SAFETY DATA SHEET

HILLYARD® D.G.A. Plus Foam Antimicrobial Hand Soap

Version	Revision Date:	MSDS Number:	Date of last issue: 08.01.2015
1.3	10.02.2015	30603-00004	Date of first issue: 19.11.2014

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : HILLYARD® D.G.A. Plus Foam Antimicrobial Hand Soap

Product code : HIL0125103

Manufacturer or supplier's details

Company name of supplier : HILLYARD INDUSTRIES, INC.

Address : 302 North Fourth Street
St. Joseph, MO 64501

Telephone : 1-816-233-1321 EXT 8285

Emergency telephone : 1-800-424-9300

Recommended use of the chemical and restrictions on use

Recommended use : Skin-care

Restrictions on use : This is a personal care or cosmetic product that is safe for consumers and other users under normal and reasonably foreseeable use. Cosmetics and consumer products, specifically defined by regulations around the world, are exempt from the requirement of an SDS for the consumer. While this material is not considered hazardous, this SDS contains valuable information critical to the safe handling and proper use of the product for industrial workplace conditions as well as unusual and unintended exposures such as large spills. This SDS should be retained and available for employees and other users of this product. For specific intended-use guidance, please refer to the information provided on the package or instruction sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Eye irritation : Category 2A

GHS Label element

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H319 Causes serious eye irritation.

Precautionary Statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P280 Wear eye protection/ face protection.
Response:
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

Other hazards which do not result in classification

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Alcohols, C10-16, ethoxylated, sulfates, sodium salts	68585-34-2	>= 1 - < 5
Cocoamidopropyl betaine	61789-40-0	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact : Wash with water and soap as a precaution.
Get medical attention if symptoms occur.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed : Causes serious eye irritation.

Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
Notes to physician	:	Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Dry chemical Carbon dioxide (CO2)
Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	Exposure to combustion products may be a hazard to health.
Hazardous combustion products	:	Sulfur oxides Carbon oxides Metal oxides Nitrogen oxides (NOx)
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions	:	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material

can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	Use only with adequate ventilation.
Advice on safe handling	:	Avoid inhalation of vapor or mist. Do not swallow. Do not get in eyes. Avoid prolonged or repeated contact with skin. Handle in accordance with good industrial hygiene and safety practice. Take care to prevent spills, waste and minimize release to the environment.
Hygiene measures	:	Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.
Conditions for safe storage	:	Keep in properly labeled containers. Store in accordance with the particular national regulations.
Materials to avoid	:	Do not store with the following product types: Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection	:	No personal respiratory protective equipment normally required.

Hand protection
Material : Impervious gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:
Safety goggles

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	clear, Colorless to pale yellow
Odor	:	soapy
Odor Threshold	:	No data available
pH	:	4.7 - 6.2
Melting point/freezing point	:	No data available
Solidification / Setting point		2.4 °C
Initial boiling point and boiling range	:	100 °C
Flash point	:	> 100 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	No data available

Relative vapor density	:	No data available
Density	:	1.00 g/cm3
Solubility(ies)		
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
Decomposition temperature	:	The substance or mixture is not classified self-reactive.
Viscosity		
Viscosity, kinematic	:	10 - 20 mm2/s (20 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Can react with strong oxidizing agents.
Conditions to avoid	:	None known.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation Skin contact Ingestion Eye contact

Acute toxicity

Not classified based on available information.

Ingredients:

Alcohols, C10-16, ethoxylated, sulfates, sodium salts:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Assessment: The substance or mixture has no acute oral

toxicity

Cocoamidopropyl betaine:

Acute oral toxicity : LD50: > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Skin corrosion/irritation

Not classified based on available information.

Product:

Result: No skin irritation

Ingredients:

Alcohols, C10-16, ethoxylated, sulfates, sodium salts:
Result: Skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Result: Irritation to eyes, reversing within 21 days

Ingredients:

Alcohols, C10-16, ethoxylated, sulfates, sodium salts:
Result: Irreversible effects on the eye

Cocoamidopropyl betaine:
Species: Rabbit
Result: Irreversible effects on the eye
Method: OECD Test Guideline 405
Remarks: Based on data from similar materials

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

Product:

Assessment: Does not cause skin sensitization.

Ingredients:

Cocoamidopropyl betaine:
Test Type: Maximization Test (GPMT)
Routes of exposure: Skin contact

Species: Guinea pig
Result: negative
Remarks: Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

Cocoamidopropyl betaine:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

Ingredients:

Cocoamidopropyl betaine:

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Ingredients:

Cocoamidopropyl betaine:
Species: Rat
NOAEL: 250 mg/kg
Application Route: Ingestion
Exposure time: 90 d
Method: OECD Test Guideline 408
Remarks: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Cocoamidopropyl betaine:

Toxicity to fish : LC50: > 1 - 10 mg/l
Exposure time: 96 h
Method: ISO 7346/2
Remarks: Based on data from similar materials

Toxicity to bacteria : EC50: > 100 mg/l
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

Persistence and degradability

Ingredients:

Alcohols, C10-16, ethoxylated, sulfates, sodium salts:

Biodegradability : Result: Readily biodegradable.

Cocoamidopropyl betaine:

Biodegradability : Result: Readily biodegradable.
Biodegradation: > 60 %
Exposure time: 28 d
Method: OECD Test Guideline 301
Remarks: Based on data from similar materials

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

NOM-002-SCT
Not regulated as a dangerous good

Special precautions for user
Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Federal Law for the control of chemical precursors, essential chemical products and machinery for producing capsules, tablets and pills. : Not applicable

The ingredients of this product are reported in the following inventories:

AICS : All ingredients listed or exempt.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), NECSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guid-

ance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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24 Hour Emergency Phone Numbers
Medical/Poison Control:
In U.S.: Call 1-800-222-1222

Outside U.S.: Call your local poison control center

Transportation/National Response Center:

1-800-535-5053
1-352-323-3500

NOTE: The National ResponseCenter emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this SDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

1. Identification

This Safety Data Sheet is available in American Spanish upon request.
Los Datos de Serguridad pueden obtenerse en Espanol si lo riquiere.

Product Name:	33 Window Glazing	**Revision Date:**	6/19/2015
Product UPC Number:	12019, 12120, 12121, 12122, 12124	**Supercedes Date:**	New SDS
Product Use/Class:	Glazing	**SDS No:**	00010401001
Manufacturer:	DAP Products Inc. 2400 Boston Street Suite 200 Baltimore, MD 21224-4723 888-327-8477 (non - emergency matters)		
Preparer:	Regulatory Department		

2. Hazards Identification

EMERGENCY OVERVIEW: May cause eye, skin, nose, throat and respiratory tract irritation. Vapors harmful if inhaled. Harmful if swallowed or absorbed through the skin.

GHS Classification
Not a hazardous substance or mixture.

Symbol(s) of Product

None

Signal Word
Not a hazardous substance or mixture.

3. Composition/Information on Ingredients

Chemical Name	CAS-No.	Wt. %	GHS Symbols	GHS Statements
Limestone	1317-65-3	75-100	GHS03	H270
Soya oil	8001-22-7	2.5-10	GHS03	H270

Talc (non-asbestiform)	14807-96-6	2.5-10	GHS03	H270
Petroleum distillates	64741-88-4	2.5-10	GHS03-GHS06	H270-331
Quartz	14808-60-7	0.1-1.0	GHS03-GHS07	H270-302
Titanium dioxide	13463-67-7	0.1-1.0	No Information	No Information
Methyl ethyl ketoxime	96-29-7	0.1-1.0	GHS03-GHS05-GHS06-GHS08	H270-317-318-331-351

The text for GHS Hazard Statements shown above (if any) is given in the "Other information" Section.

4. First-aid Measures

FIRST AID - INHALATION: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

FIRST AID - SKIN CONTACT: Remove and wash contaminated clothing. Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical aid if symptoms persist.

FIRST AID - EYE CONTACT: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

FIRST AID - INGESTION: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

5. Fire-fighting Measures

UNUSUAL FIRE AND EXPLOSION HAZARDS: Store away from caustics and oxidizers.

SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam

6. Accidental Release Measures

ENVIRONMENTAL MEASURES: No Information

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations. Use absorbent material or scrape up dried material and place in container.

7. Handling and Storage

HANDLING: KEEP OUT OF REACH OF CHILDREN!DO NOT TAKE INTERNALLY. Avoid breathing vapor and contact with eyes, skin and clothing. Use in well ventilated area. Ensure fresh air entry during application and drying. Wash thoroughly after handling.

STORAGE: Do not store at temperatures above 120 degrees F. Store containers away from excessive heat and freezing. Store away from caustics and oxidizers. Keep containers tightly closed.

8. Exposure Controls/Personal Protection

Ingredients with Occupational Exposure Limits

Chemical Name	ACGIH TLV-TWA	ACGIH-TLV STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Limestone	N.E.	N.E.	15 mg/m3 TWA total dust, 5 mg/m3 TWA respirable fraction	N.E.
Soya oil	N.E.	N.E.	N.E.	N.E.
Talc (non-asbestiform)	2 mg/m3 TWA particulate matter containing no asbestos and <1% crystalline silica, respirable fraction	N.E.	N.E.	N.E.
Petroleum distillates	N.E.	N.E.	N.E.	N.E.

Quartz	0.025 mg/m3 TWA respirable fraction	N.E.	N.E.	N.E.
Titanium dioxide	10 mg/m3 TWA	N.E.	15 mg/m3 TWA total dust	N.E.
Methyl ethyl ketoxime	N.E.	N.E.	N.E.	N.E.

Further Advice: MEL = Maximum Exposure Limit OES = Occupational Exposure Standard SUP = Supplier's Recommendation Sk = Skin Sensitizer N.E. = Not Established

Personal Protection



RESPIRATORY PROTECTION: A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m3) as determined by a full shift sample up to 10-hour work shift.



SKIN PROTECTION: Solvent-resistant gloves.



EYE PROTECTION: Goggles or safety glasses with side shields.



OTHER PROTECTIVE EQUIPMENT: Provide eyewash and solvent impervious apron if body contact may occur.



HYGIENIC PRACTICES: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use. Do not smoke.

9. Physical and Chemical Properties

Appearance:	White to Off-White	**Physical State:**	Paste
Odor:	Slight	**Odor Threshold:**	Not Established
Density, g/cm3:	2.15 - 2.22	**pH:**	Not Applicable
Freeze Point, °C:	Not Established	**Viscosity (mPa.s):**	Not Established
Solubility in Water:	Not Established	**Partition Coeff., n-octanol/water:**	Not Established
Decomposition Temperature, °C:	Not Established	**Explosive Limits, %:**	N.I. - N.I.
Boiling Range, °C:	N.I. - N.I.	**Auto-Ignition Temperature, °C**	Not Established
Minimum Flash Point, °C:	93.3	**Vapor Pressure, mmHg:**	No Information
Evaporation Rate:	Slower Than n-Butyl Acetate	**Flash Method:**	Seta Closed Cup
Vapor Density:	Heavier Than Air	**Flammability:**	No Information
Combustibility:	Does not support combustion		

(See "Other information" Section for abbreviation legend)
(If product is an aerosol, the flash point stated above is that of the propellant.)

10. Stability and Reactivity

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Incompatible with strong bases and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e., COx, NOx.

11. Toxicological Information

EFFECT OF OVEREXPOSURE - INHALATION: Inhalation may cause mild irritation to the respiratory tract (nose, mouth, mucous membranes). Prolonged, repeated, or high exposures may cause irritation to the respiratory tract (nose, mouth, mucous membranes).

EFFECT OF OVEREXPOSURE - SKIN CONTACT: Prolonged or repeated contact with skin may cause mild irritation.

EFFECT OF OVEREXPOSURE - EYE CONTACT: Not expected to cause eye problems under normal use conditions. Direct eye contact may cause irritation.

EFFECT OF OVEREXPOSURE - INGESTION: Single dose oral toxicity is low. Amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of large amounts may cause injury. Ingestion of large amounts may cause nausea, gastrointestinal upset, and pain. May cause liver and kidney damage, and central nervous system depression.

CARCINOGENICITY: No Information

EFFECT OF OVEREXPOSURE - CHRONIC HAZARDS: Prolonged and repeated skin contact may cause irritation and possibly dermatitis. The International Agency for Research on Cancer (IARC) has determined that crystalline silica in the form of quartz or cristobalite that is inhaled from occupational sources is carcinogenic to humans (Group 1- carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program (NTP) classifies respirable crystalline silica as "known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (Group A2). Breathing dust containing respirable crystalline silica may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects: Excessive inhalation of respirable dust can cause pneumoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. Smoking exacerbates this disease. Individuals with pneumoconiosis are predisposed to develop tuberculosis. There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Skin Contact

Acute Toxicity Values

The acute effects of this product have not been tested. Data on individual components are tabulated below

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
1317-65-3	Limestone	6450 mg/kg Rat	>2000 mg/kg	>20 mg/L
8001-22-7	Soya oil	>16500 mg/kg Rat	>2000 mg/kg	>20 mg/L
14807-96-6	Talc (non-asbestiform)	N.I.	N.I.	N.I.
64741-88-4	Petroleum distillates	>5000 mg/kg Rat	>2000 mg/kg Rabbit	2.18 mg/L Rat
14808-60-7	Quartz	500 mg/kg Rat	>2000 mg/kg	>20 mg/L
13463-67-7	Titanium dioxide	>10000 mg/kg Rat	>5000 mg/kg Rabbit	>20 mg/L
96-29-7	Methyl ethyl ketoxime	2326 mg/kg Rat	2702 mg/kg Rabbit	>4.83 mg/L Rat

N.I. = No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Ecological injuries are not known or expected under normal use.

13. Disposal Information

DISPOSAL INFORMATION: This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous Waste Management Regulation, 40 CFR Section 261. Dispose as hazardous waste according to all local, state, federal and

provincial regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

14. Transport Information

SPECIAL TRANSPORT PRECAUTIONS: No Information

DOT UN/NA Number:	N.A.
DOT Proper Shipping Name:	Not Regulated.
DOT Technical Name:	N.A.
DOT Hazard Class:	N.A.
Hazard SubClass:	N.A.
Packing Group:	N.A.

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Acute Health Hazard, Chronic Health Hazard

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

No Sara 313 components exist in this product.

TOXIC SUBSTANCES CONTROL ACT:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

CALIFORNIA PROPOSITION 65 CARCINOGENS AND REPORODUCTIVE TOXINS

CALIFORNIA PROPOSITION 65: No Information

International Regulations: As follows -

CANADIAN WHMIS:

This SDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

WHMIS Class No Information

16. Other Information

Revision Date: 6/19/2015 **Supersedes Date:** New MSDS

Reason for revision: HazCom2012/GHS Conversion

Datasheet produced by: Regulatory Department

HMIS Ratings:

Health:	1	**Flammability:**	1	**Reactivity:**	0	**Personal Protection:**	X

VOC Less Water Less Exempt Solvent, g/L 16.2

VOC Material, g/L: 16

VOC as Defined by California Consumer Product Regulation, Wt/Wt%: 0.1

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H270	May cause or intensify fire; oxidiser.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H351	Suspected of causing cancer. Classified as Category 2 based on limited evidence on human and/or animal studies. Mixtures with concentrations of suspected carcinogens ingredients at concentration present between 0.1% and 1.0% labelling the SDS will be optional depending on authorities. If Category 2 carcinogenic present at a concentration of 1% or above labelling the SDS will be expected. Routes of exposure are dependant on ingredient form.

Icons for GHS Pictograms shown in Section 3 describing each ingredient:

GHS03



GHS05



GHS06



GHS07



GHS08



Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS. Since thisdocument is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

Material Safety Data Sheet

24 Hour Emergency Phone Numbers:
Medical: 1-800-327-3874
1-513-558-5111
Transportation:
1-800-535-5053
1-352-323-3500

NOTE: National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
Esta hoja de datos de la seguridad de los materiales está disponible en francés canadiense y en español a su solicitud.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Product Name: 1012 GLAZING
Product UPC Number: 7079812067 7079812059 7079812056
Product Use/Class: Solvent Based Glazing
Manufacturer: **DAP Inc.**
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (non-emergency matters)

Revision Date: 11/01/2004
Supercedes: 12/28/1999
MSDS Number: 00010402001

Section 2 - Composition / Information On Ingredients

Chemical Name	CASRN	WT%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Calcium carbonate	1317-65-3	60-100	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Talc, non-fibrous	14807-96-6	5-10	2 MGM3	N.E.	N.E.	N.E.	N.E.	N.E.	No
Stoddard solvent	8052-41-3	1-5	100 PPM	N.E.	N.E.	500 PPM	N.E.	N.E.	No
Silica, crystalline	14808-60-7	0.1-1.0	0.05 MGM3	N.E.	N.E.	(10 ÷ % SiO2) / 2 MGM3	N.E.	N.E.	No

Exposure Notes:

CASRN	Exposure Note
14807-96-6	The talc (CAS number 14807-96-6) within this product naturally contains a non-fibrous tremolite (CAS number 14567-73-8), non-fibrous serpentine (CAS number 12135-86-3), and non-fibrous anthophyllite (CAS number 17068-78-9). Refer to 29 CFR 1910.1000 Table Z 3 for the permissible exposure limits associated with non-fibrous talc and these naturally occurring incidental constituents.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices

Section 3 - Hazards Identification

Emergency Overview: A gray paste with a little or no odor. WARNING! Harmful if swallowed or absorbed through the skin. Combustible liquid and vapor. Aspiration hazard if swallowed - can enter lungs and cause damage. Vapors harmful if inhaled. May cause eye, skin, nose, throat and respiratory tract irritation.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: Harmful if absorbed through the skin. May cause skin irritation.

Effects Of Overexposure - Inhalation: Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes). Inhalation of high vapor concentrations can cause CNS-depression and narcosis. Dust from dry sanding may cause eye, skin, nose, throat and respiratory tract irritation. Harmful if inhaled, may affect the brain or nervous system causing dizziness, headache or nausea.

Effects Of Overexposure - Ingestion: Harmful if swallowed. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis, which can be fatal. If ingested, may cause vomiting, diarrhea, and depressed respiration.

Effects Of Overexposure - Chronic Hazards: Prolonged and repeated skin contact may cause irritation and possibly dermatitis. Repeated or prolonged exposure may cause respiratory system damage. NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Symptoms include: loss of memory, loss of intellectual ability and loss of coordination.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation

Medical Conditions which May be Aggravated by Exposure: None known.

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical aid if symptoms persist. Remove and wash contaminated clothing.

First Aid - Inhalation: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately. Harmful or fatal if liquid is aspirated into the lungs. If swallowed, drink 8-10 oz. of water, get immediate medical attention.

Note to Physician: No Information.

COMMENTS: Call Medical Emergency at 1-800-327-3874 if any irritation or complication arise from any of the above routes of entry.

Section 5 - Fire Fighting Measures

Flash Point, F: >194
Method: (Seta Closed Cup)

Lower Explosive Limit, %: Not Established
Upper Explosive Limit, %: Not Established

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam

Unusual Fire And Explosion Hazards: Store away from caustics and oxidizers. Containers may explode if exposed to extreme heat. Eliminate sources of ignition: heat, electrical equipment, sparks and flames. Combustible liquid. At elevated temperatures, vapors can form an ignitable mixture with air. Vapors can flow along surfaces to distant ignition sources and flash back.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Immediately eliminate sources of ignition. Use absorbent material or scrape up dried material and place in container.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! DO NOT TAKE INTERNALLY. Avoid contact with skin and eyes. Use in well ventilated area. Avoid breathing vapor and contact with eyes, skin and clothing. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Odor is not an adequate warning for hazardous conditions. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal. Wash thoroughly after handling.

Storage: Close container after each use. Store containers away from excessive heat and freezing. Keep containers tightly closed. Keep away from heat and sources of ignition. Store away from caustics and oxidizers. Do not store at temperatures above 120 degrees F.

Section 8 - Exposure Controls / Personal Protection

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Provide sufficient general and/or local exhaust ventilation to maintain exposure below recommended exposure limit. Good general ventilation should be sufficient to control airborne levels. Vapors are heavier than air and may spread along floors.

Respiratory Protection: A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear and appropriate, properly fitted respirator (NIOSH approved) during and after application.

Skin Protection: Impervious gloves.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Provide eyewash and solvent impervious apron if body contact may occur.

Hygienic Practices: Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday. Do not smoke.

Section 9 - Physical And Chemical Properties

Boiling Range:	325 - 340 F	**Vapor Density:**	Not Established
Odor:	Little or None	**Odor Threshold:**	Not Established
Appearance:	Gray	**Evaporation Rate:**	Slower Than n-Butyl Acetate
Solubility in H2O:	Not Established	**Specific Gravity:**	2.149

Freeze Point:	Not Established	**pH:**	Not Applicable
Vapor Pressure:	Not Established	**Viscosity:**	Not Established
Physical State:	Paste		

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established **Product LC50:** Not Established

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP	WT%
14808-60-7	Silica, crystalline	Suspected human carcinogen.	-----	-----	Known carcinogen.	0.1-1.0

Significant Data with Possible Relevance to Humans: None

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous Waste Management Regulation, 40 CFR Section 261.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Not Regulated	**Packing Group:**	N.A.
DOT Technical Name:	N.A.	**Hazard Subclass:**	N.A.
DOT Hazard Class:	N.A.	**DOT UN/NA Number:**	N.A.

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization

may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

None

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

U.S. State Regulations:

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number	WT%
Non-Hazardous Oil / Wax	Proprietary	3-7
Butene, homopolymer	Proprietary	3-7

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number	WT%
Non-Hazardous Oil / Wax	Proprietary	3-7
Butene, homopolymer	Proprietary	3-7

California Proposition 65:

Warning: The following ingredients present in the product are known to the State of California to cause cancer:

Chemical Name	CAS Number	Definition	Date Listed	WT%
Silica, crystalline	14808-60-7	Carcinogenic.	Listed: October 1, 1988	0.1-1.0

Warning: The following ingredients present in the product are known to the State of California to cause birth defects or other reproductive harm:

None.

Section 16 - Other Information

HMIS Ratings:

Health: 1 Flammability: 1 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, GR/LTR: 47.5 LB/GAL: 0.4 WT%: 2.215

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable	ACGIH – American Conference of Governmental Industrial Hygienists
N.E. – Not Established	SARA – Superfund Amendments and Reauthorization Act of 1986
N.D. – Not Determined	NJRTK – New Jersey Right-to-Know Law
VOC – Volatile Organic Compound	OSHA – Occupational Safety and Health Administration
PEL – Permissible Exposure Limit	HMIS – Hazardous Materials Identification System
TLV – Threshold Limit Value	NTP – National Toxicology Program
STEL – Short Term Exposure Limit	CEIL – Ceiling Exposure Limit
LD50 – Lethal Dose 50	LC50 – Lethal Concentration 50
F – Degree Fahrenheit	C – Degree Celcius
MSDS – Material Safety Data Sheet	CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

Hoja de datos de la seguridad de los materiales

Números telefónicos de emergencia las 24 horas:
Emergencias médicas: 1-800-327-3874
1-513-558-5111
Transporte:
1-800-535-5053
1-352-323-3500

NOTA: Los números de emergencia del Centro de Respuesta Nacional s ólo se deben usar en caso de emergencias químicas que involucren un derramamiento, incendio, exposición o accidente que tengan que ver con químicos

IMPORTANTE: Lea esta hoja de datos de la seguridad de los materiales antes de manipular o desechar este producto, y entregue esta información a los empleados, clientes y usuarios de este producto. Este producto está cubierto por la norma de comunicación de riesgos OSHA, y este documento fue preparado de acuerdo con los requisitos de dicha norma. Todos los términos abreviados utilizados en este documento se describen con más detalles en la sección 16.

Sección 1 - Información del producto químico/ compañía

Esta hoja de datos de la seguridad de los materiales está disponible en francés canadiense y en español a su solicitud.
On peut demander cette MSDS a la langue Francaise Canadienne.

Nombre de producto: 1012 MASILLA PARA VENTANAS

Fecha de revisión: 11/01/2004

Número de UPC del producto: 7079812067 7079812059 7079812056

Reemplaza a: 12/28/1999

Uso/ clase del producto: El solvente se Basó Barnizar

Número de hoja de datos (MSDS): 00010402001

Fabricante:
DAP Inc.
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (asuntos de no emergencia)

Sección 2 - Composición / Información sobre los Ingredientes

Nombre Químico	CASRN	Peso%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Piel
Carbonatodecalcio	1317-65-3	60-100	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Talco, forma de no-fibrous	14807-96-6	5-10	2 MGM3	N.E.	N.E.	N.E.	N.E.	N.E.	No
Disolventestoddard	8052-41-3	1-5	100 PPM	N.E.	N.E.	500 PPM	N.E.	N.E.	No
Silicecristalina	14808-60-7	0.1-1.0	0.05 MGM3	N.E.	N.E.	(10 ÷ % SiO2) / 2 MGM3	N.E.	N.E.	No

Notas sobre la exposición:

CASRN	Notas sobre la exposición
14807-96-6	The talc (CAS number 14807-96-6) within this product naturally contains a non-fibrous tremolite (CAS number 14567-73-8), non-fibrous serpentine (CAS number 12135-86-3), and non-fibrous anthophyllite (CAS number 17068-78-9). Refer to 29 CFR 1910.1000 Table Z 3 for the permissible exposure limits associated with non-fibrous talc and these naturally occurring incidental constituents.

Importante: Los niveles de exposición permitidos (PEL) señalados son suministrados por el Dept. del Trabajo de EE.UU., Límites de la norma

final OSHA (CFR 29 1910.1000); Estos límites pueden variar de estado a estado.

Nota: Se debe evitar o reducir al máximo la exposición de la piel de un empleado a substancias que tengan "SÍ" en la columna "PIEL" en la tabla anterior, según lo permitan las circunstancias mediante el uso de guantes, ropa de protección, gafas de seguridad y otros equipos personales de protección, controles de ingeniería o prácticas de trabajo.

Sección 3 - Identificación de riesgos

Generalidades sobre las emergencias: Una pasta gris con un pequeño o ningún olor. ¡ADVERTENCIA! Es dañino si se traga o absorbe por la piel. Líquido y vapor COMBUSTIBLES. Riesgo de aspiración si se traga – puede entrar en los pulmones y causar daño. Vapores dañinos si se inhalan. Podría causar irritación de los ojos, piel, nariz, garganta y tracto respiratorio.

Consulte otras secciones de la hoja de datos de seguridad de los materiales para más información detallada.

Efectos de la sobre exposición - Contacto visual: Podría causar irritación a los ojos.

Efectos de la sobre exposición - Contacto de la piel: Dañino si se absorbe por la piel. Podría causar irritación de la piel.

Efectos de la sobre exposición - Inhalación: La inhalación puede causar irritación de las vías respiratorias (nariz, boca, membranas mucosas). La inhalación de concentraciones altas de vapor pueden causar la depresión-CNS y narcosis. El polvo del lijado en seco podría causar irritación de los ojos, piel, nariz, garganta y tracto respiratorio. Dañino si es inhalado, podría afectar el cerebro o el sistema nervioso causando mareo, dolor de cabeza o nauseas.

Efectos de la sobre exposición - Ingestión: Dañino si se traga. La aspiración del material en los pulmones debido al vómito puede causar neumonitis química, lo que podría ser fatal. Si se ingiere, podría causar vómito, diarrea y respiración deprimida.

Efectos de la sobre exposición - Riesgos crónicos: El contacto prolongado y repetido de la piel podría causar irritación y posiblemente dermatitis. La exposición repetida o prolongada podría causar daños al sistema respiratorio. AVISO: Ciertos informes han relacionado la sobre exposición ocupacional repetida y prolongada a solventes con el daño permanente al cerebro o al sistema nervioso. El mal uso intencional al concentrar e inhalar intencionalmente el contenido podría ser dañino o fatal. Los síntomas incluyen: pérdida de memoria, pérdida de capacidad intelectual y pérdida de coordinación.

Ruta(s) principal de entrada: Piel el Contacto, Skin Absorption, Aspiración

Condiciones médicas que se pueden agravar a causa de la exposición: Ninguno conocido.

Sección 4 - Medidas de primeros auxilios

Primeros auxilios - Contacto visual: En caso de contacto, enjuague los ojos de inmediato con grandes cantidades de agua por al menos 15 minutos hasta que la irritación ceda. Obtenga atención médica de inmediato.

Primeros auxilios - Contacto de la piel: Lávese inmediatamente con jabón y agua abundante por lo menos durante 15 minutos. Obtenga ayuda médica si los síntomas persisten. Retire y lave la ropa contaminada.

Primeros auxilios - Inhalación: Si se inhala, salga al aire fresco. Si se dificulta la respiración, abandone el área para obtener aire fresco. Si se experimenta dificultad continua para respirar, busque atención médica de inmediato.

Primeros auxilios - Ingestión: Si se traga, NO PROVOQUE EL VÓMITO. Obtenga atención médica de inmediato. Nocivo o fatal si el líquido se aspira hasta los pulmones. Si se traga, beber 8-10 onzas de agua (250-300 mL) y obtener atención médica inmediata.

Nota para el médico: Sin información

COMENTARIOS: Llame para emergencias médicas al 1-800-327-3874 si surgiera cualquier irritación o complicación de cualquiera de las rutas de entrada anteriores.

Sección 5 - Medidas para combatir incendios

Punto de inflamación, F: >194
Método: (Seta Cerró Copa)

Límite explosivo menor, %: No Establecido
Límite explosivo mayor, %: No Establecido

Medios para extinguir: Bióxido de carbono, Seque Sustancia Química, Espuma

Riesgos inusuales de incendio y explosión: Almacene lejos de substancias cáusticas y oxidantes. Los contenedores podrían explotar si se exponen a calor extremo. Elimine las fuentes de ignición: calor, equipo eléctrico, chispas y llamas. Líquido combustible. A temperaturas elevadas los vapores pueden formar una mezcla inflamable el con aire. Los vapores pueden propagarse a lo largo de superficies hasta fuentes de ignición distantes e inflamarse.

Procedimientos especiales para combatir incendios: Use un aparato para respiración auto-contenida con demanda de presión (aprobado por el Instituto NIOSH o equivalente) y equipo completo de protección. Use rociador de agua para enfriar las superficies expuestas.

Sección 6 - Medidas en caso de emisión accidental

Pasos a seguir en el caso de emisión o derramamiento de materiales: Use el equipo de protección correcto según lo especifica la Sección 8. Elimine de inmediato las fuentes de ignición. Use material absorbente o raspe el material seco y coloque en un contenedor.

Sección 7 - Manejo y almacenamiento

Manejo: ¡MANTENGA LEJOS DEL ALCANCE DE LOS NIÑOS! NO TOME INTERNAMENTE. Evitar contacto con piel y ojos. Usar en un área bien ventilada. Evitar respirar los vapores y el contacto con los ojos, la piel y la ropa. Abra todas las ventanas y puertas o use otro medios para garantizar una ventilación cruzada y la entrada de aire fresco durante la aplicación y el secado. Sentir el olor no es una advertencia adecuada de condiciones peligrosas. El mal uso intencional al concentrar e inhalar los vapores podría ser dañino o fatal. Lave a fondo después de manipular.

Almacenamiento: Cierre el contenedor después de cada uso. Almacene los contenedores lejos del calor y congelamiento excesivos. Manténgase el recipiente bien cerrado. Manténgase separado del calor y de las fuentes de ignición. Almacene lejos de substancias cáusticas y oxidantes. No almacene a temperaturas por encima de 120 grados F.

Sección 8 - Controles de la exposición/ Protección personal

Medidas de precaución: Refiérase por favor a otras secciones y subdivisiones de este MSDS.

Controles de ingeniería: Ofrezca ventilación de escape general y/o local suficiente para mantener la exposición debajo del límite recomendado. Una buena ventilación general debería ser suficiente para controlar los niveles de transporte por el aire. Los vapores son más pesados que el aire y pueden esparcirse por el piso.

Protección respiratoria: Un respirador para purificar el aire, aprobado por el NIOSH con cartucho de vapor orgánico podría ser necesario bajo ciertas circunstancias donde se espera que las concentraciones de transporte por el aire superen los límites de exposición. Se debe seguir un programa de protección respiratoria que cumpla con los requisitos de OSHA 1910.134 y ANSI Z88.2 cada vez que las condiciones del lugar de trabajo exijan el uso de un respirador. Si experimenta humedecimiento de los ojos, dolor de cabeza o mareo o si el monitoreo del aire demuestra niveles de vapor/ rocío por encima de los límites correspondientes, use un respirador apropiado

que calce correctamente (aprobado por el Instituto NIOSH) durante y después de la aplicación.

Protección de la piel: guantes impermeables

Protección de la visión: Gafas de seguridad con protectores laterales.

Otro equipo de protección: Suministre solución oftálmica y un mandil impermeable a solventes si existe posibilidad de que ocurra contacto con el cuerpo.

Prácticas higiénicas: Quitar y lavar la ropa contaminada antes de reutilizar. Lávense las manos antes de los descansos y después de terminar la jornada laboral. No fumar.

Sección 9 - Propiedades físicas y químicas

Rango de ebullición: 325 - 340 F
Olor: Pequeño o Ninguno
Aspecto: Gris
Solubilidad en H2O: No Establecido
Punto de congelamiento: No Establecido
Presión del vapor: No Establecido
Estado físico: Pasta
Densidad del vapor: No Establecido
Umbral de olor: No Establecido
Índice de evaporación: Más lento Que Acetato de N-butilo
Gravedad específica: 2.149
pH: No Aplicable
Viscosidad: No Establecido

(Ver sección 16 para la leyenda de las abreviaturas)

Sección 10 - Estabilidad y reactividad

Condiciones a evitar: Calentamiento y congelamiento excesivos.

Incompatibilidad: Incompatible con bases fuertes y agentes oxidantes.

Productos de descomposición peligrosa: Productos de descomposición normal, es decir, COx, NOx.

Polimerización peligrosa: No ocurrirá polimerización peligrosa bajo condiciones normales.

Estabilidad: Estable bajo las condiciones de almacenamiento recomendadas.

Sección 11 - Información toxicológica

LD50 del producto: No Establecido

LC50 del producto: No Establecido

Carcinogenicidad:

Número CAS	Nombre Químico	ACGIH	OSHA	
14808-60-7	Silicecristalina	Cancerígeno humano sospechado.	-----	

Datos significativos con posible relevancia para los humanos: Ninguno

Sección 12 - Información ecológica

Información ecológica: No se conocen ni esperan daños ecológicos bajo uso normal.

Sección 13 - Información sobre desechos

Información sobre desechos: Deseche los materiales de acuerdo con todas las normas federales, estatales y locales. Las normas/ restricciones estatales y locales son complejas y pueden diferir de las normas federales. La responsabilidad de eliminar los desechos correctamente recae en el propietario de los desechos.

Código de desechos de EPA en caso de desecho (CFR 40 Sección 261): Este producto no encuentra la definición de un desecho peligroso según EE.UU. EPA la Regulación Peligrosa del tratamiento de desechos, 40 Sección de CFR 261.

Sección 14 - Información sobre transporte

Nombre correcto para envío a DOT:	No Regulado	**Grupo de empaque:**	No Aplicable
Nombre técnico para DOT:	No Aplicable	**Sub-clase de riesgo:**	No Aplicable
Clase de riesgo para DOT:	No Aplicable	**Número UN/NA para DOT:**	No Aplicable

Nota: La información del envío proporcionada es aplicable para el transporte doméstico del suelo sólo. Categorización diferente puede aplicar si enviado vía otros modos del transporte y/o a destino no-domésticos.

Sección 15 - Información reglamentaria

Categoría de riesgo CERCLA - SARA:

Este producto ha sido revisado según las categorías de riesgo de EPA promulgadas según las secciones 311 y 312 de la Ley de enmienda y reautorización de fondos especiales de 1986 (SARA, por sus iniciales en inglés, Título III) y se considera, según las definiciones correspondientes, que cumple con las siguientes categorías:

PELIGRO DE SALUD CRONICO

Sección 313 de la ley SARA:

Este producto contiene las siguientes substancias sujeto a los requisitos de reporte de la sección 313 del título III de la ley SARA de 1986 y 40 CFR parte 372:

Ninguno

Ley para el control de substancias tóxicas:

Todos ingredientes en este producto son o en lista de inventario de TSCA, o de otro modo exima.

Este producto contiene las siguientes substancias químicas de acuerdo con los requisitos de reporte de la ley TSCA 12(B) si es exportado desde los Estados Unidos:

Ninguno

Regulaciones estatales de EE.UU.:

Ley del Derecho a saberde New Jersey:

Los siguientes materiales no representan peligro, pero están entre los primeros cinco componentes de este producto:

Nombre Químico	Número CAS	Peso%
Non-Hazardous Oil / Wax	Propietario	3-7
Butene, Homopolymer	Propietario	3-7

Ley del Derecho a saber de Pennsylvania:

Los siguientes ingredientes no peligrosos están presentes en el producto en una proporción mayor a 3%:

Nombre Químico	Número CAS	Peso%
Non-Hazardous Oil / Wax	Propietario	3-7
Butene, Homopolymer	Propietario	3-7

Propuesta 65 de California:

Advertencia: Los siguientes ingredientes presentes en el producto son conocidos para el Estado de California por causar cáncer:

Nombre Químico	Número CAS	Definición	Fecha Listó	Peso%
Silicecristalina	14808-60-7	Cancerígeno.	Listed: October 1, 1988	0.1-1.0

Advertencia: Los siguientes ingredientes presentes en el producto son conocidos para el Estado de California por causar defectos de nacimiento u otros daños reproductivos:

Ninguno.

Sección 16 - Otra información

Índices HMIS:

Salud: 1 Inflamabilidad: 1 Reactividad: 0 Protección personal: X

COMPONENTES ORGÁNICOS VOLÁTILES, GR/LTR: 47.5 LB/GAL: 0.4 WT%: 2.215

RAZÓN DE LA REVISIÓN: Periódico Actualiza

Leyenda:

N.A. - No aplica

N.E. - No establecido

N.D. - No determinado

VOC - Componente orgánico volátil

PEL - Límites permitidos de exposición

TLV - Valor del límite umbral

STEL - Límite de exposición a corto plazo

LD50 - Dosis letal 50

HMIS - Sistema de identificación de materiales peligrosos

CASRN - Número de registro de servicios de abstractos químicos

ACGIH - Conferencia Americana de Higienistas Industriales gubernamentales

SARA - Ley Ley de enmienda y reautorización de fondos especiales de 1986 (SARA)

NJRTK - Ley del Derecho a saber de New Jersey

OSHA - Administración de la seguridad y salud ocupacional

C - Grados centígrados

NTP - Programa nacional de toxicología

CEIL - Límite máximo de exposición

LC50 - Concentración letal 50

MSDS - Hoja de datos de la seguridad de los materiales

F - Grados Fahrenheit

DAP cree que los datos y las declaraciones contenidos en el presente son exactos hasta la fecha. Se ofrecen de buena fe como valores típicos y no como las especificaciones del producto. **NO SE OFRECE NINGUNA GARANTÍA DE COMERCIABILIDAD, IDONEIDAD PARA UN PROPÓSITO EN PARTICULAR O CUALQUIER OTRA GARANTÍA, EXPRESA O IMPLÍCITA, CON RESPECTO A LA INFORMACIÓN SUMINISTRADA EN EL PRESENTE O DEL PRODUCTO AL CUAL LA INFORMACIÓN SE REFIERE.** Dado que este documento tiene la intención de ser una guía únicamente para el uso correcto y el manejo preventivo del producto de la referencia por parte de personas correctamente entrenadas, es responsabilidad del usuario (i) revisar las recomendaciones con especial consideración al contexto específico del uso que se pretende y (ii) determinar si son correctas.

<Final de la hoja de datos de la seguridad de los materiales>

Fiche signalétique

24 heures – Numéros de téléphone en cas d'urgence:

Urgence médicale: **1-800-327-3874**
1-513-558-5111

Urgence transport: **1-800-535-5053**
1-352-323-3500

NOTE: Les numéros de téléphone en cas d'urgence doivent être utilisés uniquement lors de déversement, de fuite, d'incendie, d'exposition ou d'accident impliquant des produits chimiques.

IMPORTANT: Lire attentivement cette fiche signalétique avant de manipuler ou de disposer de ce produit. Remettre ces informations aux employés, clients et utilisateurs de ce produit. Ce produit est régit sous la gouverne de l'OSHA, Communication de renseignements à l'égard de matières dangereuses, et ce document a été préparé pour répondre aux exigences de ces standards. Les significations pour toutes les abréviations utilisées dans cette fiche signalétique sont décrites à la Section 16.

Section 1 – Identification du produit et de la compagnie

This MSDS is offered in English upon request.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Nom du produit:	1012 MASTIC DE VITRIER	**Date de révision:**	11/01/2004
Numéro UPC:	7079812067 7079812059 7079812056	**Date d'abrogation:**	11/01/2004
Utilisation du produit/Classe:	Le dissolvant A Basé Glacer	**Numéro de fiche:**	00010402001
Fabricant:	**DAP Inc.** **2400 Boston Street Suite 200** **Baltimore, MD 21224-4723** **888-327-8477 (Pour toute information non urgente)**		

Section 2 - Composition / Ingrédients dangereux

Nom Chimique	CASRN	Poids%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Peau
Pierre à chaux	1317-65-3	60-100	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	Non
Talc, forme de non-asbestous	14807-96-6	5-10	2 MGM3	N.E.	N.E.	N.E.	N.E.	N.E.	Non
Solvant Stoddard	8052-41-3	1-5	100 PPM	N.E.	N.E.	500 PPM	N.E.	N.E.	Non
Silice cristalline	14808-60-7	0.1-1.0	0.05 MGM3	N.E.	N.E.	(10 ÷ % SiO2) / 2 MGM3	N.E.	N.E.	Non

Notes concernant l'exposition:

CASRN	Notes concernant l'exposition
14807-96-6	The talc (CAS number 14807-96-6) within this product naturally contains a non-fibrous tremolite (CAS number 14567-73-8), non-fibrous serpentine (CAS number 12135-86-3), and non-fibrous anthophyllite (CAS number 17068-78-9). Refer to 29 CFR 1910.1000 Table Z 3 for the permissible exposure limits associated with non-fibrous talc and these naturally occurring incidental constituents.

Important: Les limites d'exposition permises (LEP) décrites proviennent du Department of Labor des États-Unis, règlement final concernant les valeurs d'exposition moyennes pondérées de l'OSHA
(CFR 29 1910.1000); ces limites peuvent varier selon les états.

Note: Prendre tous les moyens selon les circonstances afin de prévenir ou réduire toute exposition de la peau des employés aux substances portant la mention «OUI» dans la colonne «PEAU» du tableau ci-dessus. Utiliser des gants, une combinaison, des lunettes étanches, tout autre équipement de protection personnel adéquat, les contrôles techniques et les pratiques appropriées au type de travail.

Section 3 – Identification des dangers

Urgences générales: Une pâte grise avec une très peu d'odeur. AVERTISSEMENT ! Nocif si avalé ou absorbé par la peau. Liquide et vapeur COMBUSTIBLES. Danger d'aspiration si avalé – peut pénétrer dans les poumons et causer des lésions. Vapeurs nocives si inhalé. Peut causer une irritation des yeux, de la peau, du nez, de la gorge et des voies respiratoires.

Consulter les autres sections de cette fiche signalétique pour des informations plus détaillées.

Effets de surexposition – Contact oculaire: Peut causer une irritation des yeux.

Effets de surexposition – Contact cutané: Nocif en cas d'absorption par la peau. Peut causer une irritation de la peau.

Effets de surexposition – Inhalation: L'inhalation de ce produit peut provoquer l'irritation des voies respiratoires (nez, bouche, muqueuses). L'inhalation d'hautes concentrations de vapeur peut provoquer une depression du Système Nerveux Central et une narcosis. La poussière générée par le ponçage peut causer une irritation des yeux, de la peau, du nez, de la gorge et des voies respiratoires. Nocif si inhalé, peut affecter le cerveau ou le système nerveux causant des étourdissements, des maux de tête ou des nausées.

Effets de surexposition – Ingestion: Nocif si ingéré. L'aspiration de matériau dans les poumons lors de vomissements peut causer une pneumonie chimique qui peut être mortelle. En cas d'ingestion, peut causer des vomissements, de la diarrhée et une diminution de la capacité pulmonaire.

Effets de surexposition – Dangers chroniques: Un contact excessif et répété avec la peau peut causer une irritation et possiblement une dermatite. Une exposition excessive et répétée peut causer des lésions au système respiratoire. AVIS : Selon les rapports, une exposition professionnelle excessive et répétée aux solvants a été associée à des lésions permanentes au cerveau et au système nerveux. Une mauvaise utilisation intentionnelle en concentrant délibérément et en inhalant les vapeurs de ce produit peut être nocive, voire mortel. Les symptômes incluent : perte de mémoire, perte de capacité intellectuelle et perte de coordination.

Voie(s) d'absorption: Peau le Contact, L'Absorption de peau, l'Inhalation.

Problèmes médicaux aggravés lors d'exposition au produit : Aucune connue.

Section 4 – Premiers soins

Premiers soins – Contact oculaire: En cas de contact avec les yeux, rincer abondamment avec de l'eau pendant au moins 15 minutes ou jusqu'à ce que l'irritation disparaisse. Obtenir des soins médicaux immédiatement.

Premiers soins – Contact cutané: Laver immédiatement et abondamment avec de l'eau et du savon à l'eau pendant au moins 15 minutes. Si les symptômes persistent, obtenir se soins médicaux. Enlever et laver les vêtements contaminés.

Premiers soins – Inhalation: En cas d'inhalation, transporter la personne exposée à l'air frais. Si elle a de la difficulté à respirer, quitter les lieux afin d'obtenir de l'air frais. Si la difficulté à respirer persiste, obtenir des soins médicaux immédiatement.

Premiers soins – Ingestion: En cas d'ingestion, NE PAS FAIRE VOMIR. Obtenir des soins médicaux immédiatement. Ce produit est dangereux voire fatal s'il est aspiré dans les poumons. Si le produit a été avalé, faites boire un verre d'eau (8 à 10 onces / 227 à 296 mL); appelez immédiatement un médecin.

Note au médecin: Pas d'information.

COMMENTAIRES: En cas d'apparition d'une irritation ou de complications suite à une exposition au produit, communiquer immédiatement avec l'urgence médicale au 1-800-327-3874.

Section 5 – Mesures de protection en cas d'incendie

Point d'éclair, ° F (° C): >194
Méthode: (Seta A Fermé la Tasse)

Limite d'explosibilité inférieure, %: Pas Etabli
Limite d'explosibilité supérieure, %: Pas Etabli

Moyens d'extinction: Dioxyde de carbone, Sécher Chimique, Mousse

Risques particuliers d'explosions ou d'ignition: Entreposer loin des produits caustiques et des agents oxydants. Les contenants peuvent exploser si exposés à des chaleurs extrêmes. Éliminer toute source d'ignition : chaleur, équipement électrique, étincelles et flamme. Liquide combustible. A hautes températures, les vapeurs peuvent former un mélange inflammable avec l'air. Les vapeurs peuvent se déplacer le long des surfaces, atteindre une source d'allumage même éloignée, et s'enflammer brusquement.

Procédures spéciales de lutte contre les incendies: Porter un respirateur autonome à pression d'air (approuvé NIOSH ou équivalent) et un équipement de protection personnel complet. Utiliser une lance-brouillard afin de refroidir les contenants exposés.

Section 6 – Mesures en cas de déversement accidentel

Procédures de nettoyage: Porter un équipement de protection personnel approprié tel que spécifié à la Section 8. Éliminer immédiatement toute source d'ignition. Utiliser un matériau absorbant ou gratter le matériau sec puis le déposer dans un contenant.

Section 7 – Manutention et entreposage

Manutention: TENIR HORS DE LA PORTÉE DES ENFANTS! NE PAS AVALER. Eviter le contact avec la peau et les yeux. Utilisez dans un espace bien aéré. Évitez de respirer les vapeurs et ne laissez pas le produit venir en contact avec les yeux, la peau ou les vêtements. Ouvrir toutes les fenêtres et les portes ou utiliser tout autre moyen afin d'assurer une ventilation en croisé et l'entrée d'air frais durant l'application et le temps de séchage. L'odeur n'est pas un critère valable pour déterminer les conditions de danger. Une mauvaise utilisation intentionnelle en concentrant délibérément et en inhalant les vapeurs peut être nocif, voire mortel. Laver vigoureusement après la manipulation.

Entreposage: Refermer les contenants après usage. Entreposer les contenants loin de la chaleur excessive ou du froid excessif. Conserver le récipient bien fermé. Tenir à l'écart de la chaleur et des sources d'ignition. Entreposer loin des produits caustiques et des agents oxydants. Ne pas entreposer à des températures supérieures à 120° F (48,8 ° C).

Section 8 – Contrôles d'exposition / Protection personnelle

Mesures de précaution: S'il vous plaît se référer aux autres sections et aux autres sous-sections de ce MSDS.

Contrôles d'ingénierie: Faire fonctionner au maximum le système de ventilation central et/ou le système d'évacuation local afin de maintenir le niveau des vapeurs organiques sous les limites d'exposition recommandées. Une bonne ventilation centrale devrait suffire pour contrôler les niveaux de matières en suspension. Les vapeurs sont plus lourdes que l'air et peuvent se propager à raz le sol.

Protection des voies respiratoires: Dans certaines circonstances, lorsque le niveau anticipé de concentrations en suspension est supérieur aux limites d'exposition permises, il est nécessaire de porter un respirateur purificateur d'air muni d'une cartouche ou d'un filtre à cartouche anti-vapeurs organiques. Un programme de protection respiratoire défini selon les normes de l'OSHA 1910.134 et de l'ANSI Z88.2 doit être appliqué à chaque fois que les conditions sur les lieux de travail exigent de porter un respirateur. Lorsque des larmoiements, maux de tête ou des étourdissements surviennent ou si l'analyse de l'air démontre des niveaux supérieurs de vapeurs ou de brouillard de pulvérisation aux limites permises, porter un respirateur (approuvé NIOSH) installé de façon adéquate durant et après l'application.

Protection de la peau: gants imperméables

Protection des yeux: Lunettes étanches ou lunettes de sécurité avec boucliers latéraux.

Équipements de protection additionnels: Procurer une fontaine oculaire et un tablier imperméable aux solvants s'il y a risque de contact avec le corps.

Pratiques hygiéniques: Enlever et laver les vêtements contaminés avant réutilisation. Se laver les mains avant les pauses et à la fin de la journée. Ne pas fumer.

Section 9 – Propriétés physiques et chimiques

Point d'ébullition:	325 - 340 F	**Densité de vapeur:**	Pas Etabli
Odeur:	Petit ou Aucun	**Limite de détection olfactive:**	Pas Etabli
Apparence:	Gray	**Taux d'évaporation:**	Plus lent Que Acétate de n-Butyl
Solubilité dans l'eau (H_2O):	Pas Etabli	**Poids spécifique:**	2.149
Point de congélation:	Pas Etabli	**Taux de pH:**	Pas Applicable
Pression de vapeur:	Pas Etabli	**Viscosité:**	Pas Etabli
État physique:	Pâte		

(Consulter la Section 16 pour connaître la signification des abréviations))

Section 10 – Stabilité et réactivité

Conditions à éviter: Chaleur excessive ou froid excessif.

Incompatibilité: Incompatible avec les bases fortes et les oxydants.

Produits de décomposition dangereux: Produits de décomposition habituels : oxydes de carbone (COx) et oxydes d'azote (NOx).

Risque de polymérisation: Aucune polymérisation dangereuse ne surviendra dans des conditions normales d'utilisation.

Stabilité: Stable dans les conditions recommandées de stockage.

Section 11 – Propriétés toxicologiques

Produit DL50: Pas Etabli

Produit CL50: Pas Etabli

Effets cancérigènes:

Numéro CAS	Nom Chimique	ACGIH	OSHA	IARC	NTP	Poids%
14808-60-7	Silice cristalline	Présumée cancérogène humaine.	-----	-----	Cancérogène connue.	0.1-1.0

Données significatives possiblement pertinentes à l'humain: Aucun

Section 12 – Information écologique

Information écologique: Aucune dégradation de l'environnement n'est connue ou prévisible dans les conditions normales d'utilisation.

Section 13 – Information sur la mise au rebut

Information concernant la mise au rebut: Disposer de ce matériau en respectant les lois fédérales, provinciales et municipales. Les lois et restrictions provinciales et municipales sont complexes et peuvent différer des lois fédérales. La responsabilité de la disposition appropriée des déchets appartient au propriétaire des déchets.

Code de mise au rebut de l'Agence de protection de l'environnement (40 CFR Section 261): Ce produit ne rencontre pas la définition d'un déchets dangereux selon le Règlement de Direction de Déchets dangereux de EPA américain, 40 CFR Section 261.

Section 14 – Étiquetage selon le Ministère des Transports

Nom du produit expédié:	Pas Réglé	**Groupe d'emballage:**	Pas Applicable
Nom technique:	Pas Applicable	**Classe de transport:**	Pas Applicable
Classe de danger:	Pas Applicable	**Numéro UN/NA:**	Pas Applicable

Note : L'information d'expédition fournie est applicable pour le transport de sol domestique seulement. La catégorisation différente peut s'appliquer si expédié via les autres modes de et/ou de transport aux destinations non résidentielles.

Section 15 – Information sur les règlements

CERCLA - Catégories de dangers selon le SARA:

Ce produit a été revu en conformité avec les «Catégories de dangers» établies par l'Agence de protection de l'environnement et promulguées aux Sections 311 et 312 du Superfund Amendment and Reauthorization Act de 1986 (SARA Titre III). Selon les définitions applicables, il est considéré répondre aux catégories suivantes :

RISQUE DE SANTE CHRONIQUE

SARA SECTION 313 :
Ce produit contient les substances suivantes assujetties aux normes de déclaration de la Section 313, du Titre III de la Superfund Amendments and Reauthorization Act de 1986 et du 40 CFR partie 372 :

Aucun

LOI SUR LE CONTRÔLE DES SUBSTANCES TOXIQUES:

Tous ingrédients dans ce produit sont ou sur la liste d'inventaire de TSCA, ou autrement exempter.

Ce produit contient les substances chimiques suivantes à déclarer selon les normes TSCA 12(B) si exporté à l'extérieur des États-Unis:

Aucun

Lois particulières selon les états aux États-Unis:

NEW JERSEY RIGHT-TO-KNOW :

Les substances suivantes sont non-dangereuses mais sont comptées parmi les 5 principaux ingrédients composant ce produit:

Nom Chimique	Numéro CAS	Poids%

Non-Hazardous Oil / Wax	De propriété	3-7
Butene, Homopolymer	De propriété	3-7

PENSYLVANIA RIGHT-TO-KNOW:

Les substances suivantes sont non-dangereuses mais sont présentes à plus de 3% dans ce produit:

Nom Chimique	Numéro CAS	Poids%
Non-Hazardous Oil / Wax	De propriété	3-7
Butene, Homopolymer	De propriété	3-7

PROPOSITION 65 DE CALIFORNIE:

AVERTISSEMENT ! Les produits chimiques listés ci-dessous et contenus dans ce produit sont reconnus par l'État de la Californie pour causer le cancer:

Nom Chimique	Numéro CAS	Définition	Dater Enuméré	Poids%
Silice cristalline	14808-60-7	Cancérogène.	Listed: October 1, 1988	0.1-1.0

AVERTISSEMENT ! Les produits chimiques listés ci-dessous et contenus dans ce produit sont reconnus par l'État de la Californie pour causer le cancer, des anomalies congénitales ou d'autres problèmes reliés à la reproduction:

Aucun.

Section 16 – Autres informations

Classification des dangers:

Santé: 1 Inflammabilité: 1 Réactivité: 0 Protection personnelle: X

COMPOSÉ ORGANIQUE VOLATIL, G/LITRE: 47.5 LB/GALLON: 0.4 POIDS %: 2.215

RAISONS DE RÉVISION: Mise à jour périodique

Légende:

N.A. – Non applicable

N.É. – Non établi

N.D. – Non déterminé

VOC – Composé organique volatil

PEL – Limite d'exposition permise

TLV – Limite tolérable d'exposition

NTP – National Toxicology Program

STEL – Limite d'exposition à court terme

LD50 – Dose létale 50

CASRN – Numéro enregistré selon le Chemical Abstracts Service

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

ACGIH – American Conference of Governmental Industrial Hygienists

SARA – Superfund Amendments and Reauthorization Act de 1986

NJRTK – New Jersey Right-to-Know Law

OSHA – Occupational Safety and Health Administration

HMIS – Hazardous Materials Identification System

TWA – Valeur d'exposition moyenne pondérée

F – Degré Fahrenheit

C – Degré Celcius

LC50 – Concentration létale 50

DAP croit que les données et renseignements stipulés dans cette fiche signalétique sont précis à la date de rédaction de cette fiche. Ces données sont offertes en toute bonne foi et représente des valeurs standard sans toutefois être des spécifications du produit. **AUCUNE GARANTIE SUR LA QUALITÉ MARCHANDE, GARANTIE D'APTITUDE POUR AUCUN**

TYPE D'EMPLOI PARTICULIER OU TOUTE AUTRE FORME DE GARANTIE N'EST EXPRESSÉMENT OU IMPLICITEMENT OFFERTE EN REGARD DES INFORMATIONS FOURNIES DANS CETTE FICHE OU DES INFORMATIONS RELATIVES AU PRODUIT. Cette fiche est produite uniquement à titre de guide pour les personnes formées à cet effet afin qu'elles puissent appliquer les procédures appropriées de manutention auxquelles le produit réfère. Toutefois, c'est la responsabilité chaque utilisateur de revoir les recommandations selon le contexte spécifique de l'utilisation prévue et de déterminer si ces procédures sont appropriées.

<Fin de la fiche signalétique>

Material Safety Data Sheet

24 Hour Emergency Phone Numbers:
Medical: 1-800-327-3874
1-513-558-5111
Transportation:
1-800-535-5053
1-352-323-3500

NOTE: National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
Esta hoja de datos de la seguridad de los materiales está disponible en francés canadiense y en español a su solicitud.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Product Name: Alex Painters Acrylic Latex Caulk - All Colors
Revision Date: 11/10/2004
Product UPC Number: 18065 18609 18618 18670 30206 73625 73630
Supercedes: 10/29/2004
Product Use/Class: Latex Caulk
MSDS Number: 00010011001
Manufacturer: **DAP Inc.**
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (non-emergency matters)

Section 2 - Composition / Information On Ingredients

Chemical Name	CASRN	WT%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Calcium carbonate	1317-65-3	40-70	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Ester Branched & Linear(C7&C9)	PHTHALATE ESTER	1-5	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Stoddard solvent	8052-41-3	0.5-1.5	100 PPM	N.E.	N.E.	500 PPM	N.E.	N.E.	No
Ethylene glycol	107-21-1	0.1-1.0	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No
Silica, crystalline	14808-60-7	0.1-1.0	0.05 MGM3	N.E.	N.E.	(10 ÷ % SiO2) / 2 MGM3	N.E.	N.E.	No
Titanium dioxide	13463-67-7	0.1-1.0	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	No
Ammonia	7664-41-7	0.1-1.0	25 PPM	35 PPM	N.E.	50 PPM	N.E.	N.E.	No
Formaldehyde	50-00-0	<0.02	N.E.	N.E.	0.3 PPM	0.75 PPM	2 PPM	N.E.	No
Ethyl acrylate	140-88-5	<0.008	5 PPM	15 PPM	N.E.	25 PPM	N.E.	N.E.	Yes
Acetaldehyde	75-07-0	<0.002	N.E.	N.E.	25 PPM	200 PPM	N.E.	N.E.	No
Acrylonitrile	107-13-1	<0.0002	2 PPM	N.E.	N.E.	2 PPM	10 PPM	N.E.	Yes

Exposure Notes:

50-00-0 Formaldehyde is a specially regulated substance for which an OSHA chemical-specific exposure standard exits. Detailed information regarding this substance may be found in 29 CFR 1910.1048. Medical surveillance information regarding this substance may be found in Appendix C to 29 CFR 1910.1048.

107-13-1 Acrylonitrile is a specially regulated substance for which an OSHA chemical-specific

exposure standard exits. Detailed information regarding this substance may be found in 29 CFR 1910.1045. Medical surveillance information regarding this substance may be found in Appendix C to 29 CFR 1910.1045.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices

Section 3 - Hazards Identification

Emergency Overview: A colored paste with a very slight ammonia odor. WARNING! Harmful if swallowed or absorbed through the skin. May cause irritation to the respiratory tract. May cause eye, skin, nose, throat and respiratory tract irritation. This product contains ethylene glycol.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: Harmful if absorbed through the skin. May cause sensitization by skin contact. May cause skin irritation and/or dermatitis.

Effects Of Overexposure - Inhalation: Vapor harmful. May affect the brain or nervous system causing dizziness, headache or nausea. May cause irritation of respiratory tract. Inhalation of vapors may cause irritation of the nose, throat, lungs and respiratory tract. Prolonged, repeated, or high exposures may cause weakness and depression of the central nervous system.

Effects Of Overexposure - Ingestion: Harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Prolonged and repeated skin contact may cause irritation and possibly dermatitis. Repeated or prolonged exposure may cause respiratory system damage. Overexposure may cause kidney, cardiovascular, skin and liver damage. Formaldehyde vapor is a known animal carcinogen according to OSHA and NTP and is considered possibly carcinogenic to humans by inhalation. The International Agency for Research on Cancer considers formaldehyde to be a human carcinogen.
Ethylene Glycol may cause kidney and liver damage upon prolonged and repeated overexposures. Studies have shown that repeated inhalation of ethylene glycol has produced adverse cardiovascular changes in laboratory animals. Ethylene glycol has been shown to cause birth defects in laboratory animals.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Eye Contact

Medical Conditions which May be Aggravated by Exposure: None known.

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical aid if symptoms persist. Remove and wash contaminated clothing.

First Aid - Inhalation: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

Note to Physician: No Information.

COMMENTS: Call Medical Emergency at 1-800-327-3874 if any irritation or complication arise from any of the above routes of entry.

Section 5 - Fire Fighting Measures

Flash Point, F: Greater than 200 degrees Fahrenheit
Method: (Seta Closed Cup)

Lower Explosive Limit, %: Not Established

Upper Explosive Limit, %: Not Established

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: No special protective measures against fire required.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Use absorbent material or scrape up dried material and place in container.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! DO NOT TAKE INTERNALLY. Do not breathe vapors. Use only with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Odor is not an adequate warning for hazardous conditions. Wash thoroughly after handling.

Storage: Close container after each use. Store containers away from excessive heat and freezing. Store away from caustics and oxidizers. Do not store at temperatures above 120 degrees F.

Section 8 - Exposure Controls / Personal Protection

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Ensure adequate ventilation, especially in confined areas. Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Rubber gloves.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	**Vapor Density:**	Heavier Than Air
Odor:	Very Slight Ammonia	**Odor Threshold:**	Not Established
Appearance:	Colored	**Evaporation Rate:**	Slower Than n-Butyl Acetate
Solubility in H2O:	Not Established	**Specific Gravity:**	1.639
Freeze Point:	Not Established	**pH:**	Between 7.0 and 12.0
Vapor Pressure:	Not Established	**Viscosity:**	Not Established
Physical State:	Paste		

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

CASRN	Chemical Name	LD50	LC50	WT%
PHTHALATE ESTER	Ester Branched & Linear(C7&C9)	Oral Rat: 10 mg/kg	----------	1-5
107-21-1	Ethylene glycol	Rat:4700 mg/kg	Rat:10876 mg/kg	0.1-1.0
7664-41-7	Ammonia	----------	Rat:2000 ppm/4H	0.1-1.0
50-00-0	Formaldehyde	----------	Rat:203 mg/m3	<0.02
140-88-5	Ethyl acrylate	----------	Rat:1414 ppm/4H	<0.008
75-07-0	Acetaldehyde	----------	Rat:13300 ppm/4H	<0.002
107-13-1	Acrylonitrile	Oral Rat:78 mg/kg	Rat:425 ppm/4H	<0.0002

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP	WT%
14808-60-7	Silica, crystalline	Suspected human carcinogen.	-----	-----	Known carcinogen.	0.1-1.0
13463-67-7	Titanium dioxide	-----	-----	Classification not possible from current data.	-----	0.1-1.0
50-00-0	Formaldehyde	Suspected human carcinogen.	Potential cancer hazard.	Human carcinogen.	Anticipated carcinogen.	<0.02
140-88-5	Ethyl acrylate	-----	-----	Possible carcinogen.	-----	<0.008
75-07-0	Acetaldehyde	Confirmed animal carcinogen with unknown relevance to humans.	-----	Possible carcinogen.	Anticipated carcinogen.	<0.002
107-13-1	Acrylonitrile	Confirmed animal carcinogen with unknown relevance to humans.	Cancer hazard.	Possible carcinogen.	Anticipated carcinogen.	<0.0002
79-06-1	Acrylamide	Confirmed animal carcinogen with unknown relevance to humans.	-----	Probable carcinogen.	Anticipated carcinogen.	<0.00005

75-21-8	Ethylene oxide	Suspected human carcinogen.	Cancer hazard.	Human carcinogen.	Known carcinogen.	<0.000006

Significant Data with Possible Relevance to Humans: This product contains trace amounts of free formaldehyde. OSHA and NTP identify formaldehyde as a potential carcinogen. IARC identifies formaldehyde as a human carcinogen. Formaldehyde has been shown to cause mutations in a variety of in-vitro test systems, the significance of which to humans is unknown. In a two-year inhalation study, rats showed carcinogenic effects in the respiratory system at 15 ppm of formaldehyde. There should be minimal risk when used with ventilation adequate to keep the atmospheric concentration of formaldehyde below the recommended exposure limits. Maintain adequate ventilation to prevent exposure above current OSHA / ACGIH exposure limits. Workplace monitoring of the air to define formaldehyde exposure levels may be necessary.
This product contains trace amounts of acrylonitrile. It is exempt from the OSHA acrylonitrile standard 29 CFR 1910.1045, paragraph (a) (2) (ii). Acrylonitrile has been classified by IARC as possibly carcinogenic to humans, by OSHA as carcinogenic and by NTP as reasonably anticipated to be a human carcinogen.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): None

Section 14 - Transportation Information

DOT Proper Shipping Name:	Not Regulated	**Packing Group:**	N.A.
DOT Technical Name:	N.A.	**Hazard Subclass:**	N.A.
DOT Hazard Class:	N.A.	**DOT UN/NA Number:**	N.A.

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

None

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

U.S. State Regulations:

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number	WT%
Water	7732-18-5	10-30
Non-Hazardous Polymer	Proprietary	10-30

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number	WT%
Water	7732-18-5	10-30
Non-Hazardous Polymer	Proprietary	10-30

California Proposition 65:

Warning: The following ingredients present in the product are known to the State of California to cause cancer:

Chemical Name	CAS Number	Definition	Date Listed	WT%
Silica, crystalline	14808-60-7	Carcinogenic.	Listed: October 1, 1988	0.1-1.0
Formaldehyde	50-00-0	Carcinogenic.	Listed: January 1, 1988	<0.02
Ethyl acrylate	140-88-5	Carcinogenic.	Listed: July 1, 1989	<0.008
Acetaldehyde	75-07-0	Carcinogenic.	Listed: April 1, 1988	<0.002
Acrylonitrile	107-13-1	Carcinogenic.	Listed: July 1, 1987	<0.0002
Acrylamide	79-06-1	Carcinogenic.	Listed: January 1, 1990	<0.00005
Ethylene oxide	75-21-8	Carcinogenic.	Listed: July 1, 1987	<0.000006

Warning: The following ingredients present in the product are known to the State of California to cause birth defects or other reproductive harm:

Chemical Name	CAS Number	Definition	Date Listed	WT%
Ethylene oxide	75-21-8	Yes	Listed: February 27, 1987	<0.000006

Section 16 - Other Information

HMIS Ratings:

Health: 1 Flammability: 1 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, GR/LTR: 59.2 LB/GAL: 0.5 WT%: 2.482

REASON FOR REVISION: Periodic Update

Legend: N.A. – Not Applicable ACGIH – American Conference of Governmental Industrial Hygienists

N.E. – Not Established	SARA – Superfund Amendments and Reauthorization Act of 1986
N.D. – Not Determined	NJRTK – New Jersey Right-to-Know Law
VOC – Volatile Organic Compound	OSHA – Occupational Safety and Health Administration
PEL – Permissible Exposure Limit	HMIS – Hazardous Materials Identification System
TLV – Threshold Limit Value	NTP – National Toxicology Program
STEL – Short Term Exposure Limit	CEIL – Ceiling Exposure Limit
LD50 – Lethal Dose 50	LC50 – Lethal Concentration 50
F – Degree Fahrenheit	C – Degree Celcius
MSDS – Material Safety Data Sheet	CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

Hoja de datos de la seguridad de los materiales

Números telefónicos de emergencia las 24 horas:
Emergencias médicas: 1-800-327-3874
1-513-558-5111
Transporte:
1-800-535-5053
1-352-323-3500

NOTA: Los números de emergencia del Centro de Respuesta Nacional s ólo se deben usar en caso de emergencias químicas que involucren un derramamiento, incendio, exposición o accidente que tengan que ver con químicos

IMPORTANTE: Lea esta hoja de datos de la seguridad de los materiales antes de manipular o desechar este producto, y entregue esta información a los empleados, clientes y usuarios de este producto. Este producto está cubierto por la norma de comunicación de riesgos OSHA, y este documento fue preparado de acuerdo con los requisitos de dicha norma. Todos los términos abreviados utilizados en este documento se describen con más detalles en la sección 16.

Sección 1 - Información del producto químico/ compañía

Esta hoja de datos de la seguridad de los materiales está disponible en francés canadiense y en español a su solicitud.
On peut demander cette MSDS a la langue Francaise Canadienne.

Nombre de producto:	Alex Painters el Látex del Acrílico Calafatea - Todo Colora	**Fecha de revisión:**	11/10/2004
Número de UPC del producto:	18065 18609 18618 18670 30206 73625 73630	**Reemplaza a:**	10/29/2004
Uso/ clase del producto:	Calafateo de Latex	**Número de hoja de datos (MSDS):**	00010011001

Fabricante:
DAP Inc.
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (asuntos de no emergencia)

Sección 2 - Composición / Información sobre los Ingredientes

Nombre Químico	CASRN	Peso%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Piel
Carbonatodecalcio	1317-65-3	40-70	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Di(C7, C9) Ester ramificado & Lineal	PHTHALATE ESTER	1-5	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Disolventestoddard	8052-41-3	0.5-1.5	100 PPM	N.E.	N.E.	500 PPM	N.E.	N.E.	No
Etilen Glicol	107-21-1	0.1-1.0	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No
Silicecristalina	14808-60-7	0.1-1.0	0.05 MGM3	N.E.	N.E.	(10 ÷ % SiO2) / 2 MGM3	N.E.	N.E.	No
Dioxidodetitanio	13463-67-7	0.1-1.0	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	No
Trihidruro De Nitrogeno	7664-41-7	0.1-1.0	25 PPM	35 PPM	N.E.	50 PPM	N.E.	N.E.	No
Formaldehido	50-00-0	<0.02	N.E.	N.E.	0.3 PPM	0.75 PPM	2 PPM	N.E.	No
Ester Etilico Del Acido 2-Propenoico	140-88-5	<0.008	5 PPM	15 PPM	N.E.	25 PPM	N.E.	N.E.	Sí
Aldehídoacético	75-07-0	<0.002	N.E.	N.E.	25 PPM	200 PPM	N.E.	N.E.	No
Cianuro De Vinilo	107-13-1	<0.0002	2 PPM	N.E.	N.E.	2 PPM	10 PPM	N.E.	Sí

Notas sobre la exposición:

50-00-0 Formaldehido es una sustancia especialmente regulada para la cual existe una norma OSHA para la exposición a un químico específico. La información detallada respecto a esta sustancia se encuentra en 29 CFR 1910.1048. La información respecto a la vigilancia médica para esta sustancia se

puede encontrar en el apéndice C de 29 CFR 1910.1048.

107-13-1 Acrylonitrile es una sustancia especialmente regulada para la cual existe una norma OSHA para la exposición a un químico específico. La información detallada respecto a esta sustancia se encuentra en 29 CFR 1910.1045. La información respecto a la vigilancia médica para esta sustancia se puede encontrar en el apéndice C de 29 CFR 1910.1045.

Importante: Los niveles de exposición permitidos (PEL) señalados son suministrados por el Dept. del Trabajo de EE.UU., Límites de la norma final OSHA (CFR 29 1910.1000); Estos límites pueden variar de estado a estado.

Nota: Se debe evitar o reducir al máximo la exposición de la piel de un empleado a substancias que tengan "SÍ" en la columna "PIEL" en la tabla anterior, según lo permitan las circunstancias mediante el uso de guantes, ropa de protección, gafas de seguridad y otros equipos personales de protección, controles de ingeniería o prácticas de trabajo.

Sección 3 - Identificación de riesgos

Generalidades sobre las emergencias: Un coloró pasta con una olor muy leve del amoniaco. ¡ADVERTENCIA! Es dañino si se traga o absorbe por la piel. Puede causar irritación de las vías respiratorias. Podría causar irritación de los ojos, piel, nariz, garganta y tracto respiratorio.

Consulte otras secciones de la hoja de datos de seguridad de los materiales para más información detallada.

Efectos de la sobre exposición - Contacto visual: Podría causar irritación a los ojos.

Efectos de la sobre exposición - Contacto de la piel: Dañino si se absorbe por la piel. Posibilidad de sensibilización en contacto con la piel. Puede causar irritaciones en la piel y/o dermatitis.

Efectos de la sobre exposición - Inhalación: Vapor dañino. Podría afectar el cerebro o el sistema nervioso, causando mareo, dolor de cabeza o nauseas. Puede producir irritaciones en el sistema respiratorio. La inhalación de vapores puede causar irritación de la nariz, garganta, pulmones y tracto respiratorio. Las exposiciones prolongadas, repetidas o elevadas pueden causar debilidad y depresión del sistema nervioso central.

Efectos de la sobre exposición - Ingestión: Dañino si se traga.

Efectos de la sobre exposición - Riesgos crónicos: El contacto prolongado y repetido de la piel podría causar irritación y posiblemente dermatitis. La exposición repetida o prolongada podría causar daños al sistema respiratorio. La sobre exposición podría causar daños cardiovasculares y en los riñones, piel e hígado. El vapor del formaldehido es un cancerígeno animal conocido según OSHA y NTP y se considera posiblemente cancerígeno a humanos por aspiración. La Agencia Internacional para la Investigación en el Cancer considera formaldehido para ser un cancerígeno humano.
El glicol de etileno puede causar daño al riñón e hígado con la sobre exposición prolongada y repetida. Los estudios han demostrado que la inhalación repetida al glicol de etileno ha producido cambios cardiovasculares adversos en los animales de laboratorio. Se ha demostrado que el glicol de etileno causa defectos de nacimiento en animales de laboratorio.

Ruta(s) principal de entrada: Piel el Contacto, Aspiración, Ojo el Contacto

Condiciones médicas que se pueden agravar a causa de la exposición: Ninguno conocido.

Sección 4 - Medidas de primeros auxilios

Primeros auxilios - Contacto visual: En caso de contacto, enjuague los ojos de inmediato con grandes cantidades de agua por al menos 15 minutos hasta que la irritación ceda. Obtenga atención médica de inmediato.

Primeros auxilios - Contacto de la piel: Lávese inmediatamente con jabón y agua abundante por lo menos

durante 15 minutos. Obtenga ayuda médica si los síntomas persisten. Retire y lave la ropa contaminada.

Primeros auxilios - Inhalación: Si se inhala, salga al aire fresco. Si se dificulta la respiración, abandone el área para obtener aire fresco. Si se experimenta dificultad continua para respirar, busque atención médica de inmediato.

Primeros auxilios - Ingestión: Si se traga, NO PROVOQUE EL VÓMITO. Obtenga atención médica de inmediato.

Nota para el médico: Sin información

COMENTARIOS: Llame para emergencias médicas al 1-800-327-3874 si surgiera cualquier irritación o complicación de cualquiera de las rutas de entrada anteriores.

Sección 5 - Medidas para combatir incendios

Punto de inflamación, F: Más que 200 grados Fahrenheit
Método: (Seta Cerró Copa)

Límite explosivo menor, %: No Establecido

Límite explosivo mayor, %: No Establecido

Medios para extinguir: Bióxido de carbono, Seque Sustancia Química, Espuma, Riegue Niebla

Riesgos inusuales de incendio y explosión: No se requieren medidas de protección especiales contra el fuego.

Procedimientos especiales para combatir incendios: Use un aparato para respiración auto-contenida con demanda de presión (aprobado por el Instituto NIOSH o equivalente) y equipo completo de protección. Use rociador de agua para enfriar las superficies expuestas.

Sección 6 - Medidas en caso de emisión accidental

Pasos a seguir en el caso de emisión o derramamiento de materiales: Use el equipo de protección correcto según lo especifica la Sección 8. Use material absorbente o raspe el material seco y coloque en un contenedor.

Sección 7 - Manejo y almacenamiento

Manejo: ¡MANTENGA LEJOS DEL ALCANCE DE LOS NIÑOS! NO TOME INTERNAMENTE. No respire los vapores. Use únicamente con ventilación adecuada. Evitar respirar los vapores y el contacto con los ojos, la piel y la ropa. Abra todas las ventanas y puertas o use otro medios para garantizar una ventilación cruzada y la entrada de aire fresco durante la aplicación y el secado. Sentir el olor no es una advertencia adecuada de condiciones peligrosas. Lave a fondo después de manipular.

Almacenamiento: Cierre el contenedor después de cada uso. Almacene los contenedores lejos del calor y congelamiento excesivos. Almacene lejos de substancias cáusticas y oxidantes. No almacene a temperaturas por encima de 120 grados F.

Sección 8 - Controles de la exposición/ Protección personal

Medidas de precaución: Refiérase por favor a otras secciones y subdivisiones de este MSDS.

Controles de ingeniería: Una buena ventilación general debería ser suficiente para controlar los niveles de transporte por el aire. Asegurarse de una ventilación adecuada, especialmente en locales cerrados. Puede ser necesaria la ventilación local de las fuentes de emisión para mantener las concentraicones ambientales por debajo de los límites de exposición recomendados.

Protección respiratoria: En caso de ventilación insuficiente, use equipo respiratorio adecuado. Un respirador para purificar el aire, aprobado por el NIOSH con cartucho de vapor orgánico podría ser necesario bajo ciertas circunstancias donde se espera que las concentraciones de transporte por el aire superen los límites de exposición. Se debe seguir un programa de protección respiratoria que cumpla con los requisitos de OSHA 1910.134 y ANSI Z88.2 cada vez que las condiciones del lugar de trabajo exijan el uso de un respirador.

Protección de la piel: guantes de goma

Protección de la visión: Gafas de seguridad con protectores laterales.

Otro equipo de protección: no se precisa en el uso normal.

Prácticas higiénicas: Quitar y lavar la ropa contaminada antes de reutilizar. Lávense las manos antes de los descansos y después de terminar la jornada laboral.

Sección 9 - Propiedades físicas y químicas

Rango de ebullición: No Establecido
Olor: Amoniaco muy Leve
Aspecto: Coloró

Solubilidad en H2O: No Establecido
Punto de congelamiento: No Establecido
Presión del vapor: No Establecido
Estado físico: Pasta

Densidad del vapor: Más pesado Que Aéreo
Umbral de olor: No Establecido
Índice de evaporación: Más lento Que Acetato de N-butilo
Gravedad específica: 1.639
pH: Entre 7,0 y 12,0
Viscosidad: No Establecido

(Ver sección 16 para la leyenda de las abreviaturas)

Sección 10 - Estabilidad y reactividad

Condiciones a evitar: Calentamiento y congelamiento excesivos.

Incompatibilidad: Incompatible con bases fuertes y agentes oxidantes.

Productos de descomposición peligrosa: Productos de descomposición normal, es decir, COx, NOx.

Polimerización peligrosa: No ocurrirá polimerización peligrosa bajo condiciones normales.

Estabilidad: Estable bajo las condiciones de almacenamiento recomendadas.

Sección 11 - Información toxicológica

LD50 del producto: No Establecido

LC50 del producto: No Establecido

CASRN	Nombre Químico	LD50	LC50	Peso%
PHTHALATE ESTER	Di(C7, C9) Ester ramificado & Lineal	Oral Rat: 10 mg/kg	----------	1-5
107-21-1	Etilen Glicol	Rat:4700 mg/kg	Rat:10876 mg/kg	0.1-1.0
7664-41-7	Trihidruro De Nitrogeno	----------	Rat:2000 ppm/4H	0.1-1.0
50-00-0	Formaldehido	----------	Rat:203 mg/m3	<0.02
140-88-5	Ester Etilico Del Acido 2 -Propenoico	----------	Rat:1414 ppm/4H	<0.008
75-07-0	Aldehídoacético	----------	Rat:13300 ppm/4H	<0.002
107-13-1	Cianuro De Vinilo	Oral Rat:78 mg/kg	Rat:425 ppm/4H	<0.0002

Carcinogenicidad:

Número CAS	Nombre Químico	ACGIH	OSHA	IARC	NTP	Peso%

14808-60-7	Silicecristalina	Cancerígeno humano sospechado.	-----	-----	Cancerígeno conocido.	0.1-1.0
13463-67-7	Dioxidodetitanio	-----	-----	Clasificación no posible de datos actuales.	-----	0.1-1.0
50-00-0	Formaldehido	Cancerígeno humano sospechado.	Peligro potencial de cancer.	Cancerígeno humano.	Cancerígeno anticipado.	<0.02
140-88-5	Ester Etilico Del Acido 2-Propenoico	-----	-----	Cancerígeno posible.	-----	<0.008
75-07-0	Aldehídoacético	Cancerígeno animal confirmado con la aplicabilidad desconocida a humanos.	-----	Cancerígeno posible.	Cancerígeno anticipado.	<0.002
107-13-1	Cianuro De Vinilo	Cancerígeno animal confirmado con la aplicabilidad desconocida a humanos.	Peligro de cancer.	Cancerígeno posible.	Cancerígeno anticipado.	<0.0002
79-06-1	Acrilamida	Cancerígeno animal confirmado con la aplicabilidad desconocida a humanos.	-----	Cancerígeno probable.	Cancerígeno anticipado.	<0.00005
75-21-8	Oxido de etileno	Cancerígeno humano sospechado.	Peligro de cancer.	Cancerígeno humano.	Cancerígeno conocido.	<0.000006

Datos significativos con posible relevancia para los humanos: Este producto contiene las cantidades de la huella de formaldehído libre. OSHA y NTP identifican formaldehído como un cancerígeno potencial. IARC identifica formaldehído como un cancerígeno humano. El formaldehído se ha mostrado para causar mutaciones en una variedad de en-vitros sistemas de la prueba, el significado de que a humanos es desconocido. En un estudio de inhalación con ratas durante dos años se observaron efectos cancerígenos en el sistema respiratorio con una concentración de 15 PPM de formaldehído. El riesgo debe ser mínimo al usarse con ventilación adecuada para mantener la concentración atmosférica del formaldehído por debajo de los límites de exposición recomendados.
Mantenga ventilación adecuada para evitar la exposición por encima de los límites actuales de OSHA / ACGIH. Podría ser necesario el monitoreo en el lugar de trabajo del aire para definir los niveles de exposición al formaldehído. Este producto contiene rastros de acrilonitrilo. Está exento del estándar OSHA acrilonitrilo 29 CFR 1910.1045, parágrafo (a) (2) (ii). El acrilonitrilo está clasificado por la IARC como posiblemente carcinogénico para humanos, por la agencia OSHA como carcinogénico y por la NTP como carcinógeno humano con anticipación razonable.

Sección 12 - Información ecológica

Información ecológica: No se conocen ni esperan daños ecológicos bajo uso normal.

Sección 13 - Información sobre desechos

Información sobre desechos: Deseche los materiales de acuerdo con todas las normas federales, estatales y locales. Las normas/ restricciones estatales y locales son complejas y pueden diferir de las normas federales. La responsabilidad de eliminar los desechos correctamente recae en el propietario de los desechos.

Código de desechos de EPA en caso de desecho (CFR 40 Sección 261): Ninguno

Sección 14 - Información sobre transporte

Nombre correcto para envío a DOT: No Regulado
Grupo de empaque: No Aplicable
Nombre técnico para DOT: No Aplicable
Sub-clase de riesgo: No Aplicable
Clase de riesgo para DOT: No Aplicable
Número UN/NA para DOT: No Aplicable

Nota: La información del envío proporcionada es aplicable para el transporte doméstico del suelo sólo. Categorización diferente puede aplicar si enviado vía otros modos del transporte y/o a destino no-domésticos.

Sección 15 - Información reglamentaria

Categoría de riesgo CERCLA - SARA:

Este producto ha sido revisado según las categorías de riesgo de EPA promulgadas según las secciones 311 y 312 de la Ley de enmienda y reautorización de fondos especiales de 1986 (SARA, por sus iniciales en inglés, Título III) y se considera, según las definiciones correspondientes, que cumple con las siguientes categorías:

PELIGRO DE SALUD INMEDIATO, PELIGRO DE SALUD CRONICO

Sección 313 de la ley SARA:

Este producto contiene las siguientes substancias sujeto a los requisitos de reporte de la sección 313 del título III de la ley SARA de 1986 y 40 CFR parte 372:

Ninguno

Ley para el control de substancias tóxicas:

Todos ingredientes en este producto son o en lista de inventario de TSCA, o de otro modo exima.

Este producto contiene las siguientes substancias químicas de acuerdo con los requisitos de reporte de la ley TSCA 12(B) si es exportado desde los Estados Unidos:

Ninguno

Regulaciones estatales de EE.UU.:

Ley del Derecho a saberde New Jersey:

Los siguientes materiales no representan peligro, pero están entre los primeros cinco componentes de este producto:

Nombre Químico	Número CAS	Peso%
Agua	7732-18-5	10-30
Polímero no-peligroso	Propietario	10-30

Ley del Derecho a saber de Pennsylvania:

Los siguientes ingredientes no peligrosos están presentes en el producto en una proporción mayor a 3%:

Nombre Químico	Número CAS	Peso%
Agua	7732-18-5	10-30
Polímero no-peligroso	Propietario	10-30

Propuesta 65 de California:

Advertencia: Los siguientes ingredientes presentes en el producto son conocidos para el Estado de California por causar cáncer:

Nombre Químico	Número CAS	Definición	Fecha Listó	Peso%
Silicecristalina	14808-60-7	Cancerígeno.	Listed: October 1, 1988	0.1-1.0
Formaldehido	50-00-0	Cancerígeno.	Listed: January 1, 1988	<0.02
Ester Etilico Del Acido 2-Propenoico	140-88-5	Cancerígeno.	Listed: July 1, 1989	<0.008
Aldehídoacético	75-07-0	Cancerígeno.	Listed: April 1, 1988	<0.002
Cianuro De Vinilo	107-13-1	Cancerígeno.	Listed: July 1, 1987	<0.0002
Acrilamida	79-06-1	Cancerígeno.	Listed: January 1, 1990	<0.00005
Oxido de etileno	75-21-8	Cancerígeno.	Listed: July 1, 1987	<0.000006

Advertencia: Los siguientes ingredientes presentes en el producto son conocidos para el Estado de California por causar defectos de nacimiento u otros daños reproductivos:

Nombre Químico	Número CAS	Definición	Fecha Listó	Peso%
Oxido de etileno	75-21-8	Sí	Listed: February 27, 1987	<0.000006

Sección 16 - Otra información

Índices HMIS:

Salud: 1 Inflamabilidad: 1 Reactividad: 0 Protección personal: X

COMPONENTES ORGÁNICOS VOLÁTILES, GR/LTR: 59.2 LB/GAL: 0.5 WT%: 2.482

RAZÓN DE LA REVISIÓN: Periódico Actualiza

Leyenda:

N.A. - No aplica

N.E. - No establecido

N.D. - No determinado

VOC - Componente orgánico volátil

PEL - Límites permitidos de exposición

TLV - Valor del límite umbral

STEL - Límite de exposición a corto plazo

LD50 - Dosis letal 50

HMIS - Sistema de identificación de materiales peligrosos

CASRN - Número de registro de servicios de abstractos químicos

ACGIH - Conferencia Americana de Higienistas Industriales gubernamentales

SARA - Ley Ley de enmienda y reautorización de fondos especiales de 1986 (SARA)

NJRTK - Ley del Derecho a saber de New Jersey

OSHA - Administración de la seguridad y salud ocupacional

C - Grados centígrados

NTP - Programa nacional de toxicología

CEIL - Límite máximo de exposición

LC50 - Concentración letal 50

MSDS - Hoja de datos de la seguridad de los materiales

F - Grados Fahrenheit

DAP cree que los datos y las declaraciones contenidos en el presente son exactos hasta la fecha. Se ofrecen de buena fe como valores típicos y no como las especificaciones del producto. **NO SE OFRECE NINGUNA GARANTÍA DE COMERCIABILIDAD, IDONEIDAD PARA UN PROPÓSITO EN PARTICULAR O CUALQUIER OTRA GARANTÍA, EXPRESA O IMPLÍCITA, CON RESPECTO A LA INFORMACIÓN SUMINISTRADA EN EL PRESENTE O DEL PRODUCTO AL CUAL LA INFORMACIÓN SE REFIERE.** Dado que este documento tiene la intención de ser una guía únicamente para el uso correcto y el manejo preventivo del producto de la referencia por parte de personas correctamente entrenadas, es responsabilidad del usuario (i) revisar las recomendaciones con especial consideración al contexto específico del uso que se pretende y (ii) determinar si son correctas.

<Final de la hoja de datos de la seguridad de los materiales>

Fiche signalétique

24 heures – Numéros de téléphone en cas d'urgence:

Urgence médicale: **1-800-327-3874**
1-513-558-5111

Urgence transport: **1-800-535-5053**
1-352-323-3500

NOTE: Les numéros de téléphone en cas d'urgence doivent être utilisés uniquement lors de déversement, de fuite, d'incendie, d'exposition ou d'accident impliquant des produits chimiques.

IMPORTANT: Lire attentivement cette fiche signalétique avant de manipuler ou de disposer de ce produit. Remettre ces informations aux employés, clients et utilisateurs de ce produit. Ce produit est régit sous la gouverne de l'OSHA, Communication de renseignements à l'égard de matières dangereuses, et ce document a été préparé pour répondre aux exigences de ces standards. Les significations pour toutes les abréviations utilisées dans cette fiche signalétique sont décrites à la Section 16.

Section 1 – Identification du produit et de la compagnie

This MSDS is offered in English upon request.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Nom du produit:	Alex Painters Le Mastic Acrylique de Latex - Toutes Couleur	**Date de révision:**	11/10/2004
Numéro UPC:	18065 18609 18618 18670 30206 73625 73630	**Date d'abrogation:**	10/29/2004
Utilisation du produit/Classe:	Calfeutrant au latex	**Numéro de fiche:**	00010011001
Fabricant:	**DAP Inc.** **2400 Boston Street Suite 200** **Baltimore, MD 21224-4723** **888-327-8477 (Pour toute information non urgente)**		

Section 2 - Composition / Ingrédients dangereux

Nom Chimique	CASRN	Poids%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Peau
Pierre à chaux	1317-65-3	40-70	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	Non
Di(C7, C9) Ester. Britannique & Linéaire	PHTHALATE ESTER	1-5	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	Non
Solvant Stoddard	8052-41-3	0.5-1.5	100 PPM	N.E.	N.E.	500 PPM	N.E.	N.E.	Non
Éthylène glycol	107-21-1	0.1-1.0	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	Non
Silice cristalline	14808-60-7	0.1-1.0	0.05 MGM3	N.E.	N.E.	(10 ÷ % SiO2) / 2 MGM3	N.E.	N.E.	Non
Dioxyde de titane	13463-67-7	0.1-1.0	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	Non
Ammoniac	7664-41-7	0.1-1.0	25 PPM	35 PPM	N.E.	50 PPM	N.E.	N.E.	Non
Formaldéhyde	50-00-0	<0.02	N.E.	N.E.	0.3 PPM	0.75 PPM	2 PPM	N.E.	Non
Acrylate d' éthyle	140-88-5	<0.008	5 PPM	15 PPM	N.E.	25 PPM	N.E.	N.E.	Oui
Acétaldéhyde	75-07-0	<0.002	N.E.	N.E.	25 PPM	200 PPM	N.E.	N.E.	Non
Acrylonitrile	107-13-1	<0.0002	2 PPM	N.E.	N.E.	2 PPM	10 PPM	N.E.	Oui

Notes concernant l'exposition:

50-00-0 Formaldéhyde est une substance régie spécialement selon les standards d'exposition à des produits chimiques spécifiques établis par l'OSHA. Pour de plus amples informations concernant cette substance, consulter l'OSHASP 29 CFR 1910.1048. Les informations concernant les problèmes médicaux à surveiller sont à l'Appendice C de l'OSHASP 29 CFR 1910.1048.

107-13-1 Acrylonitrile est une substance régie spécialement selon les standards d'exposition à des

produits chimiques spécifiques établis par l'OSHA. Pour de plus amples informations concernant cette substance, consulter l'OSHASP 29 CFR 1910.1045. Les informations concernant les problèmes médicaux à surveiller sont à l'Appendice C de l'OSHASP 29 CFR 1910.1045.

Important: Les limites d'exposition permises (LEP) décrites proviennent du Department of Labor des États-Unis, règlement final concernant les valeurs d'exposition moyennes pondérées de l'OSHA
(CFR 29 1910.1000); ces limites peuvent varier selon les états.

Note: Prendre tous les moyens selon les circonstances afin de prévenir ou réduire toute exposition de la peau des employés aux substances portant la mention «OUI» dans la colonne «PEAU» du tableau ci-dessus. Utiliser des gants, une combinaison, des lunettes étanches, tout autre équipement de protection personnel adéquat, les contrôles techniques et les pratiques appropriées au type de travail.

Section 3 – Identification des dangers

Urgences générales: Un Coloré la Pâte avec un l'odeur d'Ammoniaque Très Insignifiante. AVERTISSEMENT ! Nocif si avalé ou absorbé par la peau. Peut provoquer une irritation des voies respiratoires. Peut causer une irritation des yeux, de la peau, du nez, de la gorge et des voies respiratoires.

Consulter les autres sections de cette fiche signalétique pour des informations plus détaillées.

Effets de surexposition – Contact oculaire: Peut causer une irritation des yeux.

Effets de surexposition – Contact cutané: Nocif en cas d'absorption par la peau. Peut entraîner une sensibilisation par contact avec la peau. Peut causer des irritations de la peau et/ou dermatites.

Effets de surexposition – Inhalation: Vapeurs nocives. Peut affecter le cerveau ou le système nerveux causant des étourdissements, des maux de tête ou des nausées. Peut irriter le système respiratoire. L'inhalation des vapeurs peut causer une irritation du nez, de la gorge, des poumons et des voies respiratoires. L'exposition prolongée, ou répétée, ou à de fortes concentrations peut provoquer un affaiblissement et une dépression du système nerveux central.

Effets de surexposition – Ingestion: Nocif si ingéré.

Effets de surexposition – Dangers chroniques: Un contact excessif et répété avec la peau peut causer une irritation et possiblement une dermatite. Une exposition excessive et répétée peut causer des lésions au système respiratoire. Une exposition excessive peut causer des lésions aux reins, au système cardiovasculaire, à la peau et au foie. La vapeur de formaldéhyde est une substance cancérogène animale connue selon OSHA et NTP et est probablement considérée cancérogène aux humains par l'inhalation. L'Agence Internationale pour la Recherche sur le Cancer considère du formaldéhyde pour être une substance cancérogène humaine.
Une exposition excessive et répétée à l'éthylène glycol peut causer des lésions aux reins et au foie. Les études en laboratoire menées sur des animaux ont démontré que l'inhalation répétée d'éthylène glycol cause des changements néfastes du système cardiovasculaire. Lors d'études en laboratoire sur les animaux, il a été démontré que l'éthylène glycol cause des anomalies congénitales.

Voie(s) d'absorption: Peau le Contact, Inhalation, Oeil le Contact

Problèmes médicaux aggravés lors d'exposition au produit : Aucune connue.

Section 4 – Premiers soins

Premiers soins – Contact oculaire: En cas de contact avec les yeux, rincer abondamment avec de l'eau pendant au moins 15 minutes ou jusqu'à ce que l'irritation disparaisse. Obtenir des soins médicaux immédiatement.

Premiers soins – Contact cutané: Laver immédiatement et abondamment avec de l'eau et du savon à l'eau pendant au moins 15 minutes. Si les symptômes persistent, obtenir se soins médicaux. Enlever et laver les

vêtements contaminés.

Premiers soins – Inhalation: En cas d'inhalation, transporter la personne exposée à l'air frais. Si elle a de la difficulté à respirer, quitter les lieux afin d'obtenir de l'air frais. Si la difficulté à respirer persiste, obtenir des soins médicaux immédiatement.

Premiers soins – Ingestion: En cas d'ingestion, NE PAS FAIRE VOMIR. Obtenir des soins médicaux immédiatement.

Note au médecin: Pas d'information.

COMMENTAIRES: En cas d'apparition d'une irritation ou de complications suite à une exposition au produit, communiquer immédiatement avec l'urgence médicale au 1-800-327-3874.

Section 5 – Mesures de protection en cas d'incendie

Point d'éclair, ° F (° C): Plus grand que 200 degrés Fahrenheit
Méthode: (Seta A Fermé la Tasse)

Limite d'explosibilité inférieure, %: Pas Etabli

Limite d'explosibilité supérieure, %: Pas Etabli

Moyens d'extinction: Dioxyde de carbone, Sécher Chimique, Mousse, Arroser le Brouillard

Risques particuliers d'explosions ou d'ignition: Pas de mesures spéciales de protection requises pour la lutte contre le feu.

Procédures spéciales de lutte contre les incendies: Porter un respirateur autonome à pression d'air (approuvé NIOSH ou équivalent) et un équipement de protection personnel complet. Utiliser une lance-brouillard afin de refroidir les contenants exposés.

Section 6 – Mesures en cas de déversement accidentel

Procédures de nettoyage: Porter un équipement de protection personnel approprié tel que spécifié à la Section 8. Utiliser un matériau absorbant ou gratter le matériau sec puis le déposer dans un contenant.

Section 7 – Manutention et entreposage

Manutention: TENIR HORS DE LA PORTÉE DES ENFANTS! NE PAS AVALER. Éviter de respirer les vapeurs. Utiliser seulement si la ventilation est adéquate. Évitez de respirer les vapeurs et ne laissez pas le produit venir en contact avec les yeux, la peau ou les vêtements. Ouvrir toutes les fenêtres et les portes ou utiliser tout autre moyen afin d'assurer une ventilation en croisé et l'entrée d'air frais durant l'application et le temps de séchage. L'odeur n'est pas un critère valable pour déterminer les conditions de danger. Laver vigoureusement après la manipulation.

Entreposage: Refermer les contenants après usage. Entreposer les contenants loin de la chaleur excessive ou du froid excessif. Entreposer loin des produits caustiques et des agents oxydants. Ne pas entreposer à des températures supérieures à 120º F (48,8º C).

Section 8 – Contrôles d'exposition / Protection personnelle

Mesures de précaution: S'il vous plaît se référer aux autres sections et aux autres sous-sections de ce MSDS.

Contrôles d'ingénierie: Une bonne ventilation centrale devrait suffire pour contrôler les niveaux de matières en suspension. Assurer une ventilation adéquate, surtout dans les endroits clos. Une ventilation locale près de la source d'émission peut être nécessaire pour maintenir la concentration ambiante au-dessous des niveaux limites recommandés.

Protection des voies respiratoires: En cas de ventilation insuffisante, porter un appareil respiratoire approprié. Dans certaines circonstances, lorsque le niveau anticipé de concentrations en suspension est supérieur aux limites d'exposition permises, il est nécessaire de porter un respirateur purificateur d'air muni d'une cartouche ou d'un filtre à cartouche anti-vapeurs organiques. Un programme de protection respiratoire défini selon les normes de l'OSHA 1910.134 et de l'ANSI Z88.2 doit être appliqué à chaque fois que les conditions sur les lieux de travail exigent de porter un respirateur.

Protection de la peau: gants en caoutchouc

Protection des yeux: Lunettes étanches ou lunettes de sécurité avec boucliers latéraux.

Équipements de protection additionnels: inutile dans les conditions normales d'utilisation.

Pratiques hygiéniques: Enlever et laver les vêtements contaminés avant réutilisation. Se laver les mains avant les pauses et à la fin de la journée.

Section 9 – Propriétés physiques et chimiques

Point d'ébullition:	Pas Etabli	**Densité de vapeur:**	Plus lourd Qu'Aérer
Odeur:	L'Ammoniaque très Insignifiante	**Limite de détection olfactive:**	Pas Etabli
Apparence:	Coloré	**Taux d'évaporation:**	Plus lent Que Acétate de n-Butyl
Solubilité dans l'eau (H_2O):	Pas Etabli	**Poids spécifique:**	1.639
Point de congélation:	Pas Etabli	**Taux de pH:**	Entre 7,0 et 12,0
Pression de vapeur:	Pas Etabli	**Viscosité:**	Pas Etabli
État physique:	Pâte		

(Consulter la Section 16 pour connaître la signification des abréviations))

Section 10 – Stabilité et réactivité

Conditions à éviter: Chaleur excessive ou froid excessif.

Incompatibilité: Incompatible avec les bases fortes et les oxydants.

Produits de décomposition dangereux: Produits de décomposition habituels : oxydes de carbone (COx) et oxydes d'azote (NOx).

Risque de polymérisation: Aucune polymérisation dangereuse ne surviendra dans des conditions normales d'utilisation.

Stabilité: Stable dans les conditions recommandées de stockage.

Section 11 – Propriétés toxicologiques

Produit DL50: Pas Etabli **Produit CL50:** Pas Etabli

CASRN	Nom Chimique	LD50	LC50	Poids%
PHTHALATE ESTER	Di(C7, C9) Ester. Britannique & Linéaire	Oral Rat: 10 mg/kg	----------	1-5
107-21-1	Éthylène glycol	Rat:4700 mg/kg	Rat:10876 mg/kg	0.1-1.0
7664-41-7	Ammoniac	----------	Rat:2000 ppm/4H	0.1-1.0
50-00-0	Formaldéhyde	----------	Rat:203 mg/m3	<0.02
140-88-5	Acrylate d' éthyle	----------	Rat:1414 ppm/4H	<0.008
75-07-0	Acétaldéhyde	----------	Rat:13300 ppm/4H	<0.002
107-13-1	Acrylonitrile	Oral Rat:78 mg/kg	Rat:425 ppm/4H	<0.0002

Effets cancérigènes:

Numéro CAS	Nom Chimique	ACGIH	OSHA	IARC	NTP	Poids%
14808-60-7	Silice cristalline	Présumée cancérogène humaine.	-----	-----	Cancérogène connue.	0.1-1.0
13463-67-7	Dioxyde de titane	-----	-----	Classification pas possible des données actuelles.	-----	0.1-1.0
50-00-0	Formaldéhyde	Présumée cancérogène humaine.	Le danger potentiel de cancer.	Cancérogène humaine.	Cancérogène prévue.	<0.02
140-88-5	Acrylate d'éthyle	-----	-----	Cancérogène possible.	-----	<0.008
75-07-0	Acétaldéhyde	Confirmée cancérogène animale avec le pertinence inconnu aux humains.	-----	Cancérogène possible.	Cancérogène prévue.	<0.002
107-13-1	Acrylonitrile	Confirmée cancérogène animale avec le pertinence inconnu aux humains.	Danger de cancer.	Cancérogène possible.	Cancérogène prévue.	<0.0002
79-06-1	Acrylamide	Confirmée cancérogène animale avec le pertinence inconnu aux humains.	-----	Cancérogène probable.	Cancérogène prévue.	<0.00005
75-21-8	Oxyde d'éthylène	Présumée cancérogène humaine.	Danger de cancer.	Cancérogène humaine.	Cancérogène connue.	<0.000006

Données significatives possiblement pertinentes à l'humain: Ce produit contient les quantités de trace de formaldéhyde libre. OSHA et NTP identifient du formaldéhyde comme une substance cancérogène potentielle. IARC identifie du formaldéhyde comme une substance cancérogène humaine. Le formaldéhyde a été montré pour causer des mutations dans une assortiment de systèmes de test in vitro, la signification dont à l'être humain inconnu. Des études d'inhalation d'une durée de deux ans effectuées sur le rat ont mis en évidence des effets cancérigènes sur le système respiratoire pour des concentrations de 15 ppm de formaldéhyde. Le risque devrait être minime si la ventilation est adéquate et maintient le niveau de concentrations de formaldéhyde en suspension sous les limites d'exposition permises.
Maintenir une ventilation adéquate afin d'abaisser les niveaux d'exposition sous les limites établies par l'OSHA / ACGIH. L'analyse de l'air ambiant sur les lieux de travail peut s'avérer nécessaire afin de déterminer les niveaux d'exposition au formaldéhyde. Ce produit contient des traces d'acrylonitrile. Il ne rencontre pas les standards de l'OSHA 29 CFR 1910.1045, paragraphe (a) (2) (ii) concernant l'acrylonitrile. L'acrylonitrile a été classifiée potentiellement cancérigène pour l'humain par l'AIRC, cancérigène par l'OSHA et cancérigène raisonnablement anticipé pour l'humain par la NTP.

Section 12 – Information écologique

Information écologique: Aucune dégradation de l'environnement n'est connue ou prévisible dans les conditions normales d'utilisation.

Section 13 – Information sur la mise au rebut

Information concernant la mise au rebut: Disposer de ce matériau en respectant les lois fédérales, provinciales et municipales. Les lois et restrictions provinciales et municipales sont complexes et peuvent différer des lois fédérales. La responsabilité de la disposition appropriée des déchets appartient au propriétaire des déchets.

Code de mise au rebut de l'Agence de protection de l'environnement (40 CFR Section 261): Aucun

Section 14 – Étiquetage selon le Ministère des Transports

Nom du produit expédié: Pas Réglé
Nom technique: Pas Applicable
Classe de danger: Pas Applicable
Groupe d'emballage: Pas Applicable
Classe de transport: Pas Applicable
Numéro UN/NA: Pas Applicable

Note : L'information d'expédition fournie est applicable pour le transport de sol domestique seulement. La

catégorisation différente peut s'appliquer si expédié via les autres modes de et/ou de transport aux destinations non résidentielles.

Section 15 – Information sur les règlements

CERCLA - Catégories de dangers selon le SARA:

Ce produit a été revu en conformité avec les «Catégories de dangers» établies par l'Agence de protection de l'environnement et promulguées aux Sections 311 et 312 du Superfund Amendment and Reauthorization Act de 1986 (SARA Titre III). Selon les définitions applicables, il est considéré répondre aux catégories suivantes :

RISQUE DE SANTE IMMEDIAT, RISQUE DE SANTE CHRONIQUE

SARA SECTION 313 :
Ce produit contient les substances suivantes assujetties aux normes de déclaration de la Section 313, du Titre III de la Superfund Amendments and Reauthorization Act de 1986 et du 40 CFR partie 372 :

Aucun

LOI SUR LE CONTRÔLE DES SUBSTANCES TOXIQUES:

Tous ingrédients dans ce produit sont ou sur la liste d'inventaire de TSCA, ou autrement exempter.

Ce produit contient les substances chimiques suivantes à déclarer selon les normes TSCA 12(B) si exporté à l'extérieur des États-Unis:

Aucun

Lois particulières selon les états aux États-Unis:

NEW JERSEY RIGHT-TO-KNOW :

Les substances suivantes sont non-dangereuses mais sont comptées parmi les 5 principaux ingrédients composant ce produit:

Nom Chimique	Numéro CAS	Poids%
Eau	7732-18-5	10-30
Polymère non-Hasardeux	De propriété	10-30

PENSYLVANIA RIGHT-TO-KNOW:

Les substances suivantes sont non-dangereuses mais sont présentes à plus de 3% dans ce produit:

Nom Chimique	Numéro CAS	Poids%
Eau	7732-18-5	10-30
Polymère non-Hasardeux	De propriété	10-30

PROPOSITION 65 DE CALIFORNIE:

AVERTISSEMENT ! Les produits chimiques listés ci-dessous et contenus dans ce produit sont reconnus par l'État de la Californie pour causer le cancer:

Nom Chimique	Numéro CAS	Définition	Dater Enuméré	Poids%
Silice cristalline	14808-60-7	Cancérogène.	Listed: October 1, 1988	0.1-1.0
Formaldéhyde	50-00-0	Cancérogène.	Listed: January 1, 1988	<0.02
Acrylate d' éthyle	140-88-5	Cancérogène.	Listed: July 1, 1989	<0.008

Acétaldéhyde	75-07-0	Cancérogène.	Listed: April 1, 1988	<0.002
Acrylonitrile	107-13-1	Cancérogène.	Listed: July 1, 1987	<0.0002
Acrylamide	79-06-1	Cancérogène.	Listed: January 1, 1990	<0.00005
Oxyde d'éthylène	75-21-8	Cancérogène.	Listed: July 1, 1987	<0.000006

AVERTISSEMENT ! Les produits chimiques listés ci-dessous et contenus dans ce produit sont reconnus par l'État de la Californie pour causer le cancer, des anomalies congénitales ou d'autres problèmes reliés à la reproduction:

Nom Chimique	Numéro CAS	Définition	Dater Enuméré	Poids%
Oxyde d'éthylène	75-21-8	Oui	Listed: February 27, 1987	<0.000006

Section 16 – Autres informations

Classification des dangers:

Santé: 1 Inflammabilité: 1 Réactivité: 0 Protection personnelle: X

COMPOSÉ ORGANIQUE VOLATIL, G/LITRE: 59.2 LB/GALLON: 0.5 POIDS %: 2.482

RAISONS DE RÉVISION: Mise à jour périodique

Légende: N.A. – Non applicable

ACGIH – American Conference of Governmental Industrial Hygienists

N.É. – Non établi

SARA – Superfund Amendments and Reauthorization Act de 1986

N.D. – Non déterminé

NJRTK – New Jersey Right-to-Know Law

VOC – Composé organique volatil

OSHA – Occupational Safety and Health Administration

PEL – Limite d'exposition permise

HMIS – Hazardous Materials Identification System

TLV – Limite tolérable d'exposition

TWA – Valeur d'exposition moyenne pondérée

NTP – National Toxicology Program

F – Degré Fahrenheit

STEL – Limite d'exposition à court terme

C – Degré Celcius

LD50 – Dose létale 50

LC50 – Concentration létale 50

CASRN – Numéro enregistré selon le Chemical Abstracts Service

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

DAP croit que les données et renseignements stipulés dans cette fiche signalétique sont précis à la date de rédaction de cette fiche. Ces données sont offertes en toute bonne foi et représente des valeurs standard sans toutefois être des spécifications du produit. **AUCUNE GARANTIE SUR LA QUALITÉ MARCHANDE, GARANTIE D'APTITUDE POUR AUCUN TYPE D'EMPLOI PARTICULIER OU TOUTE AUTRE FORME DE GARANTIE N'EST EXPRESSÉMENT OU IMPLICITEMENT OFFERTE EN REGARD DES INFORMATIONS FOURNIES DANS CETTE FICHE OU DES INFORMATIONS RELATIVES AU PRODUIT.** Cette fiche est produite uniquement à titre de guide pour les personnes formées à cet effet afin qu'elles puissent appliquer les procédures appropriées de manutention auxquelles le produit réfère. Toutefois, c'est la responsabilité chaque utilisateur de revoir les recommandations selon le contexte spécifique de l'utilisation prévue et de déterminer si ces procédures sont appropriées.

<Fin de la fiche signalétique>

Safety Data Sheet

24 Hour Emergency Phone Numbers
Medical/Poison Control:
In U.S.: Call 1-800-222-1222

Outside U.S.: Call your local poison control center

Transportation/National Response Center:

1-800-535-5053
1-352-323-3500

NOTE: The National ResponseCenter emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this SDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

1. Identification

This Safety Data Sheet is available in American Spanish upon request.
Los Datos de Serguridad pueden obtenerse en Espanol si lo riquiere.

Product Name:	Alex Plus Acrylic Latex Caulk Plus Silicone - All Colors	**Revision Date:**	1/12/2016
Product UPC Number:	11440, 18101, 18107, 18109, 18110, 18111, 18112, 18128, 18135, 18136, 18155, 18172	**Supercedes Date:**	6/19/2015
Product Use/Class:	Caulking Compound	**SDS No:**	00010002001
Manufacturer:	DAP Products Inc. 2400 Boston Street Suite 200 Baltimore, MD 21224-4723 888-327-8477 (non - emergency matters)		
Preparer:	Regulatory Department		

2. Hazards Identification

EMERGENCY OVERVIEW: Under normal use conditions, this product is not expected to cause adverse health effects.

GHS Classification
Not a hazardous substance or mixture.

Symbol(s) of Product

None

Signal Word
Not a hazardous substance or mixture.

Possible Hazards
13% of the mixture consists of ingredients of unknown acute toxicity

3. Composition/Information on Ingredients

Chemical Name	CAS-No.	Wt. %	GHS Symbols	GHS Statements
Limestone	1317-65-3	50-75	GHS03	H270
Dipropylene glycol dibenzoate	27138-31-4	1.0-2.5	GHS03	H270
Petroleum distillates	64741-88-4	1.0-2.5	GHS03-GHS06	H270-331
Diethylene glycol dibenzoate	120-55-8	1.0-2.5	GHS03-GHS07	H270-312
Titanium dioxide	13463-67-7	0.1-1.0	No Information	No Information
Quartz	14808-60-7	0.1-1.0	GHS03-GHS07	H270-302
Carbon black	1333-86-4	0.1-1.0	No Information	No Information

The text for GHS Hazard Statements shown above (if any) is given in the "Other information" Section.

4. First-aid Measures

FIRST AID - INHALATION: Material is not likely to present an inhalation hazard at ambient conditions. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately.

FIRST AID - SKIN CONTACT: No health hazards are known to exist. In case of contact, wash skin immediately with soap and water.

FIRST AID - EYE CONTACT: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

FIRST AID - INGESTION: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

5. Fire-fighting Measures

UNUSUAL FIRE AND EXPLOSION HAZARDS: No Information

SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam, Water Fog

6. Accidental Release Measures

ENVIRONMENTAL MEASURES: No Information

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Scrape up dried material and place into containers. Use personal protective equipment as necessary. In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations.

7. Handling and Storage

HANDLING: KEEP OUT OF REACH OF CHILDREN!DO NOT TAKE INTERNALLY. Use only with adequate ventilation. Ensure fresh air entry during application and drying. Wash thoroughly after handling.

STORAGE: Avoid excessive heat and freezing. Do not store at temperatures above 120 degrees F. Store away from caustics and oxidizers.

8. Exposure Controls/Personal Protection

Ingredients with Occupational Exposure Limits

Chemical Name	ACGIH TLV-TWA	ACGIH-TLV STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Limestone	N.E.	N.E.	15 mg/m3 TWA total dust, 5 mg/m3 TWA respirable fraction	N.E.
Dipropylene glycol dibenzoate	N.E.	N.E.	N.E.	N.E.
Petroleum distillates	N.E.	N.E.	N.E.	N.E.
Diethylene glycol dibenzoate	N.E.	N.E.	N.E.	N.E.

Titanium dioxide	10 mg/m3 TWA	N.E.	15 mg/m3 TWA total dust	N.E.
Quartz	0.025 mg/m3 TWA respirable fraction	N.E.	N.E.	N.E.
Carbon black	3 mg/m3 TWA inhalable fraction	N.E.	3.5 mg/m3 TWA	N.E.

Further Advice: MEL = Maximum Exposure Limit OES = Occupational Exposure Standard SUP = Supplier's Recommendation Sk = Skin Sensitizer N.E. = Not Established

Personal Protection



RESPIRATORY PROTECTION: No personal respiratory protective equipment normally required. National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m3) as determined by a full shift sample up to 10-hour work shift.



SKIN PROTECTION: Rubber gloves.



EYE PROTECTION: Goggles or safety glasses with side shields.



OTHER PROTECTIVE EQUIPMENT: Not required under normal use.



HYGIENIC PRACTICES: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

9. Physical and Chemical Properties

Appearance:	Colored	**Physical State:**	Paste
Odor:	Very Slight Ammonia	**Odor Threshold:**	Not Established
Density, g/cm3:	1.64 - 1.67	**pH:**	Between 7.0 and 12.0
Freeze Point, °C:	Not Established	**Viscosity (mPa.s):**	Not Established
Solubility in Water:	No Information	**Partition Coeff., n-octanol/water:**	Not Established
Decomposition Temperature, °C:	Not Established	**Explosive Limits, %:**	N.I. - N.I.
Boiling Range, °C:	N.I. - N.I.	**Auto-Ignition Temperature, °C**	Not Established
Minimum Flash Point, °C:	93.3	**Vapor Pressure, mmHg:**	No Information
Evaporation Rate:	Slower Than n-Butyl Acetate	**Flash Method:**	Seta Closed Cup
Vapor Density:	Heavier Than Air	**Flammability:**	Non-Flammable
Combustibility:	Does not support combustion		

(See "Other information" Section for abbreviation legend)
(If product is an aerosol, the flash point stated above is that of the propellant.)

10. Stability and Reactivity

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Incompatible with strong bases and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e., COx, NOx.

11. Toxicological Information

EFFECT OF OVEREXPOSURE - INHALATION: Under normal use conditions, this product is not expected to cause adverse health effects. Inhalation of vapors in high concentration may cause mild irritation of respiratory system (nose, mouth, mucous membranes).

EFFECT OF OVEREXPOSURE - SKIN CONTACT: Under normal use conditions, this product is not expected to cause adverse health effects. Prolonged or repeated contact with skin may cause mild irritation.

EFFECT OF OVEREXPOSURE - EYE CONTACT: Under normal use conditions, this product is not expected to cause adverse health effects. Direct eye contact may cause irritation.

EFFECT OF OVEREXPOSURE - INGESTION: Under normal use conditions, this product is not expected to cause adverse health effects. Single dose oral toxicity is very low. Amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of large amounts may cause injury.

CARCINOGENICITY: No Information

EFFECT OF OVEREXPOSURE - CHRONIC HAZARDS: Repeated or prolonged exposure may cause irritation of eyes and skin. The International Agency for Research on Cancer (IARC) has determined that crystalline silica in the form of quartz or cristobalite that is inhaled from occupational sources is carcinogenic to humans (Group 1- carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program (NTP) classifies respirable crystalline silica as "known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (Group A2). Breathing dust containing respirable crystalline silica may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects: Excessive inhalation of respirable dust can cause pneumoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. Smoking exacerbates this disease. Individuals with pneumoconiosis are predisposed to develop tuberculosis. There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease.

PRIMARY ROUTE(S) OF ENTRY: Inhalation, Skin Contact

Acute Toxicity Values
The acute effects of this product have not been tested. Data on individual components are tabulated below

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
1317-65-3	Limestone	6450 mg/kg Rat	>2000 mg/kg	>20 mg/L
27138-31-4	Dipropylene glycol dibenzoate	5368 mg/kg Rat	>2000 mg/kg Rabbit	>200 mg/L Rat
64741-88-4	Petroleum distillates	>5000 mg/kg Rat	>2000 mg/kg Rabbit	2.18 mg/L Rat
120-55-8	Diethylene glycol dibenzoate	2830 mg/kg Rat	2000 mg/kg Rabbit	> 200 mg/L Rat
13463-67-7	Titanium dioxide	>10000 mg/kg Rat	>5000 mg/kg Rabbit	>20 mg/L
14808-60-7	Quartz	500 mg/kg Rat	>2000 mg/kg	>20 mg/L
1333-86-4	Carbon black	>8000 mg/kg Rat	>3000 mg/kg Rabbit	N.I.

N.I. = No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Ecological injuries are not known or expected under normal use.

13. Disposal Information

DISPOSAL INFORMATION: This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous

Waste Management Regulation, 40 CFR Section 261. Dispose as hazardous waste according to all local, state, federal and provincial regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

14. Transport Information

SPECIAL TRANSPORT PRECAUTIONS: No Information

DOT UN/NA Number:	N.A.
DOT Proper Shipping Name:	Not Regulated.
DOT Technical Name:	N.A.
DOT Hazard Class:	N.A.
Hazard SubClass:	N.A.
Packing Group:	N.A.

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Acute Health Hazard, Chronic Health Hazard

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

No Sara 313 components exist in this product.

TOXIC SUBSTANCES CONTROL ACT:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

CALIFORNIA PROPOSITION 65 CARCINOGENS AND REPORODUCTIVE TOXINS

CALIFORNIA PROPOSITION 65: WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This SDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

WHMIS Class Consumer Commodity

16. Other Information

Revision Date: 1/12/2016 **Supersedes Date:** 6/19/2015

Reason for revision: Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
16 - Other Information
Statement(s) Changed

Datasheet produced by: Regulatory Department

HMIS Ratings:

Health:	1	**Flammability:**	1	**Reactivity:**	0	**Personal Protection:**	X

VOC Less Water Less Exempt Solvent, g/L38.0

VOC Material, g/L:28

VOC as Defined by California Consumer Product Regulation, Wt/Wt%:0.8

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H270	May cause or intensify fire; oxidiser.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H331	Toxic if inhaled.

Icons for GHS Pictograms shown in Section 3 describing each ingredient:

GHS03



GHS06



GHS07



Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS. Since thisdocument is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

Material Safety Data Sheet

An RPM Company

24 Hour Emergency Phone Numbers:
Medical/Poison Control:
In U.S.: Call 1-800-222-1222
Outside U.S.: Call your local poison control center
Transportation/National Response Center:
1-800-535-5053
1-352-323-3500

NOTE: The National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in American Spanish upon request.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Product Name:	Alex Ultra 230 Premium Indoor/Outdoor Sealant	**Revision Date:**	10/26/2012
Product UPC Number:	070798114364, 070798115002, 070798115064, 070798115088, 070798115095, 070798115125, 070798115156, 070798115774	**Supersedes:**	02/18/2009
Product Use/Class:	Caulk	**MSDS Number:**	00010057001
Manufacturer:	**DAP Products Inc.** **2400 Boston Street Suite 200** **Baltimore, MD 21224-4723** **888-327-8477 (non-emergency matters)**		

Section 2 - Hazards Identification

Emergency Overview: A(n) colored paste product with a very slight ammonia odor. WARNING! May cause eye, skin, nose, throat and respiratory tract irritation. Harmful if swallowed or absorbed through the skin. This product contains ethylene glycol.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: Harmful if absorbed through the skin. May cause skin irritation.

Effects Of Overexposure - Inhalation: May be harmful if inhaled. Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes).

Effects Of Overexposure - Ingestion: Harmful if swallowed. If ingested, may cause depressed respiration. Ingestion may result in obstruction when material hardens. Ingestion of ethylene glycol can cause gastrointestinal irritation, nausea, vomiting, diarrhea and if ingested in sufficient quantities, death.

Effects Of Overexposure - Chronic Hazards: Repeated or prolonged exposure may cause skin, respiratory, kidney and liver damage. Prolonged and repeated skin contact may cause irritation and possibly dermatitis.

The International Agency for Research on Cancer (IARC) has determined that crystalline silica in the form of quartz or cristobalite that is inhaled from occupational sources is carcinogenic to humans (Group 1- carcinogenic to humans). Refer

to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program (NTP) classifies respirable crystalline silica as "known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (Group A2).
Breathing dust containing respirable crystalline silica may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects: Excessive inhalation of respirable dust can cause pneumoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. Smoking exacerbates this disease. Individuals with pneumoconiosis are predisposed to develop tuberculosis. There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease. Prolonged, repeated, or high exposures may cause weakness and depression of the central nervous system.

Ethylene Glycol may cause kidney and liver damage upon prolonged and repeated overexposures. Studies have shown that repeated inhalation of ethylene glycol has produced adverse cardiovascular changes in laboratory animals. Ethylene glycol has been shown to cause birth defects in laboratory animals.

Primary Route(s) Of Entry: Skin Contact, Inhalation

Medical Conditions which May be Aggravated by Exposure: None known.

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP
13463-67-7	Titanium dioxide	Not Listed.	Not Listed.	Possibly carcinogenic to humans.	Not Listed.
14808-60-7	Silica, crystalline	Suspected human carcinogen.	Not Listed.	Carcinogenic to humans.	Known To Be Human Carcinogen.
1333-86-4	Carbon black	Confirmed animal carcinogen with unknown relevance to humans.	Not Listed.	Possibly carcinogenic to humans.	Not Listed.

Section 3 - Composition / Information On Ingredients

Chemical Name	CASRN	Wt%
Limestone	1317-65-3	30-60
Benzoate esters	Proprietary	5-10
Titanium dioxide	13463-67-7	1-5
Ethylene glycol	107-21-1	0.5-1.5
Silica, crystalline	14808-60-7	0.1-1.0
Carbon black	1333-86-4	0.1-1.0

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

First Aid - Skin Contact: Remove and wash contaminated clothing. Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical aid if symptoms persist. If skin irritation persists, call a physician.

First Aid - Inhalation: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

Note to Physician: None.

COMMENTS: If over-exposure occurs, call your poison control center at 1-800-222-1222.

Section 5 - Fire Fighting Measures

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: No special protective measures against fire required.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! DO NOT TAKE INTERNALLY. Use only with adequate ventilation. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Odor is not an adequate warning for hazardous conditions. Avoid breathing vapor and contact with eyes, skin and clothing. Wash thoroughly after handling.

Storage: Close container after each use. Do not store at temperatures above 120 degrees F. Store containers away from excessive heat and freezing. Store away from caustics and oxidizers.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Limestone	1317-65-3	10 MGM3	N.E.	N.E.	5 MGM3 (respirable fraction)	N.E.	N.E.	No
Benzoate esters	Proprietary	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Titanium dioxide	13463-67-7	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	No
Ethylene glycol	107-21-1	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No
Silica, crystalline	14808-60-7	0.025 MGM.	N.E.	N.E.	10/(%SiO2 + 2) MGM3	N.E.	N.E.	No
Carbon black	1333-86-4	3 MGM3	N.E.	N.E.	3.5 MGM3	N.E.	N.E.	No

Exposure Notes:

14808-60-7 The 2002 ACGIH Threshold Limit Values for Chemical Substances and Physical Agents lists the median Respirable Particulate Mass (RPM) point for crystalline silica at 4.0 microns in terms of the particle's aerodynamic diameter.

The TLVs for crystalline silica represent the respirable fraction.

OSHA PEL TWA for Quartz is calculated using the following formula: 10 mg/m3/(% SiO2 + 2). Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size selector with the following characteristics.

..... Aerodynamic diameter (unit density sphere)	Percent passing selector
2	90
2.5	75
3.5	50
5.0	25

| 10 .....|.....0.....|

Precautionary Measures: Contact lenses pose a special hazard; soft lenses may absorb and all lenses concentrate irritants.

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Ensure adequate ventilation, especially in confined areas. Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m3) as determined by a full shift sample up to 10-hour work shift.

Skin Protection: Rubber gloves.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	**Vapor Density:**	Heavier Than Air
Odor:	Very Slight Ammonia	**Odor Threshold:**	Not Established
Color:	Colored	**Evaporation Rate:**	Slower Than n-Butyl Acetate
Solubility in H2O:	Not Established	**Specific Gravity:**	0.00 - 1.49
Freeze Point:	Not Established	**pH:**	Between 7.0 and 12.0
Vapor Pressure:	Not Established	**Viscosity:**	Not Established
Physical State:	Paste	**Flammability:**	Non-Flammable
Flash Point, F:	Greater than 200	**Method:**	(Seta Closed Cup)
Lower Explosive Limit, %:	Not Determined	**Upper Explosive Limit, %:**	Not Determined

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established **Product LC50:** Not Established

CASRN	Chemical Name	LD50	LC50
107-21-1	Ethylene glycol	Rat:4700 mg/kg	Rat:10876 mg/kg
1333-86-4	Carbon black	Rat:>15400 mg/kg	----------

Significant Data with Possible Relevance to Humans: None.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): None.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Not Regulated.	**Packing Group:**	N.A.
DOT Technical Name:	N.A.	**Hazard Subclass:**	N.A.
DOT Hazard Class:	N.A.	**DOT UN/NA Number:**	N.A.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

None

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number
Non-Hazardous Polymer	Proprietary
Acrylic polymer	Proprietary
Water	7732-18-5

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Non-Hazardous Polymer	Proprietary
Acrylic polymer	Proprietary
Water	7732-18-5

California Proposition 65:

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16 - Other Information

HMIS Ratings:

Health: 1 Flammability: 1 Reactivity: 0 Personal Protection: X

Volatile Organic Compounds (VOC), less water less exempts: g/L: 33.8 lb/gal: 0.28 wt:wt%: 1.6

Volatile Organic Compounds (VOC), less water less exempts, less LVP-VOCs: wt:wt%: 0.1

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable
N.E. – Not Established
N.D. – Not Determined
VOC – Volatile Organic Compound
PEL – Permissible Exposure Limit
TLV – Threshold Limit Value
CEIL – Ceiling Exposure Limit
LD50 – Lethal Dose 50
F – Degree Fahrenheit
C – Degree Celsius

ACGIH – American Conference of Governmental Industrial Hygienists
SARA – Superfund Amendments and Reauthorization Act of 1986
NJRTK – New Jersey Right-to-Know Law
OSHA – Occupational Safety and Health Administration
HMIS – Hazardous Materials Identification System
NTP – National Toxicology Program
STEL – Short Term Exposure Limit
LC50 – Lethal Concentration 50
MSDS – Material Safety Data Sheet
CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE**

INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS. Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

Material Safety Data Sheet

An RPM Company

24 Hour Emergency Phone Numbers:
Medical/Poison Control:
1-800-327-3874
1-513-558-5111
Transportation/National Response Center:
1-800-535-5053
1-352-323-3500

NOTE: The National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
On peut demader cette fiche signalétique (MSDS) a la langue francaise-canadienne.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Product Name:	DAP BEATS THE NAIL General Purpose Construction Adhesive	**Revision Date:**	08/29/2007
Product UPC Number:	070798250826, 070798250840, 070798254848, 070798254985, 070798310162, 070798310209, 070798342002, 070798352001	**Supercedes:**	08/29/2002
Product Use/Class:	General Purpose Construction Adhesive	**MSDS Number:**	00077084001
Manufacturer:	**DAP Inc.** **2400 Boston Street Suite 200** **Baltimore, MD 21224-4723** **888-327-8477 (non-emergency matters)**		

Section 2 - Hazards Identification

Emergency Overview: A gray paste product with a solvent odor. DANGER! Vapors may ignite explosively. Keep away from heat, sparks and flame. Do not breathe dust, vapors or spray mist. Use only with adequate ventilation. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Aspiration hazard if swallowed. Aspiration may cause pulmonary edema and pneumonitis.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: Causes eye irritation. May cause eye irritation.

Effects Of Overexposure - Skin Contact: Causes skin irritation. Prolonged and repeated skin contact may cause dermatitis, drying and defatting due to the solvent properties.

Effects Of Overexposure - Inhalation: Vapor harmful. May affect the brain or nervous system causing

dizziness, headache or nausea. Vapors are harmful when inhaled. Inhalation of vapors in high concentration may cause irritation of respiratory system. Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes). Can cause nerve damage to arms and legs. Effects may be permanent.

Effects Of Overexposure - Ingestion: Harmful or fatal if swallowed. If ingested, may cause vomiting, diarrhea, and depressed respiration. May be harmful if swallowed. Aspiration into lungs may cause pulmonary edema and chemical pneumonitis.

Effects Of Overexposure - Chronic Hazards: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Symptoms include: loss of memory, loss of intellectual ability and loss of coordination. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Prolonged or repeated contact with acetone can cause defattening of the skin, which may lead to dermatitis. Overexposure or misuse of toluene can cause liver, kidney, and brain damage as well as cardiac abnormalities. There have been cases of aplastic anemia from toluene in industrial exposures (ACGIH, 1992). Increased coagulation time and reduced clotting factors have also been found, which are indicators of damage to the bone marrow (Clayton & Clayton, 1994).

n-Hexane exposure can cause nerve damage to arms and legs causing numbness of the fingers and toes, effect may be permanent. Symptoms include: loss of memory, loss of intellectual ability and loss of coordination.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Ingestion, Eye Contact

Medical Conditions which May be Aggravated by Exposure: None known.

Carcinogenicity: None Known

Section 3 - Composition / Information On Ingredients

Chemical Name	CASRN	Wt%
Calcium Carbonate	471-34-1	30-60
n-Hexane	110-54-3	5-10
Magnesite	546-93-0	5-10
2-Methylpentane	107-83-5	3-7
3-Methylpentane	96-14-0	3-7
Methylcyclopentane	96-37-7	1-5
Isoheptane	591-76-4	0.5-1.5
2,3-Dimethylbutane	79-29-8	0.1-1.0
2,4-Dimethylpentane	108-08-7	0.1-1.0
3-Methylhexane	589-34-4	0.1-1.0
2,2-Dimethylpentane	590-35-2	0.1-1.0
Cyclohexane	110-82-7	0.1-1.0
2,3-Dimethylpentane	565-59-3	0.1-1.0
3,3-Dimethylpentane	562-49-2	0.1-1.0
Neohexane	75-83-2	<0.09

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

First Aid - Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is

difficult, give oxygen. Get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

Note to Physician: None.

COMMENTS: Call Medical Emergency at 1-800-327-3874 if any irritation or complication arises from any of the above routes of entry.

Section 5 - Fire Fighting Measures

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam

Unusual Fire And Explosion Hazards: Store away from caustics and oxidizers. Material will readily ignite at room temperature. Extremely Flammable! Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Containers may explode if exposed to extreme heat. Eliminate sources of ignition: heat, electrical equipment, sparks and flames. Vapors may form explosive mixtures with air. Vapors can flow along surfaces to a distant ignition source and flash back. Flammable liquid. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to a distant ignition source and flash back.

Special Firefighting Procedures: Use a self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode. Cool containers and/or tanks with spray water.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. None known.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! DO NOT TAKE INTERNALLY. Avoid breathing vapors. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal. Vapors may cause flash fire. Use only with adequate ventilation. Do not get in eyes, on skin or clothing. Wash thoroughly after handling. Construction and repair activities can adversely affect indoor air quality. Consult with occupants or a representative (i.e. maintenance, building manager, industrial hygienist, or safety officer) to determine ways to minimize impact.

Storage: Keep away from heat and sources of ignition. Do not store at temperatures above 120 degrees F. Store containers away from excessive heat and freezing. Keep containers closed when not in use. Store away from caustics and oxidizers.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Calcium Carbonate	471-34-1	10 MGM3	N.E.	N.E.	5 MGM3 (respirable fraction)	N.E.	N.E.	No
n-Hexane	110-54-3	50 PPM	N.E.	N.E.	500 PPM	N.E.	N.E.	Yes
Magnesite	546-93-0	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
2-Methylpentane	107-83-5	500 PPM	1000 PPM	N.E.	N.E.	N.E.	N.E.	No
3-Methylpentane	96-14-0	500 PPM	1000 PPM	N.E.	N.E.	N.E.	N.E.	No
Methylcyclopentane	96-37-7	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Isoheptane	591-76-4	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No
2,3-Dimethylbutane	79-29-8	500 PPM	1000 PPM	N.E.	N.E.	N.E.	N.E.	No
2,4-Dimethylpentane	108-08-7	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No
3-Methylhexane	589-34-4	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No

2,2-Dimethylpentane	590-35-2	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No
Cyclohexane	110-82-7	100 PPM	N.E.	N.E.	300 PPM	N.E.	N.E.	No
2,3-Dimethylpentane	565-59-3	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No
3,3-Dimethylpentane	562-49-2	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No
Neohexane	75-83-2	500 PPM	1000 PPM	N.E.	N.E.	N.E.	N.E.	No

Exposure Notes:

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Provide sufficient general and/or local exhaust ventilation to maintain exposure below recommended exposure limit. Check all low areas for presence of vapor. Vapors are heavier than air and may spread along floors. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use.

Respiratory Protection: If concentrations exceed the exposure limits specified, use of a NIOSH-approved supplied air respirator is recommended. Where the protection factor is exceeded, use of a Self Contained Breathing Apparatus (SCBA) may be necessary. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Wear solvent impervious gloves.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Provide eyewash and solvent impervious apron if body contact may occur.

Hygienic Practices: Remove and wash contaminated clothing before re-use.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	**Vapor Density:**	Heavier Than Air
Odor:	Solvent	**Odor Threshold:**	Not Established
Color:	Gray	**Evaporation Rate:**	Faster Than n-Butyl Acetate
Solubility in H2O:	Not Established	**Specific Gravity:**	1.4
Freeze Point:	Not Established	**pH:**	Not Established
Vapor Pressure:	125 mm Hg @ 68 F	**Viscosity:**	Not Established
Physical State:	Paste	**Flammability:**	Flammable
Flash Point, F:	80 degrees F	**Method:**	(Pensky-Martens Closed Cup)
Lower Explosive Limit, %:	Not Established	**Upper Explosive Limit, %:**	Not Established

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Strong acids and oxidizing agents.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established **Product LC50:** Not Established

CASRN	Chemical Name	LD50	LC50
471-34-1	Calcium Carbonate	Rat:6450 mg/kg	----------
110-54-3	n-Hexane	Rat:28710 mg/kg	Rat:48000 ppm/4H
110-82-7	Cyclohexane	Rat:12705 mg/kg	----------

Significant Data with Possible Relevance to Humans: None.

Section 12 - Ecological Information

Ecological Information: None known.

Section 13 - Disposal Information

Disposal Information: Do not re-use empty containers. Liquids cannot be disposed of in a landfill. Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): D001

Section 14 - Transportation Information

DOT Proper Shipping Name:	Adhesive (Consumer Commodity)	**Packing Group:**	None (III if not domestic by ground)
DOT Technical Name:	N.A.	**Hazard Subclass:**	N.A.
DOT Hazard Class:	None (3 for non-domestic / or air)	**DOT UN/NA Number:**	None (UN1133 when not domestic ground)

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard, Fire Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
n-Hexane	110-54-3

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number
Petroleum hydrocarbon resin	TSRN-1223370035031P
Cross-linked styrene-butadiene rubber	TSRN-618608-5085P

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Petroleum hydrocarbon resin	Proprietary
Cross-linked styrene-butadiene rubber	Proprietary

California Proposition 65:

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16 - Other Information

HMIS Ratings:

Health: 2 Flammability: 3 Reactivity: 1 Personal Protection: X

Volatile Organic Compounds (VOC), less water less exempts: g/L: 312.6 lb/gal: 2.6 wt:wt%: 23.0

Volatile Organic Compounds (VOC), less water less exempts, less LVP-VOCs: wt:wt%: 23.0

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable	ACGIH – American Conference of Governmental Industrial Hygienists
N.E. – Not Established	SARA – Superfund Amendments and Reauthorization Act of 1986
N.D. – Not Determined	NJRTK – New Jersey Right-to-Know Law
VOC – Volatile Organic Compound	OSHA – Occupational Safety and Health Administration
PEL – Permissible Exposure Limit	HMIS – Hazardous Materials Identification System
TLV – Threshold Limit Value	NTP – National Toxicology Program
CEIL – Ceiling Exposure Limit	STEL – Short Term Exposure Limit
LD50 – Lethal Dose 50	LC50 – Lethal Concentration 50
F – Degree Fahrenheit	MSDS – Material Safety Data Sheet
C – Degree Celsius	CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

THIS MATERIAL SAFETY DATA SHEET IS AVAILABLE IN SPANISH UPON REQUEST.

LOS DATOS DE SEGURIDAD DEL PRODUCTO PUEDEN OBTENERSE EN ESPANOL SI LO REQUIERE.

PRODUCT NAME : DAP Flexible Clear Sealant
UPC # : 70798 18376
PRODUCT USE/CLASS : Solvent Based Caulk

MANUFACTURER:
DAP INC.
2400 BOSTON STREET
BALTIMORE, MD 21224

24 HOUR EMERGENCY:
TRANSPORTATION: 1-800-535-5053 (352-323-3500)
MEDICAL : 1-800-327-3874 (513-636-5118)

PREPARE DATE: 03/03/1999
REVISION NO. : 7
REVISION DATE: 04/22/2005

GENERAL INFORMATION
DAP INC. : 1-888-DAP-TIPS (1-888-327-8477)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % EQUAL TO
01	Ethyl benzene	100-41-4	0.5 – 3 %
02	Xylene	1330-20-7	25 – 30 %
03	Mineral spirits	8052-41-3	5 – 15 %
04	1,2,4-trimethyl benzene	95-63-6	<0.5 %

EXPOSURE LIMITS

	ACGIH		OSHA		COMPANY	
ITEM	TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING	TLV-TWA	SKIN
01	100 ppm	125 ppm	100 ppm	N.E.	N.E.	NO
02	100 ppm	150 ppm	N.E.	100 ppm	N.E.	NO
03	100 ppm	N.E.	N.E.	N.E.	N.E.	NO
04	N.E.	N.E.	N.E.	N.E.	N.E.	NO

(See Section 16 for abbreviation legend)

Remaining ingredients are not considered hazardous per the OSHA Hazard Communication Standard.

Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); limits may vary between states.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER! Flammable liquid and vapor. Vapor harmful. Harmful or fatal if swallowed. Vapors may cause flash fire or explosion. Aspiration hazard if swallowed - can enter lungs and cause damage. Harmful if inhaled. May irritate eyes, skin nose and upper respiratory tract.

(Continued on Page 2)

SECTION 3 - HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May irritate skin. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash). Can be absorbed through the skin.

EFFECTS OF OVEREXPOSURE - INHALATION: Vapor harmful if inhaled. Vapor may irritate nose and upper respiratory tract. Vapor inhalation may affect the brain or nervous system causing dizziness, headache or nausea. Prolonged vapor inhalation may result in severe physical injury.

EFFECTS OF OVEREXPOSURE - INGESTION: This material may be harmful or fatal if swallowed. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal. If ingested, this product may cause vomiting, diarrhea, and depressed respiration.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Reports have associated permanent brain and nervous system damage with prolonged and repeated occupational overexposure to solvents. Symptoms include: loss of memory, loss of intellectual ability and loss of coordination. Overexposure or misuse of xylene can cause liver, kidney and brain damage as well as cardiac abnormalities and reproductive toxicity.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY CONTACT: None known.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT INHALATION

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Immediately flush with large quantities of water until irritation subsides. Get medical attention immediately.

SKIN CONTACT: Wash with soap and water.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Contact a physican immediately.

Note: Only trained personnel should give artificial respiration or administer oxygen.

INGESTION: DO NOT INDUCE VOMITING. Get medical attention immediately.

COMMENTS: Call 1-800-327-3874 if irritation or complications arise from any of the above exposures.

(Continued on Page 3)

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: 80^0 F

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE:

EXTINGUISHING MEDIA: Foam, CO2, dry chemical.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable! Material will readily ignite at room temperature. Vapors may form an explosive mixture with air. Vapors can travel long distances to a source of ignition and flashback. Eliminate sources of ignition: heat, electrical equipment, sparks, pilot lights, stoves and flames. Do not smoke Do not put in contact with oxidizing or caustic materials. Containers may explode if exposed to heat.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment, including self-contained breathing apparatus, is recommended to protect from combustion products. Cool exposed containers with water.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Dike spill area. Immediately eliminate sources of ignition. Use absorbent material or scrape up dried material and place into containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING INFORMATION: KEEP OUT OF REACH OF CHILDREN. Avoid skin and eye contact. Avoid breathing vapors. Use only in a well ventilated area. Ensure fresh air entry.

STORAGE INFORMATION: Store away from caustics and oxidizers. Keep away from heat, spark, and flame. Keep containers tightly closed when not in use. Keep containers from excessive heat and freezing. Do not store at temperatures above 120 degrees F.

OTHER PRECAUTIONS: Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal. Do not take internally. Construction and repair activities can adversely affect indoor air quality. Consult with the occupants or a representative(i.e. maintenance, building manager, industrial hygienist, or safety officer) to determine ways to minimize any impact.

(Continued on Page 4)

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide sufficient mechanical ventilation (local or general exhaust) to maintain exposure below PEL and TLV. Vapors are heavier than air and will collect in low areas. Check all low areas (basements, sumps, etc.) for vapors before entering.

RESPIRATORY PROTECTION: If you experience eye watering, headache or dizziness or if used in the work place and air monitoring demonstrates vapor levels are above exposure limits, use NIOSH approved respiratory protection in accordance with applicable federal, state and local requirements. Consult your safety equipment supplier and the OSHA regulation, 29 CFR 1910.134 for respirator requirements. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

EYE PROTECTION: Goggles or safety glasses with side shields.

SKIN PROTECTION: Solvent impervious gloves.

OTHER PROTECTIVE EQUIPMENT: Provide eyewash and solvent impervious apron if body contact may occur.

HYGIENIC PRACTICES: Remove contaminated clothing and wash before reuse.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: N.A.	VAPOR DENSITY	: Heavier than air
ODOR	: Solvent	ODOR THRESHOLD	: N. E.
APPEARANCE	: Paste	EVAPORATION RATE	: Faster than butyl acetate
SOLUBILITY IN H2O	: Insoluble	pH	: N. E.
SPECIFIC GRAVITY	: 1.06		
FREEZE POINT	: N.E.	VISCOSITY	: 250,000 – 300,000 cPs
VAPOR PRESSURE	: 23 mmHg (estimated)		
PHYSICAL STATE	: Paste		

COEFFICIENT OF WATER/OIL DISTRIBUTION: N.E.

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Strong oxidizers and caustics.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e. COx, NOx

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

(Continued on Page 5)

SECTION 11 - TOXICOLOGICAL PROPERTIES

No product toxicological information is available.

This product contains ethylbenzene. The International Agency for Research of Cancer (IARC) has classified ethylbenzene as a Group 2B carcinogen -- possibly carcinogenic to humans. While there is inadequate evidence of carcinogenicity in humans, this compound shows sufficient evidence of carcinogenicity in animals (IARC, 2001). The US Environmental Protection Agency (EPA) has classified ethylbenzene as a Class D carcinogen (not classifiable as to human carcinogenicity). This is based on the lack of animal bioassays and human studies. The American Conference of Governmental Industrial Hygienists has classified ethylbenzene as a Confirmed Animal Carcinogen with Unknown Relevance to Humans. There should be minimal risk when used with ventilation adequate to keep the atmospheric concentration of ethylbenzene below the recommended exposure limit. Maintain adequate ventilation to prevent exposure above current OSHA / ACGIH exposure limits. Workplace monitoring of the air to define ethylbenzne exposure levels may be necessary.

SECTION 12 - ECOLOGICAL INFORMATION

No product information is available.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT/DISPOSAL: Dispose of according to Federal, State, and Local Standards. Discarded material should be incinerated at a permitted facility. Liquids cannot be disposed of in a landfill. Do not reuse empty container. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.
EPA WASTE CODE - If discarded (40 CFR 261): D001 Ignitable.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Solids containing flammable liquids, N.O.S. (Xylene) (Consummer Commodity*)
DOT HAZARD CLASS: 4.1 (Flammable Solid) (ORM-D*)
DOT UN/NA NUMBER: 3175 (NONE*) PACKING GROUP: II (None*)
* For containers of 1 gallon or less.

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply is shipped via other modes of transportation and/or to non-domestic destinations.

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

(Continued on Page 6)

SECTION 15 - REGULATORY INFORMATION

CERCLA - SARA HAZARD CATEGORY:
This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD CHRONIC HEALTH HAZARD FIRE HAZARD

SARA SECTION 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER
Xylene	1330-20-7
Ethyl Benzene	100-41-4

TOXIC SUBSTANCES CONTROL ACT:
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

CHEMICAL NAME	CAS NUMBER
Xylene	1330-20-7

U.S. STATE REGULATIONS: AS FOLLOWS -

NEW JERSEY RIGHT-TO-KNOW:
The following materials are non-hazardous, but are among the top five components in this product:

CHEMICAL NAME	CAS NUMBER
Contents partially unknown	

CHEMICAL NAME	CAS NUMBER

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

CHEMICAL NAME	CAS NUMBER
Amorphous silicon dioxide	112945-52-5
Acrylic resin	proprietary
Contents partially unknown	

CALIFORNIA PROPOSITION 65:
WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer, birth defects or other reproductive harm:

CHEMICAL NAME	CAS NUMBER
Ethyl benzene	100-41-4

(Continued on Page 7)

SECTION 15 - REGULATORY INFORMATION

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: No information available.

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 1 FLAMMABILITY: 3 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 08/01/2000

VOC less water, less exempt 340 – 350 g/l (32 – 33%)

LEGEND: ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
N.A. - NOT APPLICABLE
N.E. - NOT ESTABLISHED
PEL - PERMISSIBLE EXPOSURE LIMIT
NTP - NATIONAL TOXICOLOGY PROGRAM
SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
STEL - SHORT TERM EXPOSURE LIMIT
TLV - THRESHOLD LIMIT VALUE(8 HR. TIME WEIGHTED AVERAGE OR TWA)
VOC - VOLATILE ORGANIC COMPOUND
NJRTK - NEW JERSEY RIGHT TO KNOW LAW
N.D. - NOT DETERMINED

MSDS# 77019

This data is offered in good faith as typical values and not as a product specification. No warranty either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review the recommendations in specific context of the intended use and determine if they are appropriate.

< End OF MSDS >

P L A N I L L A D E D A T O S D E S E G U R I D A D D E M A T E R I A L

SECCIÓN 1 – IDENTIFICACIÓN DEL PRODUCTO QUÍMICO Y LA COMPAÑÍA

LOS DATOS DE SEGURIDAD DEL PRODUCTO ESTÁN DISPONIBLES EN ESPAÑOL SI LO REQUIERA.

LOS DATOS DE SEGURIDAD DEL PRODUCTO PUEDEN OBTENERSE EN ESPAÑOL SI LO REQUIERE.

NOMBRE DEL PRODUCTO: Sellador flexible transparente DAP
Número de UPC : 70798 18376
USO/CLASE DEL PRODUCTO: Calafate a base de solvente

FABRICANTE:
DAP INC.
2400 BOSTON STREET
BALTIMORE, MD 21224

TELÉFONO DE EMERGENCIA LAS 24 HORAS:
TRANSPORTE: 1-800-535-5053 (352-323-3500)
MÉDICO : 1-800-327-3874 (513-636-5118)

Fecha de preparación: 03/03/1999 Información general
Número de revisión: 7 DAP INC. : 1-888-DAP-TIPS (1-888-327-8477)
Fecha de revisión: 22/04/2005

Sección 2 - Composición/Información sobre los ingredientes

Elemento	Nombre químico	Número CAS	WT/WT % Equivalente a
01	Etilbenceno	100-41-4	0.5 – 3 %
02	Xileno	1330-20-7	25 – 30 %
03	Alcoholes minerales	8052-41-3	5 – 15 %
04	trimetilbenceno 1,2,4	95-63-6	<0.5 %

Límites de exposición

Elemento	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-Techo	COMPAÑÍA TLV-TWA	Piel
01	100 ppm	125 ppm	100 ppm	N.E.	N.E.	NO
02	100 ppm	150 ppm	N.E.	100 ppm	N.E.	NO
03	100 ppm	N.E.	N.E.	N.E.	N.E.	NO
04	N.E.	N.E.	N.E.	N.E.	N.E.	NO

(Vea las abreviaturas en la sección 16)

Los ingredientes restantes no son considerados peligrosos por la norma OSHA de comunicación de riesgos.

Los Niveles de exposición permitidos (PEL) señalados son suministrados por el Ministerio de Trabajo de EE.UU.
Límites de la norma final OSHA (CFR 29 1910.1000). Estos límites pueden variar en los diferentes estados.

Sección 3 - Identificación de riesgos

Generalidades sobre las emergencias: ¡PELIGRO! Líquido y vapor inflamables. Vapor
nocivo. Su ingesta es perjudicial o fatal. Los vapores pueden provocar llamaradas o

explosión. Peligro de aspiración si se ingiere – puede ingresar a los pulmones y provocar
daños. Su inhalación es perjudicial. Puede provocar irritación de los ojos, la piel, la nariz y el tracto respiratorio superior.

(Continúa en la página 2)

Sección 3 - Identificación de riesgos

Efectos potenciales sobre la salud:

Efectos de la sobreexposición - Contacto con los ojos: Puede provocar irritación ocular.

Efectos de la sobreexposición - Contacto con la piel: Puede irritar la piel. El contacto prolongado o reiterado puede provocar la eliminación de la grasa cutánea y el resecamiento de la piel.
puede ocasionar irritación de la piel y dermatitis (sarpullido). Puede ser absorbido a través de la piel.

Efectos de la sobreexposición - Inhalación: La inhalación del vapor es perjudicial. El vapor puede provocar irritación de la nariz y del tracto respiratorio superior. La inhalación de vapor puede afectar el cerebro o el sistema nervioso provocando mareos, dolor de cabeza o náuseas. La inhalación prolongada de vapor puede provocar lesiones físicas graves.

Efectos de la sobreexposición - Ingesta: La ingesta de este material puede ser perjudicial o fatal. La aspiración del material en los pulmones debido al vómito puede provocar neumonitis química, lo cual puede ser fatal. Si se ingiere, este producto puede provocar vómitos, diarrea y respiración deprimida.

Efectos de la sobreexposición - Riesgos crónicos: Se ha asociado el daño permanente en el cerebro y en el sistema nervioso con la sobreexposición ocupacional prolongada y repetida a los solventes. Los síntomas incluyen: pérdida de la memoria, pérdida de la capacidad intelectual y pérdida de la coordinación. La sobreexposición o el mal uso de xileno pueden provocar daños al hígado, riñón y cerebro así como también anormalidades cardíacas y toxicidad reproductiva.

Afecciones médicas que se pueden agravar por el contacto: No se conoce ninguna.

Ruta/s principal/es de entrada: Contacto con la piel Inhalación

Sección 4 - Medidas de primeros auxilios

Contacto con los ojos: Enjuague inmediatamente con grandes cantidades de agua hasta que ceda la irritación. Procure atención médica inmediatamente.

Contacto con la piel: Lave con agua y jabón.

Inhalación: Traslade al individuo al aire fresco. Si no respira, suminístrele respiración artificial. Si la respiración es dificultosa, suminístrele oxígeno. Llame a un médico inmediatamente.

Nota: La respiración artificial o la administración de oxígeno deben ser realizadas sólo por personal capacitado.

Ingesta: NO PROVOQUE EL VÓMITO. Procure atención médica inmediatamente.

Comentarios: Llame al 1-800-327-3874 si surgen complicaciones o irritación por
alguna de las exposiciones mencionadas.

(Continúa en la página 3)

Sección 5 - Medidas para combatir incendios

Punto de inflamación: 80^0 F Límite explosivo inferior: N.C.

Límite explosivo superior: N.C.

Temperatura de autoencendido:

Medios de extinción: Espuma, CO2, químicos secos.

Riesgos poco comunes de incendio y explosión: ¡Inflamable! El material se enciende con facilidad a temperatura ambiente. Los vapores pueden formar una mezcla explosiva con el aire. Los vapores pueden viajar largas distancias hacia una fuente de ignición y encenderse. Elimine las fuentes de encendido: calor, equipos eléctricos, chispas, lámparas piloto, estufas y llamas. No fume. Evite el contacto con materiales oxidantes o cáusticos. Los recipientes pueden explotar si se los expone al calor.

Procedimientos especiales para combatir incendios: Se recomienda el uso de un equipo completo de protección, incluyendo un equipo para respiración independiente para protegerse de productos combustibles. Recipientes expuestos con agua fresca.

Sección 6 - Medidas por escape accidental

Procedimientos de derrame o escape: Canalice el área del derrame. Elimine inmediatamente las fuentes de encendido. Utilice material absorbente o raspe el material seco y colóquelo en un recipiente.

Sección 7 - Manipulación y almacenamiento

Información de manipulación: Mantenga alejado del alcance de los niños. Evite el contacto con la piel y los ojos. Evite respirar vapores. Utilice únicamente en un área bien ventilada. Asegure una entrada de aire fresco.

Información de almacenamiento: Almacene lejos de sustancias cáusticas y oxidantes. Mantenga alejado del calor, las chispas y la llama. Mantenga los recipientes firmemente cerrados cuando no se los utilice. Mantenga los recipientes alejados del frío y el calor excesivos. No almacene a temperaturas superiores a 120 grados F.

Otras precauciones: El mal uso intencional mediante la concentración e inhalación indiscriminada de vapores puede ser perjudicial o fatal. No lo tome de forma interna. Las actividades de construcción o reparación pueden afectar de forma adversa la calidad del aire interior. Consulte con los ocupantes o un representante (es decir, con el encargado de mantenimiento, el administrador del edificio, el higienista industrial o un funcionario de seguridad) para determinar las formas de minimizar cualquier impacto.

(Continúa en la página 4)

Sección 8 - Controles sobre la exposición/protección personal

Controles de ingeniería: Suministre ventilación mecánica suficiente (local o general) para mantener la exposición por debajo del PEL y TLV. Los vapores son más pesados que el aire y se depositarán en las áreas inferiores. Verifique todas las áreas inferiores (sótanos, sumideros, etc.) en busca de vapores antes de ingresar.

Protección respiratoria: Si experimenta lagrimeo, dolor de cabeza o mareos o si se utiliza en el lugar de trabajo y el monitoreo del aire demuestra que los niveles de vapor se encuentran por encima de los límites de exposición, utilice protección respiratoria aprobada por NIOSH, conforme a los requisitos federales, estatales y locales pertinentes. Consulte a su proveedor de equipos de seguridad y la reglamentación de OSHA, 29 CFR 1910.134, sobre los requisitos del respirador. Se debe seguir un programa de protección respiratoria que cumpla con los requisitos de OSHA 1910.134 y ANSI Z88.2 cada vez que las condiciones del lugar de trabajo exijan el uso de un respirador.

Protección ocular: Gafas o anteojos de seguridad con protectores laterales.

Protección de la piel: Guantes impermeables al solvente.

Otro equipo de protección: Enjuáguese los ojos y colóquese un delantal impermeable al solvente si entrara en contacto con el cuerpo.

Prácticas de higiene: Quitar y lavar la ropa contaminada antes de volver a utilizarla.

Sección 9 - Propiedades físicas y químicas

Rango de ebullición: N.C.
Densidad del vapor: Más pesado que el aire
Olor : Solvente
Umbral de olor: N. E.
Apariencia : Pasta
Índice de evaporación: Más rápido que el butil acetato
Solubilidad en H2O: Insoluble
Peso específico: 1.06
pH: N. E.
PUNTO DE CONGELACIÓN: N.E.
Viscosidad : 250,000 – 300,000 cp
PRESIÓN DE VAPOR: 23 mmHg (estimado)
Estado físico : Pasta
COEFICIENTE DE DISTRIBUCIÓN DE AGUA/ACEITE: N.E.

(Vea las abreviaturas en la sección 16)

Sección 10 - ESTABILIDAD Y REACTIVIDAD

Condiciones a evitar: Calor y congelamiento excesivos.

Incompatibilidad: Oxidantes y cáusticos fuertes.

Productos de descomposición peligrosos: Productos de descomposición normal, por ejemplo Cox, Nox

Polimerización peligrosa: No ocurrirá bajo condiciones normales.

Estabilidad: Este producto es estable bajo condiciones normales de almacenamiento.

(Continúa en la página 5)

Sección 11 - Propiedades toxicológicas

No existe información disponible sobre productos toxicológicos.

Este producto contiene etilbenceno. La Agencia Internacional para la Investigación del Cáncer (IARC) ha clasificado al etilbenceno como un carcinógeno del Grupo 2B --posiblemente carcinógeno para los humanos. Si bien existe evidencia inadecuada de carcinogenicidad en humanos, este compuesto muestra suficiente evidencia de carcinogenicidad en animales (IARC, 2001). La Agencia de Protección Ambiental de los EE.UU. (EPA) ha clasificado al etilbenceno como un carcinógeno de clase D (no clasificable como carcinógeno para los humanos). Esto se basa en la falta de ensayos de animales y estudios de humanos. La Conferencia Americana de Higienistas Gubernamentales Industriales ha clasificado al etilbenceno como un carcinógeno animal confirmado con relevancia desconocida para los humanos. Debe haber un riesgo mínimo cuando se utiliza con ventilación adecuada para mantener la concentración atmosférica de etilbenceno por debajo de los límites de exposición recomendados. Mantenga una ventilación apropiada para prevenir la exposición por encima de los límites de exposición actuales de la OSHA/ACGIH. Puede ser necesario el monitoreo del aire del lugar de trabajo para definir los niveles de exposición de etilbenceno.

Sección 12 - Información ecológica

No existe información disponible sobre el producto.

Sección 13 - Consideraciones sobre eliminación

Administración de desechos/eliminación: Elimine los materiales de acuerdo con las normas federales, estatales y
locales. El material desechado debe incinerarse en instalaciones autorizadas. Los líquidos no pueden eliminarse en un vertedero. No vuelva a usar el recipiente
vacío. Las normas/restricciones estatales y locales son complejas y pueden diferir de las normas federales. La responsabilidad de eliminar los desechos correctamente
recae en el propietario de los desechos.
Código de desechos de EPA en caso de desecho (40 CFR 261): D001
Inflamable.

Sección 14 - Información sobre transporte

Nombre apropiado de la empresa de transporte según el DOT: Los sólidos que contengan líquidos inflamables, N.O.S. (xileno) (producto de consumo*)
Clases de peligros según el DOT: 4.1 (Sólido inflamable) (ORM-D*)
Número de UN/NA según el DOT: 3175 (ninguno*) Grupo de relleno: II (ninguno*)
* Para recipientes de 1 galón o menos.

Nota: La información de transporte proporcionada se aplica sólo para transporte doméstico terrestre. Se puede aplicar una categorización diferente si se utiliza otro medio de transporte y/o se transporta hacia destinos no domésticos.

Sección 15 - Información regulatoria

Normas federales de EE.UU: Son las siguientes -

OSHA: Peligroso según definición de la Norma de comunicación de riesgos (29 CFR

1910.1200)

(Continúa en la página 6)

Sección 15 - Información regulatoria

CERCLA – Categoría de riesgo SARA:
Este producto se ha revisado de acuerdo con las “Categorías de riesgo” de la EPA
promulgadas bajo los apartados 311 y 312 de la Ley de enmienda y reautorización de fondos especiales de 1986 (Título III de la SARA) y se considera que, bajo
las definiciones aplicables, cumpla con las siguientes categorías:

RIESGOS PARA LA SALUD INMEDIATOS RIESGOS PARA LA SALUD CRÓNICOS RIESGO DE INCENDIO

Apartado 313 de la SARA:
Este producto contiene las siguientes sustancias químicas de acuerdo con los requisitos del Apartado 313 del título III de la Ley de enmienda y reautorización de fondos especiales de 1986 40 CFR parte 372:

---------- Nombre químico ----------	Número CAS
Xileno	1330-20-7
Etil benceno	100-41-4

Ley para el control de sustancias tóxicas:
Este producto contiene las siguientes sustancias químicas de acuerdo con los requisitos de la ley TSCA 12 (b) si se exporta desde los Estados Unidos:

---------- Nombre químico ----------	Número CAS
Xileno	1330-20-7

Normas federales de EE.UU: Son las siguientes -

Ley del derecho a saber de Nueva Jersey:
Los siguientes materiales no son peligrosos pero se encuentran entre los cinco componentes más importantes
en este producto:

---------- Nombre químico ----------	Número CAS
Contenidos parcialmente desconocidos	

---------- Nombre químico ----------	Número CAS

Ley del derecho a saber de Pensilvania:
Los siguientes ingredientes no peligrosos están presentes en el producto en una proporción
mayor al 3%:

---------- Nombre químico ----------	Número CAS
Dióxido de silicona amorfo	112945-52-5
Resina acrílica	propietario
Contenidos parcialmente desconocidos	

Propuesta 65 de California:
ADVERTENCIA: Los siguientes químicos presentes en este producto son conocidos para el estado de California por causar cáncer, defectos congénitos u otros
daños reproductivos:

---------- Nombre químico ----------	Número CAS
Etil benceno	100-41-4

(Continúa en la página 7)

Sección 15 - Información regulatoria

Reglamentaciones internacionales: Son las siguientes -

WHMIS de Canadá: Este MSDS ha sido preparado en conformidad con las Reglamentaciones de control de productos excepto para el uso de los 16 encabezados.

Clase de WHMIS de Canadá: No existe información disponible.

Sección 16 - Otra información

Índices HMIS - Salud: 1 Inflamabilidad: 3 Reactividad: 0

Fecha de revisión de MSDS anteriores: 08/01/2000

VOC menos agua, menos exento 340 – 350 g/l (32 – 33%)

Leyenda: ACGIH - Conferencia americana de higienistas gubernamentales industriales
N.C. - No corresponde
N.E. - No establecido
PEL - Límites permitidos de exposición
NTP - Programa nacional de toxicología
SARA - Ley de enmienda y reautorización de fondos especiales de 1986
STEL - Límite de exposición a corto plazo
TLV - Valor umbral límite (Promedio medio en tiempo o TWA de 8 horas)
VOC - Componente orgánico volátil
NJRTK - Ley del derecho a saber de Nueva Jersey
N.D. - No determinado

MSDS# 77019

Esta información se ofrece de buena fe como valores típicos y no como las especificaciones del producto. No se ofrece ninguna garantía expresa o implícita. Se considera que los procedimientos de manipulación segura e higiene industrial son aplicables. Sin embargo, cada usuario debe revisar las recomendaciones en el contexto específico del uso que se pretende y determinar si son correctas.

< Fin del MSDS >

F I C H E S I G N A L É T I Q U E

SECTION 1 - PRODUIT CHIMIQUE ET IDENTIFICATION DE LA SOCIÉTÉ

CETTE FICHE SIGNALÉTIQUE EST DISPONIBLE EN ESPAGNOL SUR DEMANDE.

LOS DATOS DE SEGURIDAD DEL PRODUCTO PUEDEN OBTENERSE EN ESPANOL SI LO REQUIERE.

NOM DU PRODUIT : DAP Flexible Clear Sealant
N^{O} CUP : 70798 18376
USAGE/CLASSE/PRODUIT : Pâte de calfeutrage à base de solvant

FABRICANT :
DAP INC.
2400 BOSTON STREET
BALTIMORE, MD 21224 É.-U

URGENCE 24/24 H :
TRANSPORT : 1-800-535-5053 (352-323-3500)
MÉDICAL : 1-800-327-3874 (513-636-5118)

DATE PRÉPARATION : 03/03/1999
N^{O} RÉVISION : 7
DATE RÉVISION : 22/04/2005

GÉNÉRALITÉS
DAP INC. : 1-888-DAP-TIPS (1-888-327-8477)

SECTION 2 - COMPOSITION/INFORMATIONS RELATIVES AUX INGRÉDIENTS

ART	NOM CHIMIQUE	NUMÉRO CAS	% PDS/PDS ÉGAL À
01	Éthylbenzène	100-41-4	0,5 – 3 %
02	Xylène	1330-20-7	25 – 30 %
03	Essence minérale	8052-41-3	5 – 15 %
04	1,2,4-triméthylbenzène	95-63-6	<0,5 %

LIMITES D'EXPOSITION

ART	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-PLAFOND	COMPAGNIE TLV-TWA	COMPAGNIE PEAU
01	100 ppm	125 ppm	100 ppm	N/E	N/E	NON
02	100 ppm	150 ppm	N/E	100 ppm	N/E	NON
03	100 ppm	N.E.	N/E	N/E	N/E	NON
04	N/E	N/E.	N/E	N.E.	N/E	NON

(Se reporter à la section 16 pour la légende des abréviations).

Les ingrédients restants ne sont pas considérés comme dangereux en vertu de la norme de l'OSHA sur la communication des renseignements à l'égard des matières dangereuses.

Les limites d'exposition admissibles (PEL) sont extraites des OSHA Final Rule Limits (CFR 29 1910.1000) du Département du travail aux États-Unis ; les limites peuvent varier en fonction des États.

SECTION 3 – IDENTIFICATION DES RISQUES

RÉCAPITULATIF DES CAS D'URGENCE : DANGER ! Liquide et vapeur inflammables. Vapeurs dangereuses. Nocif ou fatal en cas d'ingestion. Les vapeurs peuvent provoquer un embrasement éclair ou une explosion. Danger d'aspiration si avalé – peut entrer dans les poumons provoquer des lésions. Nocif en cas d'ingestion. Peut irriter les yeux, la peau, le nez et les voies respiratoires supérieures.

(Suite en page 2)

SECTION 3 – IDENTIFICATION DES RISQUES

EFFETS POTENTIELS SUR LA SANTÉ :

EFFET DE SUREXPOSITION – CONTACT AVEC LES YEUX : Peut causer de l'irritation aux yeux.

EFFET DE SUREXPOSITION – CONTACT AVEC LA PEAU : Peut irriter la peau. Tout contact prolongé ou répété peut résulter en délipidation et assèchement de la peau ce qui peut entraîner irritation de la peau et dermite (inflammation de la peau). Peut être absorbé par la peau.

EFFET DE SUREXPOSITION – INHALATION : Vapeur nocive en cas d'inhalation. La vapeur peut irriter le nez et les voies respiratoires supérieures. L'inhalation de la vapeur peut affecter le cerveau ou le système nerveux ce qui entraîne des étourdissements, maux de tête ou nausée. Toute inhalation prolongée de la vapeur peut entraîner des blessures physiques graves.

EFFET DE SUREXPOSITION – INGESTION : Cette substance peut être nocive ou fatale si avalée. Toute aspiration de la substance dans les poumons suite à des vomissements peut entraîner une pneumonite chimique qui peut être fatale. En cas d'ingestion, ce produit peut entraîner des vomissements, de la diarrhée et une respiration déprimée.

EFFET DE SUREXPOSITION – DANGERS CHRONIQUES : Des rapports ont associé une détérioration permanente du cerveau et du système nerveux à une surexposition occupationnelle prolongée et répétée aux dissolvants. Les symptômes incluent: perte de mémoire, perte de l'aptitude intellectuelle et perte de coordination. Toute surexposition ou mauvais emploi du xylène peut endommager le foie, les reins et le cerveau ainsi qu'entraîner des anomalies cardiaques et une toxicité de la reproduction.

TROUBLES MÉDICAUX POUVANT ÊTRE AGGRAVÉS PAR LE CONTACT : Aucun connu.

VOIE(S) PRINCIPALE(S) D'ENTRÉE : CONTACT AVEC LA PEAU INHALATION

SECTION 4 – MESURES DE PREMIERS SECOURS

CONTACT AVEC LES YEUX : Rincer immédiatement les yeux avec de grandes quantités d'eau, jusqu'à ce que l'irritation disparaisse. Obtenir immédiatement une assistance médicale.

CONTACT AVEC LA PEAU : Laver avec de l'eau savonneuse.

INHALATION : Amener la personne à l'air frais. Si la respiration a cessé, procéder à une respiration artificielle. Si la personne respire difficilement, lui administrer de l'oxygène. Contacter immédiatement un médecin.

Remarque : Seul un personnel qualifié est en droit de pratiquer la respiration artificielle ou d'administrer de l'oxygène.

INGESTION : NE PAS PROVOQUER LE VOMISSEMENT. Obtenir immédiatement une assistance médicale.

COMMENTAIRES : Appeler le 1-800-327-3874 en cas d'irritation ou de complications faisant suite à l'une des expositions ci-dessus.

(Suite en page 3)

SECTION 5 – MESURES DE LUTTE CONTRE LE FEU

POINT D'ÉCLAIR: 80^0 F

LIMITE INFÉRIEURE D'EXPLOSION : S/O
LIMITE SUPÉRIEURE D'EXPLOSION : S/O

TEMPÉRATURE D'AUTOCOMBUSTION :

AGENTS D'EXTINCTION : Mousse, CO2, substances chimiques sèches.

DANGERS INHABITUELS DE FEU ET D'EXPLOSION : Inflammable ! La substance peut s'enflammer facilement à une température ambiante. Les vapeurs peuvent former un explosif une fois mêlées à l'air. Les vapeurs peuvent parcourir de longues distances pour atteindre une source d'inflammation et provoquer un retour de flamme. Éliminer toute source d'inflammation : chaleur, équipement électrique, étincelles, veilleuses, fours et flammes. Ne pas fumer. Ne pas mettre en contact avec des substances comburantes ou corrosives. Les contenants peuvent exploser s'ils sont exposés à la chaleur.

PROCÉDURES SPÉCIALES DE LUTTE CONTRE LES INCENDIES : Un équipement protecteur complet, y compris un appareil de respiration autonome, est recommandé pour assurer la protection contre les produits de combustion. Refroidir les récipients exposés avec de l'eau.

SECTION 6 – MESURES EN CAS DE DÉVERSEMENT ACCIDENTEL

PROCÉDURES EN CAS DE DÉVERSEMENT OU DE FUITE : Indiguer les zones de déversement. Éliminer immédiatement toute source d'inflammation. Utiliser un matériau absorbant ou racler la substance séchée et placer dans des contenants.

SECTON 7 – MANIPULATION ET STOCKAGE

INFORMATIONS SUR LA MANIPULATION : GARDER HORS DE PORTÉE DES ENFANTS. Éviter le contact oculaire et cutané. Éviter de respirer les vapeurs. N'utiliser que dans une zone bien ventilée. Garantir une entrée d'air frais.

INFORMATIONS SUR LE STOCKAGE : Conserver à l'abri des matériaux oxydants et caustiques. Garder éloigné de la chaleur, des étincelles et des flammes. Maintenir les contenants bien fermés lorsqu'ils ne sont pas utilisés. Protéger les contenants contre toute température de surchauffe et gel. Ne pas stocker à des températures supérieures à 120 degrés F.

AUTRES PRÉCAUTIONS : Toute utilisation inappropriée visant à concentrer et à respirer volontairement les vapeurs peut être dangereuse voire fatale. Ne pas ingérer.
Toute activité de construction et de réparation peut affecter la qualité de l'air à l'intérieur. Consulter les occupants ou un représentant (à savoir, le service de maintenance, le gérant du bâtiment, un hygiéniste industriel ou un agent de la sécurité) afin de déterminer les moyens de réduire les impacts.

(Suite en page 4)

SECTION 8 – CONTRÔLES D'EXPOSITION / PROTECTION PERSONNELLE

CONTRÔLES TECHNIQUES : Fournir une ventilation mécanique suffisante (évacuation locale ou générale) pour maintenir le niveau d'exposition sous PEL et TLV. Les vapeurs sont plus lourdes que l'air et peuvent s'accumuler dans les parties basses. Inspecter toutes les parties basses (sous-sols, puisards, etc.) afin de détecter la présence de vapeurs avant d'entrer.

PROTECTION RESPIRATOIRE : Dans le cas des yeux qui pleurent ou de l'apparition de maux de tête ou d'étourdissements ou en cas d'utilisation sur le lieu de travail et que la surveillance de l'air indique des niveaux de vapeurs supérieurs aux limites d'exposition, utiliser une protection respiratoire agréée par NIOSH conforme aux conditions fédérales, de l'État et locales applicables. Consulter le fournisseur d'équipement de sécurité ainsi que la réglementation OSHA, 29 CFR 1910.134 pour les conditions relatives aux appareils respiratoires. Un programme de protection des voies respiratoires, conforme aux exigences OSHA 1910.134 et ANSI Z88.2, doit être suivi à chaque fois que les conditions de travail justifient l'emploi d'un appareil respiratoire.

PROTECTION DES YEUX : Porter des lunettes de sécurité avec écrans latéraux.

PROTECTION DE LA PEAU : Porter des gants imperméables aux dissolvants.

AUTRE ÉQUIPEMENT DE PROTECTION : Fournir un bassin oculaire et un tablier imperméable aux dissolvants si un contact avec le corps peut se produire.

PRATIQUES HYGIÉNIQUES : Enlever les vêtements contaminés et les laver avant de les utiliser à nouveau.

SECTION 9 – PROPRIÉTÉS PHYSIQUES ET CHIMIQUES

LIMITES D'ÉBULLITION : S/O
DENSITÉ DE VAPEUR : Plus lourd que l'air
ODEUR : Dissolvant
SEUIL OLFACTIF : N/E
APPARENCE : Pâte
TAUX D'ÉVAPORATION : Plus rapide que l'acétate de butyle
SOLUBILITÉ DANS H2O : Insoluble
GRAVITÉ SPÉCIFIQUE : 1.06
pH : N/E
POINT DE CONGÉLATION : N/E
VISCOSITÉ : 250,000 – 300,000 cPs
PRESSION DE VAPEUR : 23 mmHg (estimé)
ÉTAT PHYSIQUE : Pâte
COEFFICIENT DE DISTRIBUTION EAU/HUILE : N/E

(Se reporter à la section 16 pour la légende des abréviations).

SECTION 10 - STABILITÉ ET RÉACTIVITÉ

CONDITIONS À ÉVITER : Chaleur ou froid excessifs.

INCOMPATIBILITÉ : Oxydants et substances caustiques puissants.

PRODUITS DANGEREUX DE DÉCOMPOSITION : Produits de décomposition normale, à savoir COx, NOx

POLYMÉRISATION DANGEREUSE : Ne se produit pas dans des conditions normales.

STABILITÉ : Ce produit est stable dans des conditions normales de stockage.

(Suite en page 5)

SECTION 11 – PROPRIÉTÉS TOXICOLOGIQUES

Aucune information toxicologique sur le produit n'est disponible.

Ce produit contient de l'éthylbenzène. Le Centre International de Recherche sur le Cancer (CIRC) a classé l'éthylbenzène comme étant possiblement carcinogène pour les humains (Groupe 2B). Bien qu'il n'y ait pas suffisamment d'évidence de cancérogénicité chez les humains, ce composé indique une évidence suffisante de cancérogénicité chez les animaux (CIRC, 2001). L'Environmental Protection Agency (EPA) des États a classé l'éthylbenzène comme un cancérogène de classe D (non classable comme cancérogène chez les humains). Ces données se basent sur l'absence d'études sur les humains et les animaux. L'American Conference of Governmental Industrial Hygienists (ACGIH) a classé l'éthylbenzène comme un cancérogène confirmé chez les animaux avec une pertinence inconnue chez les humains. Il devrait y avoir un risque minime avec une ventilation adéquate permettant de maintenir la concentration atmosphérique de l'éthylbenzène en dessous de la limite d'exposition recommandée. Maintenir une ventilation adéquate pour éviter toute exposition au-dessus des limites d'exposition d'après OSHA / ACGIH. Une surveillance du lieu de travail de l'air permettant de définir les niveaux d'exposition à l'éthylbenzène peut s'avérer nécessaire.

SECTION 12 – INFORMATIONS ÉCOLOGIQUES

Aucune information sur le produit n'est disponible.

SECTION 13 – CONSIDÉRATIONS POUR LA MISE AU REBUT

GESTION/MISE AU REBUT DES DÉCHETS : Procéder à la mise au rebut conformément à toutes les normes locales, régionales et gouvernementales. La substance jetée doit être incinérée dans une installation agréée. Les liquides ne peuvent pas être jetés dans une décharge. Ne pas réutiliser les contenants vides. La réglementation et les restrictions locales ou de l'État sont complexes et peuvent différer de la réglementation fédérale. La responsabilité d'une mise au rebut adéquate des déchets incombe au propriétaire des déchets.
CODE DE DÉCHETS EPA – Si jetés (40 CFR 261) : D001 Inflammables.

SECTION 14 – INFORMATIONS SUR LE TRANSPORT

APPELLATION RÉGLEMENTAIRE POUR EXPÉDITION / DOT : Solides contenant un liquide inflammable, N.O.S. (Xylène) (Bien de consommation*).
CLASSIFICATION DES DANGERS / DOT : 4.1 (Solide inflammable) (ORM-D*)
NUMÉRO UN/NA DOT : 3175 (AUCUN*) GROUPE D'EMBALLAGE : II (Aucun*)
* Pour les contenants de 1 gallon ou moins.

Remarque : Les informations relatives à l'expédition sont applicables uniquement au transport national par voie terrestre. D'autres catégories peuvent exister en cas d'expédition via d'autres moyens de transport et/ou vers des destinations autres que nationales.

SECTION 15 – INFORMATIONS RÉGLEMENTAIRES

RÉGLEMENTATION FÉDÉRALE AMÉRICAINE : COMME SUIT -

OSHA : Dangereux par définition de la norme sur la communication à l'égard des matières dangereuses (29 CFR 1910.1200)

(Suite en page 6)

SECTION 15 – INFORMATIONS RÉGLEMENTAIRES

CATÉGORIE DES DANGERS CERCLA - SARA :
Ce produit a été passé en revue selon les catégories des dangers d'EPA stipulées dans les Sections 311 et 312 de Superfund Amendment et Reauthorization Act de 1986 (SARA Titre III) et a été considéré, selon les définitions applicables, comme satisfaisant les catégories suivantes :

DANGER IMMÉDIAT POUR LA SANTÉ DANGER CHRONIQUE POUR LA SANTÉ DANGER D'INCENDIE.

SARA SECTION 313 :
Ce produit contient les substances suivantes soumises aux exigences de déclaration de la section 313 du Titre III de Superfund Amendments et Reauthorization Act de 1986 et 40 CFR Section 372.

NOM CHIMIQUE	NUMÉRO CAS
Xylène	1330-20-7
Éthylbenzène	100-41-4

TOXIC SUBSTANCES CONTROL ACT (LOI RÉGLEMENTANT LES SUBSTANCES TOXIQUES):
Ce produit contient les substances chimiques suivantes soumises aux conditions de rapport de TSCA 12(b) en cas d'exportation depuis les États-Unis :

NOM CHIMIQUE	NUMÉRO CAS
Xylène	1330-20-7

RÉGLEMENTATION D'ÉTAT AMÉRICAIN : COMME SUIT -

LE DROIT À L'INFORMATION DE L'ÉTAT DU NEW JERSEY :
Les substances suivantes ne sont pas dangereuses mais se trouvent parmi les cinq composants principaux dans ce produit :

NOM CHIMIQUE	NUMÉRO CAS
Contenu partiellement inconnu	

NOM CHIMIQUE	NUMÉRO CAS

LE DROIT À L'INFORMATION DE L'ÉTAT DE PENNSYLVANIE :
Les ingrédients non dangereux suivants sont présents dans le produit à plus de 3 % :

NOM CHIMIQUE	NUMÉRO CAS
Dioxyde de silicium amorphe	112945-52-5
Résine acrylique	propriétaire
Contenu partiellement inconnu	

PROPOSITION 65 DE L'ÉTAT DE LA CALIFORNIE :

AVERTISSEMENT : Les produits chimiques stipulés ci-dessous et contenus dans ce produit sont connus dans l'état de Californie pour causer des cancers, des anomalies congénitales ou d'autres dangers pour la reproduction :

NOM CHIMIQUE	NUMÉRO CAS
Éthylbenzène	100-41-4

(Suite en page 7)

SECTION 15 – INFORMATIONS RÉGLEMENTAIRES

RÉGLEMENTATIONS INTERNATIONALES : COMME SUIT -

SIMDUT DU CANADA : Cette fiche signalétique a été préparée conformément aux règlements sur les produits contrôlés sauf pour l'utilisation des 16 en-têtes.

CLASSE SIMDUT DU CANADA : Aucune information disponible.

SECTION 16 – INFORMATIONS DIVERSES

ÉVALUATION HMIS – SANTÉ : 1 INFLAMMABILITÉ : 3 RÉACTIVITÉ : 0

DATE RÉVISION PRÉCÉDENTE DE LA FICHE SIGNALÉTIQUE : 08/01/2000

COV moins d'eau, moins exempté 340 – 350 g/l (32 – 33 %)

LÉGENDE : ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
S/O - SANS OBJET
N/E - NON ÉTABLI
PEL - LIMITE D'EXPOSITION PERMISSIBLE
NTP - NATIONAL TOXICOLOGY PROGRAM
SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT DE 1986
STEL - LIMITE D'EXPOSITION À COURT TERME
TLV - VALEUR DU SEUIL DE TOLÉRANCE (8 H. MOYENNE PONDÉRÉE DANS LE TEMPS OU TWA)
COV - COMPOSÉS ORGANIQUES VOLATILES
NJRTK - DROIT À L'INFORMATION DE L'ÉTAT DU NEW JERSEY
N/D - NON DÉTERMINÉ

Ces données ont été stipulées en toute bonne foi comme valeurs types et non comme spécifications du produit.
Aucune garantie qu'elle soit expresse ou implicite n'est offerte dans les présentes.

Les procédures de manipulation sécuritaire et d’hygiène industrielle sont supposées être normalement applicables. Toutefois, chaque utilisateur doit passer en revue les recommandations dans le contexte spécifique de l’utilisation anticipée et déterminer si elles sont appropriées.

< FIN DE LA FICHE >

Material Safety Data Sheet

24 Hour Emergency Phone Numbers:
Medical: 1-800-327-3874
1-513-558-5111
Transportation:
1-800-535-5053
1-352-323-3500

NOTE: National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
Esta hoja de datos de la seguridad de los materiales está disponible en francés canadiense y en español a su solicitud.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Product Name: Concrete Patch

UPC Numbers: 7079810430

Revision Date: 02/10/2006

Supercedes: 01/12/2006

MSDS Number: 00010040101

Manufacturer:
DAP Inc.
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (non-emergency matters)

Section 2 - Composition / Information On Ingredients

Chemical Name	CASRN	WT%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	SKIN
Calcium Carbonate	471-34-1	30-60	10 MGM3	N.E.	N.E.	N.E.	N.E.	N.E.	No
Magnesite	546-93-0	5-10	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Branched and linear phthalates	Proprietary	1-5	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Ethylene glycol	107-21-1	0.5-1.5	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No
Ammonia	7664-41-7	0.1-1.0	25 PPM	35 PPM	N.E.	50 PPM	N.E.	N.E.	No
Formaldehyde	50-00-0	<0.02	N.E.	N.E.	0.3 PPM	0.75 PPM	2 PPM	N.E.	No
Ethyl acrylate	140-88-5	<0.01	5 PPM	15 PPM	N.E.	25 PPM	N.E.	N.E.	Yes
Acetaldehyde	75-07-0	<0.002	N.E.	N.E.	25 PPM	200 PPM	N.E.	N.E.	No
Acrylonitrile	107-13-1	<0.0003	2 PPM	N.E.	N.E.	2 PPM	10 PPM	N.E.	Yes

Exposure Notes:

50-00-0 Formaldehyde is a specially regulated substance for which an OSHA chemical-specific exposure standard exits. Detailed information regarding this substance may be found in 29 CFR 1910.1048. Medical surveillance information regarding this substance may be found in Appendix C to 29 CFR 1910.1048.

107-13-1 Acrylonitrile is a specially regulated substance for which an OSHA chemical-specific exposure standard exits. Detailed information regarding this substance may be found in 29 CFR 1910.1045. Medical surveillance

information regarding this substance may be found in Appendix C to 29 CFR 1910.1045.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices

Section 3 - Hazards Identification

Emergency Overview: A gray paste with a very slight ammonia odor. WARNING! Harmful if swallowed or absorbed through the skin. May cause eye, skin, nose, throat and respiratory tract irritation. This product contains ethylene glycol.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: Harmful if absorbed through the skin. May cause sensitization by skin contact. May cause skin irritation and/or dermatitis.

Effects Of Overexposure - Inhalation: Harmful if inhaled. Inhalation of vapors may cause irritation of the nose, throat, lungs and respiratory tract.

Effects Of Overexposure - Ingestion: Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Effects Of Overexposure - Chronic Hazards: Prolonged and repeated skin contact may cause irritation and possibly dermatitis. Repeated or prolonged exposure may cause respiratory system damage.

Overexposure may cause kidney, cardiovascular, skin and liver damage.

Formaldehyde vapor is a known animal carcinogen according to OSHA and NTP and is considered possibly carcinogenic to humans by inhalation. The International Agency for Research on Cancer considers formaldehyde to be a human carcinogen.

Ethylene Glycol may cause kidney and liver damage upon prolonged and repeated overexposures. Studies have shown that repeated inhalation of ethylene glycol has produced adverse cardiovascular changes in laboratory animals. Ethylene glycol has been shown to cause birth defects in laboratory animals. Prolonged, repeated, or high exposures may cause weakness and depression of the central nervous system.

The mixture of phthalate esters contained within this product has been shown to cause developmental effects at high doses in laboratory animals when administered orally by gavage in a developmental study and developmental and fertility effects when administered at high doses by feed in a two-generation reproduction study. The potential risk from occupational and consumer exposure is considered to be very low, based on limited relevance of the rodent findings to humans and the large safety margins between exposure and the effect levels.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation

Medical Conditions which May be Aggravated by Exposure: None known.

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical aid if symptoms persist. Remove and wash contaminated clothing.

First Aid - Inhalation: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately. If ingested, drink 2 glasses of water. Immediately see a physician. Never give anything by mouth to an unconcious person.

Note to Physician: No Information.

COMMENTS: Call Medical Emergency at 1-800-327-3874 if any irritation or complication arise from any of the above routes of entry.

Section 5 - Fire Fighting Measures

Flash Point, F: Greater than 200
Method: (Seta Closed Cup)

Lower Explosive Limit, %: Not Established
Upper Explosive Limit, %: Not Established

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam

Unusual Fire And Explosion Hazards: No special protective measures against fire required.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Use absorbent material or scrape up dried material and place in container.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! DO NOT TAKE INTERNALLY. Use only with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing. Wash thoroughly after handling. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Odor is not an adequate warning for hazardous conditions.

Storage: Close container after each use. Store away from caustics and oxidizers. Store containers away from excessive heat and freezing. Do not store at temperatures above 120 degrees F.

Section 8 - Exposure Controls / Personal Protection

Precautionary Measures: No Information.

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Ensure adequate ventilation, especially in confined areas. Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Rubber gloves. Natural rubber, butyl rubber and polyvinyl chloride gloves are not suitable protection against the phthalates contained within this product; neoprene is recommended.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Applicable	**Vapor Density:**	Heavier Than Air
Odor:	Very Slight Ammonia	**Odor Threshold:**	Not Established
Appearance:	Gray	**Evaporation Rate:**	Slower Than n-Butyl Acetate
Solubility in H2O:	Not Established	**Specific Gravity:**	1.580
Freeze Point:	Not Established	**pH:**	Between 7.0 and 12.0
Vapor Pressure:	Not Established	**Viscosity:**	Not Established
Physical State:	Paste		

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established **Product LC50:** Not Established

CASRN	Chemical Name	LD50	LC50	WT%
471-34-1	Calcium Carbonate	Rat:6450 mg/kg	----------	30-60
107-21-1	Ethylene glycol	Rat:4700 mg/kg	Rat:10876 mg/kg	0.5-1.5
7664-41-7	Ammonia	----------	Rat:2000 ppm/4H	0.1-1.0
50-00-0	Formaldehyde	----------	Rat:203 mg/m3	<0.02
140-88-5	Ethyl acrylate	----------	Rat:1414 ppm/4H	<0.01
75-07-0	Acetaldehyde	----------	Rat:13300 ppm/4H	<0.002
107-13-1	Acrylonitrile	Oral Rat:78 mg/kg	Rat:425 ppm/4H	<0.0003

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP	WT%
50-00-0	Formaldehyde	Suspected human carcinogen.	Potential cancer hazard.	Human carcinogen.	Anticipated carcinogen.	<0.02
140-88-5	Ethyl acrylate	-----	-----	Possible carcinogen.	-----	<0.01
75-07-0	Acetaldehyde	Confirmed animal carcinogen with unknown relevance to humans.	-----	Possible carcinogen.	Anticipated carcinogen.	<0.002
107-13-1	Acrylonitrile	Confirmed animal carcinogen with unknown relevance to humans.	Cancer hazard.	Possible carcinogen.	Anticipated carcinogen.	<0.0003
79-06-1	Acrylamide	Confirmed animal carcinogen with unknown relevance to humans.	-----	Probable carcinogen.	Anticipated carcinogen.	<0.0001

Significant Data with Possible Relevance to Humans: This product contains trace amounts of free formaldehyde. OSHA and NTP identify formaldehyde as a potential carcinogen. IARC identifies formaldehyde as a human carcinogen. Formaldehyde has been shown to cause mutations in a variety of in-vitro test systems, the significance of which to humans is unknown. In a two-year inhalation study, rats showed carcinogenic effects in the respiratory system at 15 ppm of formaldehyde. There should be minimal risk when used with ventilation adequate to keep the atmospheric concentration of formaldehyde below the recommended exposure limits. Maintain adequate ventilation to prevent exposure above current OSHA / ACGIH exposure limits. Workplace monitoring of the air to define formaldehyde exposure levels may be necessary.
This product contains trace amounts of acrylonitrile. It is exempt from the OSHA acrylonitrile standard 29 CFR 1910.1045, paragraph (a) (2) (ii). Acrylonitrile has been classified by IARC as possibly carcinogenic to humans, by OSHA as carcinogenic and by NTP as reasonably anticipated to be a human carcinogen.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): None

Section 14 - Transportation Information

DOT Proper Shipping Name: Not Regulated
Packing Group: N.A.
DOT Technical Name: N.A.
Hazard Subclass: N.A.
DOT Hazard Class: N.A.
DOT UN/NA Number: N.A.

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number	WT%
Ethylene glycol	107-21-1	0.5-1.5

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

U.S. State Regulations:

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number	WT%
Water	7732-18-5	10-30
Non-Hazardous Polymer	Proprietary	10-30

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number	WT%
Water	7732-18-5	10-30
Non-Hazardous Polymer	Proprietary	10-30

California Proposition 65:

Warning: The following ingredients present in the product are known to the State of California to cause cancer:

Chemical Name	CAS Number	Definition	Date Listed	WT%
Formaldehyde	50-00-0	Carcinogenic.	Listed: January 1, 1988	<0.02
Ethyl acrylate	140-88-5	Carcinogenic.	Listed: July 1, 1989	<0.01
Acetaldehyde	75-07-0	Carcinogenic.	Listed: April 1, 1988	<0.002
Acrylonitrile	107-13-1	Carcinogenic.	Listed: July 1, 1987	<0.0003
Acrylamide	79-06-1	Carcinogenic.	Listed: January 1, 1990	<0.0001

Warning: The following ingredients present in the product are known to the State of California to cause birth defects or other reproductive harm:

None.

Section 16 - Other Information

HMIS Ratings:

Health: 1 Flammability: 1 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, GR/LTR: 28.1 LB/GAL: 0.2 WT%: 1.145

REASON FOR REVISION:

Legend:

N.A. – Not Applicable	ACGIH – American Conference of Governmental Industrial Hygienists
N.E. – Not Established	SARA – Superfund Amendments and Reauthorization Act of 1986
N.D. – Not Determined	NJRTK – New Jersey Right-to-Know Law
VOC – Volatile Organic Compound	OSHA – Occupational Safety and Health Administration
PEL – Permissible Exposure Limit	HMIS – Hazardous Materials Identification System
TLV – Threshold Limit Value	NTP – National Toxicology Program
STEL – Short Term Exposure Limit	CEIL – Ceiling Exposure Limit
LD50 – Lethal Dose 50	LC50 – Lethal Concentration 50
F – Degree Fahrenheit	C – Degree Celcius
MSDS – Material Safety Data Sheet	CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

Safety Data Sheet

24 Hour Emergency Phone Numbers
Medical/Poison Control:
In U.S.: Call 1-800-222-1222

Outside U.S.: Call your local poison control center

Transportation/National Response Center:

1-800-535-5053
1-352-323-3500

NOTE: The National ResponseCenter emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this SDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

1. Identification

This Safety Data Sheet is available in American Spanish upon request.
Los Datos de Serguridad pueden obtenerse en Espanol si lo riquiere.

Product Name:	Dynaflex 230 - All Colors	**Revision Date:**	6/19/2015
Product UPC Number:	05894, 11765, 18256, 18280, 18285, 18300, 18301, 18302, 18303, 18306, 18412, 18416	**Supercedes Date:**	New SDS
Product Use/Class:	Caulking Compound	**SDS No:**	00010001001
Manufacturer:	DAP Products Inc. 2400 Boston Street Suite 200 Baltimore, MD 21224-4723 888-327-8477 (non - emergency matters)		
Preparer:	Regulatory Department		

2. Hazards Identification

EMERGENCY OVERVIEW: Under normal use conditions, this product is not expected to cause adverse health effects.

GHS Classification
Not a hazardous substance or mixture.

Symbol(s) of Product

None

Signal Word
Not a hazardous substance or mixture.

3. Composition/Information on Ingredients

Chemical Name	CAS-No.	Wt. %	GHS Symbols	GHS Statements
Limestone	1317-65-3	25-50	GHS03	H270
Diethylene glycol dibenzoate	120-55-8	2.5-10	GHS03-GHS07	H270-312

Diethylene glycol monobenzoate	20587-61-5	1.0-2.5	GHS03	H270
Titanium dioxide	13463-67-7	1.0-2.5	No Information	No Information
Ethylene glycol	107-21-1	1.0-2.5	GHS03-GHS06	H270-331
Silica, amorphous	7631-86-9	1.0-2.5	GHS03-GHS07	H270-332
Carbon black	1333-86-4	0.1-1.0	No Information	No Information
Quartz	14808-60-7	0.1-1.0	GHS03-GHS07	H270-302

The text for GHS Hazard Statements shown above (if any) is given in the "Other information" Section.

4. First-aid Measures

FIRST AID - INHALATION: Material is not likely to present an inhalation hazard at ambient conditions. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately.

FIRST AID - SKIN CONTACT: No health hazards are known to exist. In case of contact, wash skin immediately with soap and water.

FIRST AID - EYE CONTACT: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

FIRST AID - INGESTION: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

5. Fire-fighting Measures

UNUSUAL FIRE AND EXPLOSION HAZARDS: 465 <undefined>

SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam, Water Fog

6. Accidental Release Measures

ENVIRONMENTAL MEASURES: No Information

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Scrape up dried material and place into containers. Use personal protective equipment as necessary. In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations.

7. Handling and Storage

HANDLING: KEEP OUT OF REACH OF CHILDREN!DO NOT TAKE INTERNALLY. Use only with adequate ventilation. Ensure fresh air entry during application and drying. Wash thoroughly after handling.

STORAGE: Avoid excessive heat and freezing. Do not store at temperatures above 120 degrees F. Store away from caustics and oxidizers.

8. Exposure Controls/Personal Protection

Ingredients with Occupational Exposure Limits

Chemical Name	ACGIH TLV-TWA	ACGIH-TLV STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Limestone	N.E.	N.E.	15 mg/m3 TWA total dust, 5 mg/m3 TWA respirable fraction	N.E.
Diethylene glycol dibenzoate	N.E.	N.E.	N.E.	N.E.
Diethylene glycol monobenzoate	N.E.	N.E.	N.E.	N.E.
Titanium dioxide	10 mg/m3 TWA	N.E.	15 mg/m3 TWA total dust	N.E.
Ethylene glycol	N.E.	N.E.	N.E.	N.E.
Silica, amorphous	N.E.	N.E.	N.E.	N.E.

Carbon black	3 mg/m3 TWA inhalable fraction	N.E.	3.5 mg/m3 TWA	N.E.
Quartz	0.025 mg/m3 TWA respirable fraction	N.E.	N.E.	N.E.

Further Advice: MEL = Maximum Exposure Limit OES = Occupational Exposure Standard SUP = Supplier's Recommendation Sk = Skin Sensitizer N.E. = Not Established

Personal Protection



RESPIRATORY PROTECTION: No personal respiratory protective equipment normally required. National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m3) as determined by a full shift sample up to 10-hour work shift.



SKIN PROTECTION: Rubber gloves.



EYE PROTECTION: Goggles or safety glasses with side shields.



OTHER PROTECTIVE EQUIPMENT: Not required under normal use.



HYGIENIC PRACTICES: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

9. Physical and Chemical Properties

Appearance:	Colored	**Physical State:**	Paste
Odor:	Very Slight Ammonia	**Odor Threshold:**	Not Established
Density, g/cm3:	1.43 - 1.48	**pH:**	Between 7.0 and 12.0
Freeze Point, °C:	Not Established	**Viscosity (mPa.s):**	Not Established
Solubility in Water:	Not Established	**Partition Coeff., n-octanol/water:**	Not Established
Decomposition Temperature, °C:	Not Established	**Explosive Limits, %:**	N.I. - N.I.
Boiling Range, °C:	N.I. - N.I.	**Auto-Ignition Temperature, °C**	Not Established
Minimum Flash Point, °C:	93.3	**Vapor Pressure, mmHg:**	No Information
Evaporation Rate:	Slower Than n-Butyl Acetate	**Flash Method:**	Seta Closed Cup
Vapor Density:	Heavier Than Air	**Flammability:**	No Information
Combustibility:	Does not support combustion		

(See "Other information" Section for abbreviation legend)
(If product is an aerosol, the flash point stated above is that of the propellant.)

10. Stability and Reactivity

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Incompatible with strong bases and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e., COx, NOx.

11. Toxicological Information

EFFECT OF OVEREXPOSURE - INHALATION: Under normal use conditions, this product is not expected to cause adverse health effects. Inhalation of vapors in high concentration may cause mild irritation of respiratory system (nose, mouth, mucous membranes).

EFFECT OF OVEREXPOSURE - SKIN CONTACT: Under normal use conditions, this product is not expected to cause adverse health effects. Prolonged or repeated contact with skin may cause mild irritation.

EFFECT OF OVEREXPOSURE - EYE CONTACT: Under normal use conditions, this product is not expected to cause adverse health effects. Direct eye contact may cause irritation.

EFFECT OF OVEREXPOSURE - INGESTION: Under normal use conditions, this product is not expected to cause adverse health effects. Single dose oral toxicity is very low. Amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of large amounts may cause injury. Ingestion of ethylene glycol can cause gastrointestinal irritation, nausea, vomiting, diarrhea and if ingested in sufficient quantities, death.

CARCINOGENICITY: No Information

EFFECT OF OVEREXPOSURE - CHRONIC HAZARDS: Repeated or prolonged exposure may cause irritation of eyes and skin. The International Agency for Research on Cancer (IARC) has determined that crystalline silica in the form of quartz or cristobalite that is inhaled from occupational sources is carcinogenic to humans (Group 1- carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program (NTP) classifies respirable crystalline silica as "known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (Group A2). Breathing dust containing respirable crystalline silica may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects: Excessive inhalation of respirable dust can cause pneumoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. Smoking exacerbates this disease. Individuals with pneumoconiosis are predisposed to develop tuberculosis. There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease. Ethylene Glycol may cause kidney and liver damage upon prolonged and repeated overexposures. Studies have shown that repeated inhalation of ethylene glycol has produced adverse cardiovascular changes in laboratory animals. Ethylene glycol has been shown to cause birth defects in laboratory animals.

PRIMARY ROUTE(S) OF ENTRY: Inhalation, Skin Contact

Acute Toxicity Values

The acute effects of this product have not been tested. Data on individual components are tabulated below

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
1317-65-3	Limestone	6450 mg/kg Rat	>2000 mg/kg	>20 mg/L
120-55-8	Diethylene glycol dibenzoate	2830 mg/kg Rat	2000 mg/kg Rabbit	> 200 mg/L Rat
20587-61-5	Diethylene glycol monobenzoate	N.I.	N.I.	N.I.
13463-67-7	Titanium dioxide	>10000 mg/kg Rat	>5000 mg/kg Rabbit	>20 mg/L
107-21-1	Ethylene glycol	4000 mg/kg Rat	9530 mg/kg Rabbit	> 2.5 mg/L Rat
7631-86-9	Silica, amorphous	>3300 mg/kg Rat	>5000 mg/kg Rabbit	>20 mg/L
1333-86-4	Carbon black	>8000 mg/kg Rat	>3000 mg/kg Rabbit	6.750 mg/m3 Rat
14808-60-7	Quartz	500 mg/kg Rat	>2000 mg/kg	>20 mg/L

N.I. = No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Ecological injuries are not known or expected under normal use.

13. Disposal Information

DISPOSAL INFORMATION: This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous Waste Management Regulation, 40 CFR Section 261. Dispose as hazardous waste according to all local, state, federal and provincial regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

14. Transport Information

SPECIAL TRANSPORT PRECAUTIONS: No Information

DOT UN/NA Number:	N.A.
DOT Proper Shipping Name:	Not Regulated.
DOT Technical Name:	N.A.
DOT Hazard Class:	N.A.
Hazard SubClass:	N.A.
Packing Group:	N.A.

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Acute Health Hazard, Chronic Health Hazard

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Ethylene glycol	107-21-1

TOXIC SUBSTANCES CONTROL ACT:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

CALIFORNIA PROPOSITION 65 CARCINOGENS AND REPORODUCTIVE TOXINS

CALIFORNIA PROPOSITION 65: No Information

International Regulations: As follows -

CANADIAN WHMIS:

This SDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

WHMIS Class Consumer Commodity

16. Other Information

Revision Date: 6/19/2015 **Supersedes Date:** New MSDS

Reason for revision: HazCom2012/GHS Conversion

Datasheet produced by: Regulatory Department

HMIS Ratings:

Health:	1	**Flammability:**	1	**Reactivity:**	0	**Personal Protection:**	X

VOC Less Water Less Exempt Solvent, g/L 38.2

VOC Material, g/L: 27

VOC as Defined by California Consumer Product Regulation, Wt/Wt%: 0.1

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H270	May cause or intensify fire; oxidiser.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H331	Toxic if inhaled.
H332	Harmful if inhaled.

Icons for GHS Pictograms shown in Section 3 describing each ingredient:

GHS03



GHS06



GHS07



Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS. Since thisdocument is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

Material Safety Data Sheet

24 Hour Emergency Phone Numbers:
Medical: 1-800-327-3874
1-513-558-5111
Transportation:
1-800-535-5053
1-352-323-3500

NOTE: National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
Esta hoja de datos de la seguridad de los materiales está disponible en francés canadiense y en español a su solicitud.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Product Name: FAST N FINAL PREMIUM
Revision Date: 01/31/2006
Product UPC Number: 7079812140, 7079812141, 7079812142, 7079812143, 7079812145, 7079812146, 7079812147, 7079812148, 7079812149, 7079823030, 7079823050, 7079823090, 7079871354
Supercedes: 07/08/2003
Product Use/Class: RTU Spackle/Wallboard Repair
MSDS Number: 00010410001
Manufacturer: **DAP Inc.**
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (non-emergency matters)

Section 2 - Composition / Information On Ingredients

Chemical Name	CASRN	WT%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Sodium silicate glass	1344-09-8	10-30	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Ethylene glycol	107-21-1	0.5-1.5	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No
Vinyl acetate	108-05-4	0.1-1.0	10 PPM	15 PPM	N.E.	N.E.	N.E.	N.E.	No
Formaldehyde	50-00-0	<0.004	N.E.	N.E.	0.3 PPM	0.75 PPM	2 PPM	N.E.	No
Acetaldehyde	75-07-0	<0.002	N.E.	N.E.	25 PPM	200 PPM	N.E.	N.E.	No

Exposure Notes:

50-00-0 Formaldehyde is a specially regulated substance for which an OSHA chemical-specific exposure standard exits. Detailed information regarding this substance may be found in 29 CFR 1910.1048. Medical surveillance information regarding this substance may be found in Appendix C to 29 CFR 1910.1048.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices

Section 3 - Hazards Identification

Emergency Overview: A white to off-white paste with a slight sweet odor. CAUTION! May cause eye, skin, nose, throat and respiratory tract irritation. This product contains ethylene glycol.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: May cause skin irritation. May cause dry skin.

Effects Of Overexposure - Inhalation: Harmful if inhaled. Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes). Inhalation of dust may cause lung damage or other adverse pulmonary and respiratory effects.

Effects Of Overexposure - Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Effects Of Overexposure - Chronic Hazards:

Formaldehyde vapor is a known animal carcinogen according to OSHA and NTP and is considered possibly carcinogenic to humans by inhalation. The International Agency for Research on Cancer considers formaldehyde to be a human carcinogen.

Ethylene Glycol may cause kidney and liver damage upon prolonged and repeated overexposures. Studies have shown that repeated inhalation of ethylene glycol has produced adverse cardiovascular changes in laboratory animals. Ethylene glycol has been shown to cause birth defects in laboratory animals. This product contains vinyl acetate which is classified as a class 2B carcinogen by IARC. Vinyl acetate was found to cause cancer in the respiratory tract of laboratory animals. There is no evidence that vinyl acetate causes cancer in humans. The IARC published a monograph on vinyl acetate (1995). In this monograph, IARC indicates "there is inadequate evidence in humans for carcinogenicity of vinyl acetate. There is limited evidence in experimental animals for the carcinogenicity of vinyl acetate." Normally, this lack of conclusive evidence would place a substance in the IARC 3 classification (not classified as a human carcinogen). However, because vinyl acetate is metabolized to acetaldehyde, which has an IARC 2B (possibly carcinogenic to humans) classification, it also has been listed under Category 2B. Prolonged, repeated, or high exposures may cause weakness and depression of the central nervous system.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation

Medical Conditions which May be Aggravated by Exposure: If dry sanded, asthma and asthma-like conditions may worsen from prolonged or repeated exposure to dust.

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water.

First Aid - Inhalation: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

First Aid - Ingestion: Call a physician or Poison Control Center immediately. Do not induce vomiting.

Note to Physician: None.

COMMENTS: Call Medical Emergency at 1-800-327-3874 if any irritation or complication arises from any of the above routes of entry.

Section 5 - Fire Fighting Measures

Flash Point, F: Greater than 200 degrees
Method: (Seta Closed Cup)

Lower Explosive Limit, %: Not Established
Upper Explosive Limit, %: Not Established

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam

Unusual Fire And Explosion Hazards: None known.

Special Firefighting Procedures: Cool fire-exposed containers using water spray.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Scrape up dried material and place into containers.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! Do not breathe vapors. Wash thoroughly after handling. Avoid excessive heat and handling. Do not breathe dust. While dry sanding, use of a NIOSH-approved dust mask is recommended. Avoid contact with eyes, skin and clothing. Removal of this product after use will result in the generation of Dust. If dry-sanded, exposure to dust may result in the build-up of material in eyes, ears, nose, and mouth which may cause irritation.

Storage: Store away from caustics and oxidizers. Do not store at temperatures above 120 degrees F. Keep tightly closed. Avoid excessive heat and freezing.

Section 8 - Exposure Controls / Personal Protection

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits. Wet sanding is recommended to avoid generation of dust. Prevent build-up of dust and vapors by opening windows and doors or use other means to ensure fresh air entry during application, drying and sanding.

Respiratory Protection: A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. If concentrations exceed the exposure limits specified, use of a NIOSH-approved supplied air respirator is recommended. Where the protection factor is exceeded, use of a Self Contained Breathing Apparatus (SCBA) may be necessary. Use an approved NIOSH/OSHA respirator if dry sanded.

Skin Protection: Wear gloves with repeated or prolonged use.

Eye Protection: Safety glasses with side-shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Remove and wash contaminated clothing before re-use.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	**Vapor Density:**	Not Established
Odor:	Slight Sweet	**Odor Threshold:**	Not Established
Appearance:	White to Off-White	**Evaporation Rate:**	Not Established
Solubility in H2O:	Not Established	**Specific Gravity:**	0.478
Freeze Point:	Not Established	**pH:**	Between 7.0 and 12.0
Vapor Pressure:	Not Established	**Viscosity:**	Not Established
Physical State:	Paste		

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Strong oxidizing agents. Strong bases.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under normal conditions.

Section 11 - Toxicological Information

Product LD50: Not Established **Product LC50:** Not Established

CASRN	Chemical Name	LD50	LC50	WT%
107-21-1	Ethylene glycol	Rat:4700 mg/kg	Rat:10876 mg/kg	0.5-1.5
108-05-4	Vinyl acetate	----------	Rat:11400 mg/m3/4H	0.1-1.0
50-00-0	Formaldehyde	----------	Rat:203 mg/m3	<0.004
75-07-0	Acetaldehyde	----------	Rat:13300 ppm/4H	<0.002

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP	WT%
108-05-4	Vinyl acetate	Confirmed animal carcinogen with unknown relevance to humans.	Not Listed.	Possible carcinogen.	Not Listed.	0.1-1.0
50-00-0	Formaldehyde	Suspected human carcinogen.	Potential cancer hazard.	Human carcinogen.	Anticipated carcinogen.	<0.004
75-07-0	Acetaldehyde	Confirmed animal carcinogen with unknown relevance to humans.	Not Listed.	Possible carcinogen.	Anticipated carcinogen.	<0.002

Significant Data with Possible Relevance to Humans: This product contains trace amounts of free formaldehyde. OSHA and NTP identify formaldehyde as a potential carcinogen. IARC identifies formaldehyde as a human carcinogen. Formaldehyde has been shown to cause mutations in a variety of in-vitro test systems, the

significance of which to humans is unknown. In a two-year inhalation study, rats showed carcinogenic effects in the respiratory system at 15 ppm of formaldehyde. There should be minimal risk when used with ventilation adequate to keep the atmospheric concentration of formaldehyde below the recommended exposure limits. Maintain adequate ventilation to prevent exposure above current OSHA / ACGIH exposure limits. Workplace monitoring of the air to define formaldehyde exposure levels may be necessary.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): None

Section 14 - Transportation Information

DOT Proper Shipping Name:	Not Regulated	**Packing Group:**	N.A.
DOT Technical Name:	N.A.	**Hazard Subclass:**	N.A.
DOT Hazard Class:	N.A.	**DOT UN/NA Number:**	None

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number	WT%
Ethylene glycol	107-21-1	0.5-1.5
Vinyl acetate	108-05-4	0.1-1.0

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if

exported from the United States:

None.

U.S. State Regulations

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number	WT%
Water	7732-18-5	30-60
Acetic acid, vinyl ester, polymer	Proprietary	10-30
Sodium Borate; Boric Acid, Sodium Salt	7775-19-1	1-5

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number	WT%
Water	7732-18-5	30-60
Acetic acid, vinyl ester, polymer	Proprietary	10-30
Sodium Borate; Boric Acid, Sodium Salt	7775-19-1	1-5

California Proposition 65:

Warning: The following ingredients present in the product are known to the State of California to cause cancer:

Chemical Name	CAS Number	Definition	Date Listed	WT%
Formaldehyde	50-00-0	Carcinogenic.	Listed: January 1, 1988	<0.004
Acetaldehyde	75-07-0	Carcinogenic.	Listed: April 1, 1988	<0.002

Warning: The following ingredients present in the product are known to the State of California to cause birth defects or other reproductive harm:

None.

Section 16 - Other Information

HMIS Ratings:

Health: 1 Flammability: 1 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, GR/LTR: 9.5 LB/GAL: 0.1 WT%: 1.485

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable

N.E. – Not Established

N.D. – Not Determined

VOC – Volatile Organic Compound

ACGIH – American Conference of Governmental Industrial Hygienists

SARA – Superfund Amendments and Reauthorization Act of 1986

NJRTK – New Jersey Right-to-Know Law

OSHA – Occupational Safety and Health Administration

PEL – Permissible Exposure Limit	HMIS – Hazardous Materials Identification System
TLV – Threshold Limit Value	NTP – National Toxicology Program
STEL – Short Term Exposure Limit	CEIL – Ceiling Exposure Limit
LD50 – Lethal Dose 50	LC50 – Lethal Concentration 50
F – Degree Fahrenheit	C – Degree Celsius
MSDS – Material Safety Data Sheet	CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

Hoja de datos de la seguridad de los materiales

Números telefónicos de emergencia las 24 horas:
Emergencias médicas: 1-800-327-3874
1-513-558-5111
Transporte:
1-800-535-5053
1-352-323-3500

NOTA: Los números de emergencia del Centro de Respuesta Nacional sólo se deben usar en caso de emergencias químicas que involucren un derramamiento, incendio, exposición o accidente que tengan que ver con químicos

IMPORTANTE: Lea esta hoja de datos de la seguridad de los materiales antes de manipular o desechar este producto, y entregue esta información a los empleados, clientes y usuarios de este producto. Este producto está cubierto por la norma de comunicación de riesgos OSHA, y este documento fue preparado de acuerdo con los requisitos de dicha norma. Todos los términos abreviados utilizados en este documento se describen con más detalles en la sección 16.

Sección 1 - Información del producto químico/ compañía

Esta hoja de datos de la seguridad de los materiales está disponible en francés canadiense y en español a su solicitud.
On peut demander cette MSDS a la langue Francaise Canadienne.

Nombre de producto: FAST N FINAL PREMIUM

Fecha de revisión: 01/31/2006

Número de UPC del producto: 7079812140, 7079812141, 7079812142, 7079812143, 7079812145, 7079812146, 7079812147, 7079812148, 7079812149, 7079823030, 7079823050, 7079823090, 7079871354

Reemplaza a: 07/08/2003

Uso/ clase del producto: RTU Spackle/Wallboard Repair

Número de hoja de datos (MSDS): 00010410001

Fabricante:
DAP Inc.
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (asuntos de no emergencia)

Sección 2 - Composición / Información sobre los Ingredientes

Nombre Químico	CASRN	Peso%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Piel
La Rata Del Silicato	1344-09-8	10-30	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	No
Etilen Glicol	107-21-1	0.5-1.5	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No
Acetato De Vinilo	108-05-4	0.1-1.0	10 PPM	15 PPM	N.E.	N.E.	N.E.	N.E.	No
Formaldehido	50-00-0	<0.004	N.E.	N.E.	0.3 PPM	0.75 PPM	2 PPM	N.E.	No
Aldehídoacético	75-07-0	<0.002	N.E.	N.E.	25 PPM	200 PPM	N.E.	N.E.	No

Notas sobre la exposición:

50-00-0 Formaldehido es una sustancia especialmente regulada para la cual existe una norma OSHA para la exposición a un químico específico. La información detallada respecto a esta sustancia se encuentra en 29 CFR 1910.1048. La información respecto a la vigilancia médica para esta sustancia se

puede encontrar en el apéndice C de 29 CFR 1910.1048.

Importante: Los niveles de exposición permitidos (PEL) señalados son suministrados por el Dept. del Trabajo de EE.UU., Límites de la norma final OSHA (CFR 29 1910.1000); Estos límites pueden variar de estado a estado.

Nota: Se debe evitar o reducir al máximo la exposición de la piel de un empleado a substancias que tengan "SÍ" en la columna "PIEL" en la tabla anterior, según lo permitan las circunstancias mediante el uso de guantes, ropa de protección, gafas de seguridad y otros equipos personales de protección, controles de ingeniería o prácticas de trabajo.

Sección 3 - Identificación de riesgos

Generalidades sobre las emergencias: Un blanco a la pasta de-blanco con un olor dulce leve. ¡PRECAUCIÓN! Podría causar irritación de los ojos, piel, nariz, garganta y tracto respiratorio. Este producto contiene glicol de etileno.

Consulte otras secciones de la hoja de datos de seguridad de los materiales para más información detallada.

Efectos de la sobre exposición - Contacto visual: Podría causar irritación a los ojos.

Efectos de la sobre exposición - Contacto de la piel: Podría causar irritación de la piel. Puede causar piel seca.

Efectos de la sobre exposición - Inhalación: Es dañino si se inhala. La inhalación puede causar irritación de las vías respiratorias (nariz, boca, membranas mucosas). Aspiración de polvo puede causar el daño pulmonar u otros efectos adversos, pulmonares y respiratorios.

Efectos de la sobre exposición - Ingestión: La ingestión puede ocasionar irritación gastrointestinal, náusea, vómito y diarrea.

Efectos de la sobre exposición - Riesgos crónicos:

El vapor del formaldehido es un cancerígeno animal conocido según OSHA y NTP y se considera posiblemente cancerígeno a humanos por aspiración. La Agencia Internacional para la Investigación en el Cancer considera formaldehido para ser un cancerígeno humano.

El glicol de etileno puede causar daño al riñón e hígado con la sobre exposición prolongada y repetida. Los estudios han demostrado que la inhalación repetida al glicol de etileno ha producido cambios cardiovasculares adversos en los animales de laboratorio. Se ha demostrado que el glicol de etileno causa defectos de nacimiento en animales de laboratorio. Este producto contiene acetato de vinilo que es clasificado como un cancerígeno de clase 2B por IARC. El acetato del vinilo se encontró para causar el cancer en el tracto respiratorio de animales de laboratorio. No hay la evidencia que acetato de vinilo causa el cancer en humanos. El IARC publicó una monografía en el acetato (1995) del vinilo. En esta monografía, IARC indica “hay la evidencia inadecuada en humanos para el carcinogenicity de acetato de vinilo. Allí es limitado la evidencia en animales experimentales para el carcinogenicity de acetato de vinilo.” Normalmente, esta falta de la evidencia conclusiva colocaría una substancia en el IARC 3 clasificación (no clasificado como un cancerígeno humano). Sin embargo, porque acetato de vinilo es metabolizado al acetaldehyde, que tiene un IARC 2B (posiblemente cancerígeno a humanos) la clasificación, se ha listado también abajo Categoría 2B. Las exposiciones prolongadas, repetidas o elevadas pueden causar debilidad y depresión del sistema nervioso central.

Ruta(s) principal de entrada: Piel el Contacto, Pele la Absorción, Aspiración

Condiciones médicas que se pueden agravar a causa de la exposición: Si se lija en seco, las condiciones de asma y relacionadas con el asma podrían empeorar por una exposición prolongada o repetida al polvo.

Sección 4 - Medidas de primeros auxilios

Primeros auxilios - Contacto visual: En caso de contacto, enjuague los ojos de inmediato con abundante agua por al menos 15 minutos. Obtenga atención médica de inmediato.

Primeros auxilios - Contacto de la piel: Lávese inmediatamente con jabón y agua abundante.

Primeros auxilios - Inhalación: Si se inhala, salga al aire fresco. Si se dificulta la respiración, abandone el área para obtener aire fresco. Si se experimenta dificultad continua para respirar, busque atención médica de inmediato.

Primeros auxilios - Ingestión: Llamar inmediatamente a un médico o a un centro de información toxicológica. No provocar vómitos.

Nota para el médico: Sin información

COMENTARIOS: Llame para emergencias médicas al 1-800-327-3874 si surgiera cualquier irritación o complicación de cualquiera de las rutas de entrada anteriores.

Sección 5 - Medidas para combatir incendios

Punto de inflamación, F: Más que 200 grados
Método: (Seta Cerró Copa)

Límite explosivo menor, %: No Establecido

Límite explosivo mayor, %: No Establecido

Medios para extinguir: Bióxido de carbono, Seque Sustancia Química, Espuma

Riesgos inusuales de incendio y explosión: Ninguno conocido.

Procedimientos especiales para combatir incendios: Enfríe los contenedores expuestos al fuego usando un atomizador de agua.

Sección 6 - Medidas en caso de emisión accidental

Pasos a seguir en el caso de emisión o derramamiento de materiales: Use el equipo de protección correcto según lo especifica la Sección 8. Raspe el material seco y coloque en contenedores.

Sección 7 - Manejo y almacenamiento

Manejo: ¡MANTENGA LEJOS DEL ALCANCE DE LOS NIÑOS! No respire los vapores. Lave a fondo después de manipular. Evite el calor y la manipulación en exceso. No respire el polvo. Mientras seca sanding, of a de uso máscara NIOSH-APROBADO de polvo se recomienda. Evite el contacto con los ojos, la piel y la ropa. La remoción de este producto después del uso resultará en la generación de polvo. Si se lija en seco, la exposición al polvo podría resultar en la acumulación de material en los ojos, nariz y boca, lo que puede causar irritación.

Almacenamiento: Almacene lejos de substancias cáusticas y oxidantes. No almacene a temperaturas por encima de 120 grados F. Manténgase perfectamente cerrado. Evite el calor y el congelamiento en exceso.

Sección 8 - Controles de la exposición/ Protección personal

Medidas de precaución: Refiérase por favor a otras secciones y subdivisiones de este MSDS.

Controles de ingeniería: Puede ser necesaria la ventilación local de las fuentes de emisión para mantener las concentraicones ambientales por debajo de los límites de exposición recomendados. Se recomienda el lijado

húmedo para evitar la generación de polvo. Prevenga aumento de polvo y vapores abriendo ventanas y puertas o utilice otros medios para asegurar la entrada aérea fresca durante la aplicación, secando y sanding.

Protección respiratoria: Se debe seguir un programa de protección respiratoria que cumpla con los requisitos de OSHA 1910.134 y ANSI Z88.2 cada vez que las condiciones del lugar de trabajo exijan el uso de un respirador. Si las concentraciones exceden los límites de exposición especificados, se recomienda el uso de un aparato de respiración con suministro de aire aprobado por el NIOSH. Cuando el factor de protección es excedido, puede que sea necesario el uso de un aparato de respiración autónomo (SCBA). Use un respirador aprobado por NIOSH/OSHA si se lija en seco.

Protección de la piel: Use guantes con el uso repetido o prolongado.

Protección de la visión: gafas protectoras con cubiertas laterales

Otro equipo de protección: no se precisa en el uso normal.

Prácticas higiénicas: Quitar y lavar la ropa contaminada antes de reutilizar.

Sección 9 - Propiedades físicas y químicas

Rango de ebullición:	No Establecido	**Densidad del vapor:**	No Establecido
Olor:	Leve Dulce	**Umbral de olor:**	No Establecido
Aspecto:	Blanco a De-Blanco	**Índice de evaporación:**	No Establecido
Solubilidad en H2O:	No Establecido	**Gravedad específica:**	0.478
Punto de congelamiento:	No Establecido	**pH:**	Entre 7,0 y 12,0
Presión del vapor:	No Establecido	**Viscosidad:**	No Establecido
Estado físico:	Pasta		

(Ver sección 16 para la leyenda de las abreviaturas)

Sección 10 - Estabilidad y reactividad

Condiciones a evitar: Calentamiento y congelamiento excesivos.

Incompatibilidad: agentes oxidantes fuertes bases fuertes

Productos de descomposición peligrosa: Productos de descomposición normal, es decir, COx, NOx.

Polimerización peligrosa: No ocurrirá polimerización peligrosa bajo condiciones normales.

Estabilidad: Estable en condiciones normales

Sección 11 - Información toxicológica

LD50 del producto: No Establecido **LC50 del producto:** No Establecido

CASRN	Nombre Químico	LD50	LC50	Peso%
107-21-1	Etilen Glicol	Rat:4700 mg/kg	Rat:10876 mg/kg	0.5-1.5
108-05-4	Acetato De Vinilo	----------	Rat:11400 mg/m3/4H	0.1-1.0
50-00-0	Formaldehido	----------	Rat:203 mg/m3	<0.004
75-07-0	Aldehídoacético	----------	Rat:13300 ppm/4H	<0.002

Carcinogenicidad:

Número						

CAS	Nombre Químico	ACGIH	OSHA	IARC	NTP	Peso%
108-05-4	Acetato De Vinilo	Cancerígeno animal confirmado con la aplicabilidad desconocida a humanos.	Not Listed.	Cancerígeno posible.	Not Listed.	0.1-1.0
50-00-0	Formaldehido	Cancerígeno humano sospechado.	Peligro potencial de cancer.	Cancerígeno humano.	Cancerígeno anticipado.	<0.004
75-07-0	Aldehídoacético	Cancerígeno animal confirmado con la aplicabilidad desconocida a humanos.	Not Listed.	Cancerígeno posible.	Cancerígeno anticipado.	<0.002

Datos significativos con posible relevancia para los humanos: Este producto contiene las cantidades de la huella de formaldehído libre. OSHA y NTP identifican formaldehído como un cancerígeno potencial. IARC identifica formaldehído como un cancerígeno humano. El formaldehído se ha mostrado para causar mutaciones en una variedad de en-vitros sistemas de la prueba, el significado de que a humanos es desconocido. En un estudio de inhalación con ratas durante dos años se observaron efectos cancerígenos en el sistema respiratorio con una concentración de 15 PPM de formaldehído. El riesgo debe ser mínimo al usarse con ventilación adecuada para mantener la concentración atmosférica del formaldehído por debajo de los límites de exposición recomendados.
Mantenga ventilación adecuada para evitar la exposición por encima de los límites actuales de OSHA / ACGIH. Podría ser necesario el monitoreo en el lugar de trabajo del aire para definir los niveles de exposición al formaldehído.

Sección 12 - Información ecológica

Información ecológica: No se conocen ni esperan daños ecológicos bajo uso normal.

Sección 13 - Información sobre desechos

Información sobre desechos: Deseche los materiales de acuerdo con todas las normas federales, estatales y locales. Las normas/ restricciones estatales y locales son complejas y pueden diferir de las normas federales. La responsabilidad de eliminar los desechos correctamente recae en el propietario de los desechos.

Código de desechos de EPA en caso de desecho (CFR 40 Sección 261): Ninguno

Sección 14 - Información sobre transporte

Nombre correcto para envío a DOT: No Regulado
Grupo de empaque: No Aplicable
Nombre técnico para DOT: No Aplicable
Sub-clase de riesgo: No Aplicable
Clase de riesgo para DOT: No Aplicable
Número UN/NA para DOT: Ninguno

Nota: La información del envío proporcionada es aplicable para el transporte doméstico del suelo sólo. Categorización diferente puede aplicar si enviado vía otros modos del transporte y/o a destino no-domésticos.

Sección 15 - Información reglamentaria

Categoría de riesgo CERCLA - SARA:

Este producto ha sido revisado según las categorías de riesgo de EPA promulgadas según las secciones 311 y 312 de la Ley de enmienda y reautorización de fondos especiales de 1986 (SARA, por sus iniciales en inglés, Título III) y se considera, según las definiciones correspondientes, que cumple con las siguientes categorías:

PELIGRO DE SALUD INMEDIATO, PELIGRO DE SALUD CRONICO

Sección 313 de la ley SARA:

Este producto contiene las siguientes substancias sujeto a los requisitos de reporte de la sección 313 del título III de la ley SARA de 1986 y 40 CFR parte 372:

Nombre Químico	Número CAS	Peso%
Etilen Glicol	107-21-1	0.5-1.5
Acetato De Vinilo	108-05-4	0.1-1.0

Ley para el control de substancias tóxicas:

Todos ingredientes en este producto son o en lista de inventario de TSCA, o de otro modo exima.

Este producto contiene las siguientes substancias químicas de acuerdo con los requisitos de reporte de la ley TSCA 12(B) si es exportado desde los Estados Unidos:

Ninguno.

Regulaciones estatales de EE.UU.:

Ley del Derecho a saberde New Jersey:

Los siguientes materiales no representan peligro, pero están entre los primeros cinco componentes de este producto:

Nombre Químico	Número CAS	Peso%
Agua	7732-18-5	30-60
Acético Acido, Vinilo Ester, Polímero	Propietario	10-30
Sodium Borate; Boric Acid, Sodium Salt	7775-19-1	1-5

Ley del Derecho a saber de Pennsylvania:

Los siguientes ingredientes no peligrosos están presentes en el producto en una proporción mayor a 3%:

Nombre Químico	Número CAS	Peso%
Agua	7732-18-5	30-60
Acético Acido, Vinilo Ester, Polímero	Propietario	10-30
Sodium Borate; Boric Acid, Sodium Salt	7775-19-1	1-5

Propuesta 65 de California:

Advertencia: Los siguientes ingredientes presentes en el producto son conocidos para el Estado de California por causar cáncer:

Nombre Químico	Número CAS	Definición	Fecha Listó	Peso%
Formaldehido	50-00-0	Cancerígeno.	Listed: January 1, 1988	<0.004
Aldehídoacético	75-07-0	Cancerígeno.	Listed: April 1, 1988	<0.002

Advertencia: Los siguientes ingredientes presentes en el producto son conocidos para el Estado de California por causar defectos de nacimiento u otros daños reproductivos:

Ninguno.

Sección 16 - Otra información

Índices HMIS:

Salud: 1 Inflamabilidad: 1 Reactividad: 0 Protección personal: X

COMPONENTES ORGÁNICOS VOLÁTILES, GR/LTR: 9.5 LB/GAL: 0.1 WT%: 1.485

RAZÓN DE LA REVISIÓN: Periódico Actualiza

Leyenda:

N.E. - No establecido

N.A. - No aplica

NJRTK - Ley del Derecho a saber de New Jersey

N.D. - No determinado

OSHA - Administración de la seguridad y salud ocupacional

LD50 - Dosis letal 50

PEL - Límites permitidos de exposición

C - Grados centígrados

VOC - Componente orgánico volatile

NTP - Programa nacional de toxicología

STEL - Límite de exposición a corto plazo

CEIL - Límite máximo de exposición

MSDS - Hoja de datos de la seguridad de los materiales

LC50 - Concentración letal 50

HMIS - Sistema de identificación de materiales peligrosos

F - Grados Fahrenheit

CASRN - Número de registro de servicios de abstractos químicos

TLV - Valor del límite umbral

ACGIH - Conferencia Americana de Higienistas Industriales gubernamentales

SARA - Ley Ley de enmienda y reautorización de fondos especiales de 1986 (SARA)

DAP cree que los datos y las declaraciones contenidos en el presente son exactos hasta la fecha. Se ofrecen de buena fe como valores típicos y no como las especificaciones del producto. **NO SE OFRECE NINGUNA GARANTÍA DE COMERCIABILIDAD, IDONEIDAD PARA UN PROPÓSITO EN PARTICULAR O CUALQUIER OTRA GARANTÍA, EXPRESA O IMPLÍCITA, CON RESPECTO A LA INFORMACIÓN SUMINISTRADA EN EL PRESENTE O DEL PRODUCTO AL CUAL LA INFORMACIÓN SE REFIERE.** Dado que este documento tiene la intención de ser una guía únicamente para el uso correcto y el manejo preventivo del producto de la referencia por parte de personas correctamente entrenadas, es responsabilidad del usuario (i) revisar las recomendaciones con especial consideración al contexto específico del uso que se pretende y (ii) determinar si son correctas.

<Final de la hoja de datos de la seguridad de los materiales>

Fiche signalétique

24 heures – Numéros de téléphone en cas d'urgence:

Urgence médicale: **1-800-327-3874**
1-513-558-5111

Urgence transport: **1-800-535-5053**
1-352-323-3500

NOTE: Les numéros de téléphone en cas d'urgence doivent être utilisés uniquement lors de déversement, de fuite, d'incendie, d'exposition ou d'accident impliquant des produits chimiques.

IMPORTANT: Lire attentivement cette fiche signalétique avant de manipuler ou de disposer de ce produit. Remettre ces informations aux employés, clients et utilisateurs de ce produit. Ce produit est régit sous la gouverne de l'OSHA, Communication de renseignements à l'égard de matières dangereuses, et ce document a été préparé pour répondre aux exigences de ces standards. Les significations pour toutes les abréviations utilisées dans cette fiche signalétique sont décrites à la Section 16.

Section 1 – Identification du produit et de la compagnie

This MSDS is offered in English upon request.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Nom du produit:	FAST N FINAL PREMIUM	**Date de révision:**	01/31/2006
Numéro UPC:	7079812140, 7079812141, 7079812142, 7079812143, 7079812145, 7079812146, 7079812147, 7079812148, 7079812149, 7079823030, 7079823050, 7079823090, 7079871354	**Date d'abrogation:**	07/08/2003
Utilisation du produit/Classe:	Prêt à Utiliser la Réparation de Spackle/Panneau MURAL	**Numéro de fiche:**	00010410001
Fabricant:	**DAP Inc.** **2400 Boston Street Suite 200** **Baltimore, MD 21224-4723** **888-327-8477 (Pour toute information non urgente)**		

Section 2 - Composition / Ingrédients dangereux

Nom Chimique	CASRN	Poids%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Peau
Silicate de sodium (ratio SiO2:Na2O supérieur à 2,4:1)	1344-09-8	10-30	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	Non
Éthylène glycol	107-21-1	0.5-1.5	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	Non
Acétate de vinyle	108-05-4	0.1-1.0	10 PPM	15 PPM	N.E.	N.E.	N.E.	N.E.	Non
Formaldéhyde	50-00-0	<0.004	N.E.	N.E.	0.3 PPM	0.75 PPM	2 PPM	N.E.	Non
Acétaldéhyde	75-07-0	<0.002	N.E.	N.E.	25 PPM	200 PPM	N.E.	N.E.	Non

Notes concernant l'exposition:

50-00-0 Formaldéhyde est une substance régie spécialement selon les standards d'exposition à des produits chimiques spécifiques établis par l'OSHA. Pour de plus amples informations concernant cette substance, consulter l'OSHASP 29 CFR 1910.1048. Les informations concernant les problèmes médicaux à surveiller sont à l'Appendice C de l'OSHASP 29 CFR 1910.1048.

Important: Les limites d'exposition permises (LEP) décrites proviennent du Department of Labor des États-Unis, règlement final concernant les valeurs d'exposition moyennes pondérées de l'OSHA

(CFR 29 1910.1000); ces limites peuvent varier selon les états.

Note: Prendre tous les moyens selon les circonstances afin de prévenir ou réduire toute exposition de la peau des employés aux substances portant la mention «OUI» dans la colonne «PEAU» du tableau ci-dessus. Utiliser des gants, une combinaison, des lunettes étanches, tout autre équipement de protection personnel adéquat, les contrôles techniques et les pratiques appropriées au type de travail.

Section 3 – Identification des dangers

Urgences générales: Un blanc à la pâte de-blanc avec une odeur douce insignifiante. ATTENTION! Peut causer une irritation des yeux, de la peau, du nez, de la gorge et des voies respiratoires. Ce produit contient du glycol d'éthylène.

Consulter les autres sections de cette fiche signalétique pour des informations plus détaillées.

Effets de surexposition – Contact oculaire: Peut causer une irritation des yeux.

Effets de surexposition – Contact cutané: Peut causer une irritation de la peau. Peut causer un assèchement de la peau.

Effets de surexposition – Inhalation: Nocif en cas d'ingestion L'inhalation de ce produit peut provoquer l'irritation des voies respiratoires (nez, bouche, muqueuses). L'inhalation de poussière peut causer des dommages du poumon ou les effets autres, défavorables, pulmonaires et respiratoires.

Effets de surexposition – Ingestion: L'ingestion peut provoquer une irritation de l'appareil digestif, des nausées, des vomissements et des diarrhées.

Effets de surexposition – Dangers chroniques:

La vapeur de formaldéhyde est une substance cancérogène animale connue selon OSHA et NTP et est probablement considérée cancérogène aux humains par l'inhalation. L'Agence Internationale pour la Recherche sur le Cancer considère du formaldéhyde pour être une substance cancérogène humaine.

Une exposition excessive et répétée à l'éthylène glycol peut causer des lésions aux reins et au foie. Les études en laboratoire menées sur des animaux ont démontré que l'inhalation répétée d'éthylène glycol cause des changements néfastes du système cardiovasculaire. Lors d'études en laboratoire sur les animaux, il a été démontré que l'éthylène glycol cause des anomalies congénitales. Ce produit contient l'acétate de vinyle qui est classifié comme une classe 2B substance cancérogène par IARC. L'acétate de vinyle a été trouvée pour causer le cancer dans l'étendue respiratoire d'animaux de laboratoire. Il n'y a pas de preuve que l'acétate de vinyle cause le cancer dans humain. Le IARC a publié un monograph sur l'acétate de vinyle (1995). Dans ce monograph, IARC indique "il y a de la preuve inadéquate dans humain pour carcinogenicity d'acétate de vinyle. Est là-bas limité de la preuve dans les animaux expérimentaux pour le carcinogenicity d'acétate." de vinyle Normalement, ce manque de preuve concluante placerait une substance dans le IARC 3 classification (n'a pas classifié comme une substance cancérogène humaine). Cependant, parce que l'acétate de vinyle est metabolized à acetaldehyde, qui a un IARC 2B (probablement cancérogène à humain) la classification, il a été aussi énuméré sous la Catégorie 2B. L'exposition prolongée, ou répétée, ou à de fortes concentrations peut provoquer un affaiblissement et une dépression du système nerveux central.

Voie(s) d'absorption: Peau le Contact, Ecorcher l'Absorption, Inhalation

Problèmes médicaux aggravés lors d'exposition au produit : Lors de ponçage à sec, la condition des personnes atteintes d'asthme ou de symptômes semblables à l'asthme peut s'aggraver en cas d'exposition excessive et répétée à la poussière.

Section 4 – Premiers soins

Premiers soins – Contact oculaire: En cas de contact avec les yeux, rincer abondamment avec de l'eau pendant au moins 15 minutes. Obtenir des soins médicaux immédiatement.

Premiers soins – Contact cutané: Laver immédiatement et abondamment avec de l'eau et du savon.

Premiers soins – Inhalation: En cas d'inhalation, transporter la personne exposée à l'air frais. Si elle a de la difficulté à respirer, quitter les lieux afin d'obtenir de l'air frais. Si la difficulté à respirer persiste, obtenir des soins médicaux immédiatement.

Premiers soins – Ingestion: Appeler immédiatement un médecin ou un Centre AntiPoison. Ne pas faire vomir.

Note au médecin: Pas d'information.

COMMENTAIRES: En cas d'apparition d'une irritation ou de complications suite à une exposition au produit, communiquer immédiatement avec l'urgence médicale au 1-800-327-3874.

Section 5 – Mesures de protection en cas d'incendie

Point d'éclair, ° F (° C): Plus grand que 200 degrés
Méthode: (Seta A Fermé la Tasse)

Limite d'explosibilité inférieure, %: Pas Etabli

Limite d'explosibilité supérieure, %: Pas Etabli

Moyens d'extinction: Dioxyde de carbone, Sécher Chimique, Mousse

Risques particuliers d'explosions ou d'ignition: Aucune connue.

Procédures spéciales de lutte contre les incendies: Utiliser une lance-brouillard afin de refroidir les contenants exposés au feu.

Section 6 – Mesures en cas de déversement accidentel

Procédures de nettoyage: Porter un équipement de protection personnel approprié tel que spécifié à la Section 8. Gratter le matériau sec puis déposer dans un contenant.

Section 7 – Manutention et entreposage

Manutention: TENIR HORS DE LA PORTÉE DES ENFANTS! Éviter de respirer les vapeurs. Laver vigoureusement après la manipulation. Éviter la chaleur et la manipulation excessive. Ne pas respirer la poussière. Pendant que sécher sanding, of a d'usage masque de poussière NIOSH-APPROUVE est recommandé. Éviter tout contact avec les yeux, la peau et les vêtements. L'enlèvement de ce produit générera de la poussière. Lors de ponçage à sec, l'exposition à cette poussière produit une accumulation de matériau dans les yeux, les oreilles, le nez et la bouche et peut causer une irritation.

Entreposage: Entreposer loin des produits caustiques et des agents oxydants. Ne pas entreposer à des températures supérieures à 120º F (48,8º C). Conserver hermétiquement fermé. Éviter la chaleur excessive ou le froid excessif.

Section 8 – Contrôles d'exposition / Protection personnelle

Mesures de précaution: S'il vous plaît se référer aux autres sections et aux autres sous-sections de ce MSDS.

Contrôles d'ingénierie: Une ventilation locale près de la source d'émission peut être nécessaire pour maintenir

la concentration ambiante au-dessous des niveaux limites recommandés. Un ponçage humide est recommandé afin d'éviter de générer de la poussière. Empêcher l'accumulation de poussière et les vapeurs en ouvrant fenêtres et les portes ou utilise d'autres moyens pour assurer de l'entrée d'air fraîche pendant l'application, séchant et sanding.

Protection des voies respiratoires: Un programme de protection respiratoire défini selon les normes de l'OSHA 1910.134 et de l'ANSI Z88.2 doit être appliqué à chaque fois que les conditions sur les lieux de travail exigent de porter un respirateur. Si la concentration dépasse les niveaux limites spécifiés, il est recommandé d'utiliser un respirateur à adduction d'air pur agréé par NIOSH. Lorsque la concentration dépasse le facteur de protection de ce type de respirateur, il peut être nécessaire d'utiliser un appareil respirateur autonome. Lors de ponçage à sec, porter un respirateur approuvé NIOSH/OSHA.

Protection de la peau: En cas d'utilisation excessive et répétée, porter des gants.

Protection des yeux: lunettes de sécurité avec protections latérales

Équipements de protection additionnels: inutile dans les conditions normales d'utilisation.

Pratiques hygiéniques: Enlever et laver les vêtements contaminés avant réutilisation.

Section 9 – Propriétés physiques et chimiques

Point d'ébullition:	Pas Etabli	**Densité de vapeur:**	Pas Etabli
Odeur:	Insignifiant Doux	**Limite de détection olfactive:**	Pas Etabli
Apparence:	Blanc à De-Blanc	**Taux d'évaporation:**	Pas Etabli
Solubilité dans l'eau (H_2O):	Pas Etabli	**Poids spécifique:**	0.478
Point de congélation:	Pas Etabli	**Taux de pH:**	Entre 7,0 et 12,0
Pression de vapeur:	Pas Etabli	**Viscosité:**	Pas Etabli
État physique:	Pâte		

(Consulter la Section 16 pour connaître la signification des abréviations))

Section 10 – Stabilité et réactivité

Conditions à éviter: Chaleur excessive ou froid excessif.

Incompatibilité: des oxydants forts des bases fortes

Produits de décomposition dangereux: Produits de décomposition habituels : oxydes de carbone (COx) et oxydes d'azote (NOx).

Risque de polymérisation: Aucune polymérisation dangereuse ne surviendra dans des conditions normales d'utilisation.

Stabilité: Stable dans des conditions normales

Section 11 – Propriétés toxicologiques

Produit DL50: Pas Etabli **Produit CL50:** Pas Etabli

CASRN	Nom Chimique	LD50	LC50	Poids%
107-21-1	Éthylène glycol	Rat:4700 mg/kg	Rat:10876 mg/kg	0.5-1.5
108-05-4	Acétate de vinyle	----------	Rat:11400 mg/m3/4H	0.1-1.0

50-00-0	Formaldéhyde	----------	Rat:203 mg/m3	<0.004
75-07-0	Acétaldéhyde	----------	Rat:13300 ppm/4H	<0.002

Effets cancérigènes:

Numéro CAS	Nom Chimique	ACGIH	OSHA	IARC	NTP	Poids%
108-05-4	Acétate de vinyle	Confirmée cancérogène animale avec le pertinence inconnu aux humains.	Not Listed.	Cancérogène possible.	Not Listed.	0.1-1.0
50-00-0	Formaldéhyde	Présumée cancérogène humaine.	Le danger potentiel de cancer.	Cancérogène humaine.	Cancérogène prévue.	<0.004
75-07-0	Acétaldéhyde	Confirmée cancérogène animale avec le pertinence inconnu aux humains.	Not Listed.	Cancérogène possible.	Cancérogène prévue.	<0.002

Données significatives possiblement pertinentes à l'humain: Ce produit contient les quantités de trace de formaldéhyde libre. OSHA et NTP identifient du formaldéhyde comme une substance cancérogène potentielle. IARC identifie du formaldéhyde comme une substance cancérogène humaine. Le formaldéhyde a été montré pour causer des mutations dans une assortiment de systèmes de test in vitro, la signification dont à l'être humain inconnu. Des études d'inhalation d'une durée de deux ans effectuées sur le rat ont mis en évidence des effets cancérigènes sur le système respiratoire pour des concentrations de 15 ppm de formaldéhyde. Le risque devrait être minime si la ventilation est adéquate et maintient le niveau de concentrations de formaldéhyde en suspension sous les limites d'exposition permises.
Maintenir une ventilation adéquate afin d'abaisser les niveaux d'exposition sous les limites établies par l'OSHA / ACGIH. L'analyse de l'air ambiant sur les lieux de travail peut s'avérer nécessaire afin de déterminer les niveaux d'exposition au formaldéhyde.

Section 12 – Information écologique

Information écologique: Aucune dégradation de l'environnement n'est connue ou prévisible dans les conditions normales d'utilisation.

Section 13 – Information sur la mise au rebut

Information concernant la mise au rebut: Disposer de ce matériau en respectant les lois fédérales, provinciales et municipales. Les lois et restrictions provinciales et municipales sont complexes et peuvent différer des lois fédérales. La responsabilité de la disposition appropriée des déchets appartient au propriétaire des déchets.

Code de mise au rebut de l'Agence de protection de l'environnement (40 CFR Section 261): Aucun

Section 14 – Étiquetage selon le Ministère des Transports

Nom du produit expédié: Pas Réglé
Nom technique: Pas Applicable
Classe de danger: Pas Applicable
Groupe d'emballage: Pas Applicable
Classe de transport: Pas Applicable
Numéro UN/NA: Aucun

Note : L'information d'expédition fournie est applicable pour le transport de sol domestique seulement. La catégorisation différente peut s'appliquer si expédié via les autres modes de et/ou de transport aux destinations non résidentielles.

Section 15 – Information sur les règlements

CERCLA - Catégories de dangers selon le SARA:

Ce produit a été revu en conformité avec les «Catégories de dangers» établies par l'Agence de protection de l'environnement et promulguées aux Sections 311 et 312 du Superfund Amendment and Reauthorization Act de 1986 (SARA Titre III). Selon les définitions applicables, il est considéré répondre aux catégories suivantes :

RISQUE DE SANTE IMMEDIAT, RISQUE DE SANTE CHRONIQUE

SARA SECTION 313 :
Ce produit contient les substances suivantes assujetties aux normes de déclaration de la Section 313, du Titre III de la Superfund Amendments and Reauthorization Act de 1986 et du 40 CFR partie 372 :

Nom Chimique	Numéro CAS	Poids%
Éthylène glycol	107-21-1	0.5-1.5
Acétate de vinyle	108-05-4	0.1-1.0

LOI SUR LE CONTRÔLE DES SUBSTANCES TOXIQUES:
Tous ingrédients dans ce produit sont ou sur la liste d'inventaire de TSCA, ou autrement exempter.

Ce produit contient les substances chimiques suivantes à déclarer selon les normes TSCA 12(B) si exporté à l'extérieur des États-Unis:
Aucun

Lois particulières selon les états aux États-Unis:

NEW JERSEY RIGHT-TO-KNOW :

Les substances suivantes sont non-dangereuses mais sont comptées parmi les 5 principaux ingrédients composant ce produit:

Nom Chimique	Numéro CAS	Poids%
Eau	7732-18-5	30-60
Acétique Acide, Ester de Vinyle, le Polymère	De propriété	10-30
Sodium Borate; Boric Acid, Sodium Salt	7775-19-1	1-5

PENSYLVANIA RIGHT-TO-KNOW:

Les substances suivantes sont non-dangereuses mais sont présentes à plus de 3% dans ce produit:

Nom Chimique	Numéro CAS	Poids%
Eau	7732-18-5	30-60
Acétique Acide, Ester de Vinyle, le Polymère	De propriété	10-30
Sodium Borate; Boric Acid, Sodium Salt	7775-19-1	1-5

PROPOSITION 65 DE CALIFORNIE:

AVERTISSEMENT ! Les produits chimiques listés ci-dessous et contenus dans ce produit sont reconnus par l'État de la Californie pour causer le cancer:

Nom Chimique	Numéro CAS	Définition	Dater Enuméré	Poids%
Formaldéhyde	50-00-0	Cancérogène.	Listed: January 1, 1988	<0.004
Acétaldéhyde	75-07-0	Cancérogène.	Listed: April 1, 1988	<0.002

AVERTISSEMENT ! Les produits chimiques listés ci-dessous et contenus dans ce produit sont reconnus par l'État de la Californie pour causer le cancer, des anomalies congénitales ou d'autres problèmes reliés à la reproduction:
Aucun

Section 16 – Autres informations

Classification des

dangers:

Santé: 1 Inflammabilité: 1 Réactivité: 0 Protection personnelle: X

COMPOSÉ ORGANIQUE VOLATIL, G/LITRE: 9.5 LB/GALLON: 0.1 POIDS %: 1.485

RAISONS DE RÉVISION: Mise à jour périodique

Légende:

N.A. – Non applicable

N.É. – Non établi

N.D. – Non déterminé

OSHA – Occupational Safety and Health Administration

HMIS – Hazardous Materials Identification System

TWA – Valeur d'exposition moyenne pondérée

NTP – National Toxicology Program

STEL – Limite d'exposition à court terme

CASRN – Numéro enregistré selon le Chemical Abstracts Service

ACGIH – American Conference of Governmental Industrial Hygienists

SARA – Superfund Amendments and Reauthorization Act de 1986

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

LD50 – Dose létale 50

LC50 – Concentration létale 50

NJRTK – New Jersey Right-to-Know Law

VOC – Composé organique volatil

PEL – Limite d'exposition permise

TLV – Limite tolérable d'exposition

F – Degré Fahrenheit

C – Degré Celcius

DAP croit que les données et renseignements stipulés dans cette fiche signalétique sont précis à la date de rédaction de cette fiche. Ces données sont offertes en toute bonne foi et représente des valeurs standard sans toutefois être des spécifications du produit. **AUCUNE GARANTIE SUR LA QUALITÉ MARCHANDE, GARANTIE D'APTITUDE POUR AUCUN TYPE D'EMPLOI PARTICULIER OU TOUTE AUTRE FORME DE GARANTIE N'EST EXPRESSÉMENT OU IMPLICITEMENT OFFERTE EN REGARD DES INFORMATIONS FOURNIES DANS CETTE FICHE OU DES INFORMATIONS RELATIVES AU PRODUIT.** Cette fiche est produite uniquement à titre de guide pour les personnes formées à cet effet afin qu'elles puissent appliquer les procédures appropriées de manutention auxquelles le produit réfère. Toutefois, c'est la responsabilité chaque utilisateur de revoir les recommandations selon le contexte spécifique de l'utilisation prévue et de déterminer si ces procédures sont appropriées.

<Fin de la fiche signalétique>

Material Safety Data Sheet

24 Hour Emergency Phone Numbers:
Medical: 1-800-327-3874
1-513-558-5111
Transportation:
1-800-535-5053
1-352-323-3500

NOTE: National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
Esta hoja de datos de la seguridad de los materiales está disponible en francés canadiense y en español a su solicitud.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Product Name: DAP® FIREBLOCK FOAM Polyurethane Foam Sealant
Revision Date: 04/25/2007
Product UPC Number: 070798442429
Supercedes: 03/01/2005
Product Use/Class: Pressurized Polyurethane Fireblock Foam
MSDS Number: 00077006001
Manufacturer: **DAP Inc.**
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (non-emergency matters)

Section 2 - Composition / Information On Ingredients

Chemical Name	CASRN	WT%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Chlorodifluoromethane	75-45-6	7-13	1000 PPM	N.E.	N.E.	N.E.	N.E.	N.E.	No
4,4'-Methylenediphenyl diisocyanate (MDI)	101-68-8	5-10	0.005 PPM	N.E.	N.E.	N.E.	N.E.	0.2 MGM3	No
Polymeric diphenylmethane diisocyanate	9016-87-9	5-10	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No

Exposure Notes:

None

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices

Section 3 - Hazards Identification

Emergency Overview: Viscous liquid which foams upon release from container as an off-white to yellowish froth. WARNING! Contents under pressure. May cause eye, skin, nose, throat and respiratory tract irritation. This product has strong adhesive-like characteristics and will adhere aggressively to skin and other surfaces. If accidental contact occurs, follow the appropriate first-aid procedure described in Section 4 of this MSDS. Harmful if inhaled. May cause sensitization by inhalation and skin contact. The primary adverse health effects of this product are related to the Polymeric Isocyanate (MDI) component, and, to a lesser degree, the Fluorocarbon (Non-Flammable Gas) component. Therefore, adequate ventilation should be provided to avoid exceeding the exposure limits of these components (See Section 8). The likelihood of exceeding these limits are low due to the low concentration of vapor produced during normal use. However, if used

indoors, mechanical ventilation or exhaust should be provided during use and until product is cured. Exposure to temperatures above 120 'F may cause can to rupture.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May be irritating to eyes. Foam contact can cause physical damage due to adhesive character.

Effects Of Overexposure - Skin Contact: Harmful: possible risk of irreversible effects in contact with skin. May cause sensitization by skin contact. This product has strong adhesive-like characteristics and will adhere aggressively to skin and other surfaces. If accidental contact occurs, follow the appropriate first-aid procedure described in Section 4 of this MSDS.

Effects Of Overexposure - Inhalation: Inhalation of vapors is irritating to the respiratory system, may cause throat pain and cough. Vapors may be irritating to eyes, nose, throat, and lungs. Prolonged, repeated, or high exposures may cause bronchitis, pharangitis, and possibly pulmonary edema. Overexposure to Fluorocarbon may cause lightheadedness, headaches, or lethargy. Persons with cardiac arrhythmia may be at increased risk in severe exposure. May irritate mucous membranes with tightness in chest, coughing, or allergic asthma-like sensitivity. Extensive overexposure can lead to respiratory symptoms like bronchitis and pulmonary edema. These effects are usually reversible.

Effects Of Overexposure - Ingestion: Harmful or fatal if swallowed. If ingested, may cause vomiting, diarrhea, and depressed respiration. May cause irritation of mucous membranes in the mouth and digestive tract.

Effects Of Overexposure - Chronic Hazards: None known.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Ingestion, Eye Contact

Medical Conditions which May be Aggravated by Exposure: Asthma and asthma-like conditions may worsen from prolonged and repeated exposure.

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention.

First Aid - Skin Contact: Remove and wash contaminated clothing. Use a rag to remove excess foam from skin and remove contaminated clothing. Use of a solvent, such as acetone (nail polish remover) or mineral spirits, may help in removing uncured foam residue from clothing or other surfaces (avoid eye contact). Cured foam may be physically removed by persistent washing with soap and water. If irritation develops, use mild skin cream. If irritation persists, obtain medical attention.

First Aid - Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately. Never give anything by mouth to an unconscious person. If conscious, drink plenty of water.

Note to Physician: None.

COMMENTS: Call Medical Emergency at 1-800-327-3874 if any irritation or complication arises from any of the above routes of entry.

Section 5 - Fire Fighting Measures

Flash Point, F: N.A.
Method: (Not Applicable)

Lower Explosive Limit, %: Not Established
Upper Explosive Limit, %: Not Established

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Store away from caustics and oxidizers. Closed containers may burst if exposed to extreme heat or fire. Eliminate sources of ignition: heat, electrical equipment, sparks and flames.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Uncured product is very sticky, so carefully remove the bulk of the foam by scraping it up and then immediately remove residue with a rag and solvent such as polyurethane cleaner, mineral spirits, acetone (nail polish remover), paint thinner, etc. Once the product has cured, it can only be removed physically by scraping, buffing, etc. Dispose as plastic waste (foam plastic) in accordance with all applicable guidelines and regulations. Use personal protective equipment as necessary. Use absorbent material or scrape up dried material and place in container.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! DO NOT TAKE INTERNALLY. Use only with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing. Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates. Make sure nozzle is directed away from yourself prior to discharge.
Keep away from open flames, hot surfaces and sources of ignition.

Storage: Store away from caustics and oxidizers. Store containers away from excessive heat and freezing. Do not store at temperatures above 120 degrees F. Protect material from direct sunlight. Keep containers tightly closed in a dry, cool and well -ventilated place.

Section 8 - Exposure Controls / Personal Protection

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Highly flammable vapors are heavier than air and may accumulate in low areas. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Wear appropriate protective eyeglasses or chemical safety goggles. Wear appropriate protective clothing to prevent skin contact.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Take off all contaminated clothing immediately. Dispose of promptly.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	**Vapor Density:**	Heavier Than Air
Odor:	Slight	**Odor Threshold:**	Not Established

Appearance:	Orange	**Evaporation Rate:**	Slower Than n-Butyl Acetate
Solubility in H2O:	Not Established	**Specific Gravity:**	1.2
Freeze Point:	Not Established	**pH:**	Not Established
Vapor Pressure:	> 50 psi in container	**Viscosity:**	Not Established
Physical State:	Thick Liquid		

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing. Avoid alcohols, strong bases or amines and metal compounds (such as small particle metal catalysts).

Incompatibility: Alcohols, strong bases or amines and metal compounds (such as small particle metal catalysts).

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

None

Carcinogenicity:

None

Significant Data with Possible Relevance to Humans: None.

Section 12 - Ecological Information

Ecological Information: None known.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): If discarded (40 CFR 261): None.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Consumer Commodity	**Packing Group:**	N.A.
DOT Technical Name:	N.A.	**Hazard Subclass:**	N.A.
DOT Hazard Class:	ORM-D	**DOT UN/NA Number:**	None

Material

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard, Pressurized Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number	WT%
Chlorodifluoromethane	75-45-6	7-13
4,4'-Methylenediphenyl diisocyanate (MDI)	101-68-8	5-10
Polymeric diphenylmethane diisocyanate	9016-87-9	5-10

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

U.S. State Regulations

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number	WT%
Non-Hazardous Additive	Proprietary	60-100

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number	WT%
Non-Hazardous Additive	Proprietary	60-100

California Proposition 65:

Warning: The following ingredients present in the product are known to the State of California to cause cancer:

Material

None

Warning: The following ingredients present in the product are known to the State of California to cause birth defects or other reproductive harm:

None

Section 16 - Other Information

HMIS Ratings:

Health: 2 Flammability: 1 Reactivity: 1 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, GR/LTR: N.E. LB/GAL: N.E. WT%: N.E.

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable	ACGIH – American Conference of Governmental Industrial Hygienists
N.E. – Not Established	SARA – Superfund Amendments and Reauthorization Act of 1986
N.D. – Not Determined	NJRTK – New Jersey Right-to-Know Law
VOC – Volatile Organic Compound	OSHA – Occupational Safety and Health Administration
PEL – Permissible Exposure Limit	HMIS – Hazardous Materials Identification System
TLV – Threshold Limit Value	NTP – National Toxicology Program
STEL – Short Term Exposure Limit	CEIL – Ceiling Exposure Limit
LD50 – Lethal Dose 50	LC50 – Lethal Concentration 50
F – Degree Fahrenheit	C – Degree Celsius
MSDS – Material Safety Data Sheet	CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

Material Safety Data Sheet

An RPM Company

24 Hour Emergency Phone Numbers:
Medical/Poison Control:
In U.S.: Call 1-800-222-1222
Outside U.S.: Call your local poison control center
Transportation/National Response Center:
1-800-535-5053
1-352-323-3500

NOTE: The National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
On peut demader cette fiche signalétique (MSDS) a la langue francaise-canadienne.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Product Name:	Kwik Seal Plus High Gloss - All Colors	**Revision Date:**	04/01/2008
Product UPC Number:	070798185104 070798185197 070798185265 070798185395	**Supersedes:**	01/24/2006
Product Use/Class:	Latex Caulk	**MSDS Number:**	00010025001
Manufacturer:	**DAP Inc.** **2400 Boston Street Suite 200** **Baltimore, MD 21224-4723** **888-327-8477 (non-emergency matters)**		

Section 2 - Hazards Identification

Emergency Overview: A colored paste product with a very slight ammonia odor. WARNING! May cause eye, skin, nose, throat and respiratory tract irritation. May cause eye or skin irritation. Harmful if swallowed or absorbed through the skin. This product contains ethylene glycol.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: May cause skin irritation. Harmful if absorbed through the skin.

Effects Of Overexposure - Inhalation: Harmful if inhaled. Inhalation of high vapor concentrations can cause central nervous system depression and narcosis. Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes).

Effects Of Overexposure - Ingestion: Ingestion of ethylene glycol can cause gastrointestinal irritation, nausea, vomiting, diarrhea and if ingested in sufficient quantities, death. Harmful or fatal if swallowed. If ingested, may cause vomiting, diarrhea, and depressed respiration. Ingestion may result in obstruction when material hardens.

Effects Of Overexposure - Chronic Hazards: Repeated or prolonged exposure may cause respiratory system damage.

Prolonged and repeated skin contact may cause irritation and possibly dermatitis.

The International Agency for Research on Cancer (IARC) has determined that crystalline silica in the form of quartz or cristobalite that is inhaled from occupational sources is carcinogenic to humans (Group 1- carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program (NTP) classifies respirable crystalline silica as "known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (Group A2).
Breathing dust containing respirable crystalline silica may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects: Excessive inhalation of respirable dust can cause pneumoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. Smoking exacerbates this disease. Individuals with pneumoconiosis are predisposed to develop tuberculosis. There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease. Prolonged, repeated, or high exposures may cause weakness and depression of the central nervous system. Overexposure may cause kidney, cardiovascular, skin and liver damage.

Formaldehyde vapor is a known animal carcinogen according to OSHA and NTP and is considered possibly carcinogenic to humans by inhalation. The International Agency for Research on Cancer considers formaldehyde to be a human carcinogen.

Ethylene Glycol may cause kidney and liver damage upon prolonged and repeated overexposures. Studies have shown that repeated inhalation of ethylene glycol has produced adverse cardiovascular changes in laboratory animals. Ethylene glycol has been shown to cause birth defects in laboratory animals.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Medical Conditions which May be Aggravated by Exposure: None known.

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP
13463-67-7	Titanium dioxide	Not Listed.	Not Listed.	Possible carcinogen.	Not Listed.
14808-60-7	Silica, crystalline	Suspected human carcinogen.	Not Listed.	Human carcinogen.	Known carcinogen.
100-42-5	Styrene	Not Listed.	Not Listed.	Possible carcinogen.	Not Listed.
50-00-0	Formaldehyde	Suspected human carcinogen.	Potential cancer hazard.	Human carcinogen.	Anticipated carcinogen.
140-88-5	Ethyl arcylate	Not Listed.	Not Listed.	Possible carcinogen.	Not Listed.

Section 3 - Composition / Information On Ingredients

Chemical Name	CASRN	Wt%
Limestone	1317-65-3	10-30
Texanol	25265-77-4	1-5
Titanium dioxide	13463-67-7	1-5
Ethylene glycol	107-21-1	0.1-1.0
Silica, crystalline	14808-60-7	0.1-1.0
Styrene	100-42-5	0.1-1.0
Formaldehyde	50-00-0	<0.09
Ethyl arcylate	140-88-5	<0.008

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical aid if symptoms persist. If skin irritation persists, call a physician. Remove and wash contaminated clothing.

First Aid - Inhalation: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

Note to Physician: None.

COMMENTS: If over-exposure occurs, call your poison control center at 1-800-222-1222.

Section 5 - Fire Fighting Measures

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: No special protective measures against fire required.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Use absorbent material or scrape up dried material and place in container.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! DO NOT TAKE INTERNALLY. Avoid breathing vapor and contact with eyes, skin and clothing. Use only with adequate ventilation. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Odor is not an adequate warning for hazardous conditions. Wash thoroughly after handling.

Storage: Do not store at temperatures above 120 degrees F. Store containers away from excessive heat and freezing. Close container after each use. Store away from caustics and oxidizers.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Limestone	1317-65-3	10 MGM3	N.E.	N.E.	5 MGM3 (respirable fraction)	N.E.	N.E.	No
Texanol	25265-77-4	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Titanium dioxide	13463-67-7	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	No
Ethylene glycol	107-21-1	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No
Silica, crystalline	14808-60-7	0.05 MGM3	N.E.	N.E.	10/(%SiO2 + 2) MGM3	N.E.	N.E.	No
Styrene	100-42-5	20 PPM	40 PPM	N.E.	100 PPM	N.E.	200 PPM	No
Formaldehyde	50-00-0	N.E.	N.E.	0.3 PPM	0.75 PPM	2 PPM	N.E.	No
Ethyl arcylate	140-88-5	5 PPM	15 PPM	N.E.	25 PPM	N.E.	N.E.	Yes

Exposure Notes:

14808-60-7 The 2002 ACGIH Threshold Limit Values for Chemical Substances and Physical Agents lists the median Respirable Particulate Mass (RPM) point for crystalline silica at 4.0 microns in terms of the particle's aerodynamic diameter.

The TLVs for crystalline silica represent the respirable fraction.

OSHA PEL TWA for Quartz is calculated using the following formula: 10 mg/m3/(% SiO2 + 2). Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size selector with the following characteristics.

..... Aerodynamic diameter (unit density sphere)	Percent passing selector
2	90
2.5	75
3.5	50
5.0	25
10	0

50-00-0 Formaldehyde is a specially regulated substance for which an OSHA chemical-specific exposure standard exits. Detailed information regarding this substance may be found in 29 CFR 1910.1048. Medical surveillance information regarding this substance may be found in Appendix C to 29 CFR 1910.1048.

Precautionary Measures: Contact lenses pose a special hazard; soft lenses may absorb and all lenses concentrate irritants.

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Ensure adequate ventilation, especially in confined areas. Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m3) as determined by a full shift sample up to 10-hour work shift.

Skin Protection: Rubber gloves.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	**Vapor Density:**	Heavier Than Air
Odor:	Very Slight Ammonia	**Odor Threshold:**	Not Established
Color:	Colored	**Evaporation Rate:**	Slower Than n-Butyl Acetate
Solubility in H2O:	Not Established	**Specific Gravity:**	1.2
Freeze Point:	Not Established	**pH:**	Between 7.0 and 12.0
Vapor Pressure:	Not Established	**Viscosity:**	Not Established
Physical State:	Paste	**Flammability:**	Non-flammable
Flash Point, F:	Greater than 200	**Method:**	(Seta Closed Cup)
Lower Explosive Limit, %:	Not Established	**Upper Explosive Limit, %:**	Not Established

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established **Product LC50:** Not Established

CASRN	Chemical Name	LD50	LC50
25265-77-4	Texanol	3200 mg/Kg (mouse and rat)	> 3500mg/m3/6hr (rat)
107-21-1	Ethylene glycol	Rat:4700 mg/kg	Rat:10876 mg/kg
100-42-5	Styrene	----------	Rat:12 gm/m3/4H
50-00-0	Formaldehyde	----------	Rat:203 mg/m3
140-88-5	Ethyl arcylate	----------	Rat:1414 ppm/4H

Significant Data with Possible Relevance to Humans: This product contains trace amounts of free formaldehyde. OSHA and NTP identify formaldehyde as a potential carcinogen. IARC identifies formaldehyde as a human carcinogen. Formaldehyde has been shown to cause mutations in a variety of in-vitro test systems, the significance of which to humans is unknown. There should be minimal risk when used with ventilation adequate to keep the atmospheric concentration of formaldehyde below the recommended exposure limits.
Maintain adequate ventilation to prevent exposure above current OSHA / ACGIH exposure limits. Workplace monitoring of the air to define formaldehyde exposure levels may be necessary.
In a two-year inhalation study, rats showed carcinogenic effects in the respiratory system at 15 ppm of formaldehyde.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): None

Section 14 - Transportation Information

DOT Proper Shipping Name: Not Regulated
Packing Group: N.A.
DOT Technical Name: N.A.
Hazard Subclass: N.A.
DOT Hazard Class: N.A.
DOT UN/NA Number: None

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may

apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Styrene	100-42-5

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number
Water	7732-18-5
Acrylic polymer	Proprietary

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Water	7732-18-5
Acrylic polymer	Proprietary

California Proposition 65:

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16 - Other Information

HMIS Ratings:

Health: 1	Flammability: 1	Reactivity: 0	Personal Protection: X

Volatile Organic Compounds (VOC), less water less exempts: g/L: 55 lb/gal: 0.5 wt:wt%: 2.9

Volatile Organic Compounds (VOC), less water less exempts, less LVP-VOCs: wt:wt%: 1.0

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable	ACGIH – American Conference of Governmental Industrial Hygienists
N.E. – Not Established	SARA – Superfund Amendments and Reauthorization Act of 1986
N.D. – Not Determined	NJRTK – New Jersey Right-to-Know Law
VOC – Volatile Organic Compound	OSHA – Occupational Safety and Health Administration
PEL – Permissible Exposure Limit	HMIS – Hazardous Materials Identification System
TLV – Threshold Limit Value	NTP – National Toxicology Program
CEIL – Ceiling Exposure Limit	STEL – Short Term Exposure Limit
LD50 – Lethal Dose 50	LC50 – Lethal Concentration 50
F – Degree Fahrenheit	MSDS – Material Safety Data Sheet
C – Degree Celsius	CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : LATEX WOOD DOUGH - ALL COLORS
UPC NUMBER : 00527, 00534, 00535, 00536, 00537, 99939

PRODUCT USE/CLASS : Latex Wood Filler

MANUFACTURER:
DAP INC.
2400 BOSTON STREET
BALTIMORE, MD 21224

24 HOUR EMERGENCY:
TRANSPORTATION: 1-800-535-5053 (352-323-3500)
MEDICAL : 1-800-327-3874 (513-558-5111)

PREPARE DATE: 02/02/1996
REVISION NO.: 7
REVISION DATE: 12/29/1999

GENERAL INFORMATION:
DAP INC. : 1-888-DAP-TIPS (1-888-327-8477)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE

No hazardous ingredients in this product.

	EXPOSURE LIMITS					
	ACGIH		OSHA		COMPANY	
ITEM	TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING	TLV-TWA	SKIN

(See Section 16 for abbreviation legend)

Remaining ingredients are not considered hazardous per the OSHA Hazard Communication Standard.

Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); limits may vary between states.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: CAUTION: Removal of this product after use will result in the enervation of dust. If dry-sanded, exposure to dust may result in build-up of material in eyes, ears, nose, and mouth which may cause irritation.

POTENTIAL HEALTH EFFECTS:

(Continued on Page 2)

SECTION 3 - HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Prolonged or repeated contact with skin may cause irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Dust may cause nose and throat irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: If ingested this product may cause vomiting, diarrhea, and depressed respiration.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Inhalation of dust may result in pulmonary and respiratory damages. Prolonged or repeated contact with skin may cause irritation.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY CONTACT: If dry sanded, asthma and asthma-like conditions may worsen from prolonged or repeated exposure to dust.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT INHALATION

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Flush with large quantities of water until irritation subsides. Contact a physician.

SKIN CONTACT: Wash with soap and water.

INHALATION: Remove to fresh air. Contact a physician immediately.

INGESTION: DO NOT INDUCE VOMITING. Contact a physician or Regional Poison Control Center immediately.

COMMENTS: None.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: >200 F
(SETAFLASH CLOSED CUP)

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: N.E.

EXTINGUISHING MEDIA: CO2 DRY CHEMICAL FOAM WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

(Continued on Page 3)

SECTION 5 - FIRE FIGHTING MEASURES

SPECIAL FIREFIGHTING PROCEDURES: As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Use absorbent material or scrape up dried material and place into containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING INFORMATION: KEEP OUT OF REACH OF CHILDREN. Avoid prolonged or repeated contact with skin. Avoid contact with eyes.

STORAGE INFORMATION: Store away from caustics and oxidizers. Keep containers tightly closed when not in use. Keep containers from excessive heat and freezing. Do not store at temperatures above 120 degrees F.

OTHER PRECAUTIONS: None.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Normal room ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Not required under normal usage and adequate ventilation.

EYE PROTECTION: Safety glasses with side shields recommended.

SKIN PROTECTION: None required.

OTHER PROTECTIVE EQUIPMENT: None.

HYGIENIC PRACTICES: Although this product is not considered an eye irritant, inhalation hazard, or a skin contact hazard under normal conditions, it is advisable that personnel minimize skin contact, inhalation of vapors, and eye contact. Wash contaminated clothing before reuse.

(Continued on Page 4)

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE : 210 - 220 F
ODOR : Mild Odor
APPEARANCE : Thick Paste
SOLUBILITY IN H2O : Dispersible
SPECIFIC GRAVITY : 1.3956
VAPOR PRESSURE : 17.5 mm Hg @ 68 F.
PHYSICAL STATE : Thick Paste

VAPOR DENSITY : Is heavier than air
EVAPORATION RATE: Is slower than Butyl Acetate

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Strong oxidizers and caustics.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e. COx, NOx

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

The toxicological properties of this material are unknown, however, based on the toxicity of its constituents, it is expected to have relatively low toxicity.

SECTION 12 - ECOLOGICAL INFORMATION

No Information.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT/DISPOSAL: Dispose of according to Federal, State, and Local Standards. This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous Waste Management Regulations, 40 CFR Section 261. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is
with the owner of the waste.

EPA WASTE CODE - If discarded (40 CFR 261): None.

(Continued on Page 5)

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not Regulated by D.O.T.

DOT HAZARD CLASS: NONE

DOT UN/NA NUMBER: NONE PACKING GROUP: NONE

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

SARA SECTION 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE

No SARA Section 313 components exist in this product.

TOXIC SUBSTANCES CONTROL ACT:
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

CHEMICAL NAME	CAS NUMBER

None.

CHEMICAL NAME	CAS NUMBER

NEW JERSEY RIGHT-TO-KNOW:
The following materials are non-hazardous, but are among the top five components in this product:

CHEMICAL NAME	CAS NUMBER
Calcium Carbonate	1317-65-3
Water	7732-18-5
Vinyl Acetate Copolymer	TSRN-618608-5098P
Sodium Benzoate	532-32-1
Glass Beads	TSRN-618608-5107P

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

CHEMICAL NAME	CAS NUMBER
Calcium Carbonate	1317-65-3
Water	7732-18-5
Vinyl Acetate Copolymer	proprietary

(Continued on Page 6)

SECTION 15 - REGULATORY INFORMATION

CALIFORNIA PROPOSITION 65:
WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer:

CHEMICAL NAME	CAS NUMBER
Crystalline Silica	14808-60-7

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: No information available.

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 02/01/1997

REASON FOR REVISION:
SECTION 1: Address change and new emergency contact phone numbers.

VOC less water, less exempt solvent: 1-5 gm/l
VOC material: 1-5 gm/l

LEGEND:
- ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
- N.A. - NOT APPLICABLE
- N.E. - NOT ESTABLISHED
- PEL - PERMISSIBLE EXPOSURE LIMIT
- NTP - NATIONAL TOXICOLOGY PROGRAM
- SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
- STEL - SHORT TERM EXPOSURE LIMIT
- TLV - THRESHOLD LIMIT VALUE(8 HR. TIME WEIGHTED AVERAGE OR TWA)
- VOC - VOLATILE ORGANIC COMPOUND
- NJRTK - NEW JERSEY RIGHT TO KNOW LAW
- N.D. - NOT DETERMINED

MSDS# 10505

This data is offered in good faith as typical values and not as a product specification. No warranty either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review the recommendations in specific context of the intended use and determine if they are appropriate.

< End OF MSDS >

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : LIGHTWEIGHT WALLBOARD JOINT COMPOUND
UPC NUMBER : 7079810114
PRODUCT USE/CLASS : Lightweight Joint Compound

MANUFACTURER:
DAP INC.
2400 BOSTON STREET
BALTIMORE, MD 21224

24 HOUR EMERGENCY:
TRANSPORTATION: 1-800-535-5053 (352-323-3500)
MEDICAL : 1-800-327-3874 (513-558-5111)

PREPARE DATE : 02/13/1996
REVISION NO. : 10
REVISION DATE: 12/30/2004

GENERAL INFORMATION:
DAP INC. : 1-888-DAP-TIPS (1-888-327-8477)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
01	Calcium Carbonate	1317-65-3	30.0-45.0 %
02	Crystalline Silica	14808-60-7	0.1- 1.0 %
03	Amorphous Mineral Silicate	93763-70-3	5.0-10.0 %
04	Attapulgite(polygorskite)	12174-11-7	1.0- 5.0 %
05	Vinyl Acetate	108-05-4	0.01-0.3 %

EXPOSURE LIMITS

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	COMPANY TLV-TWA	SKIN
01	10 mg/m3	N.E.	15 mg/m3	N.E.	N.E.	NO
02	0.05 mg/m3*	N.E.	10 mg/m3dust	N.E.	N.E.	NO
03	10 mg/m3	N.E.	5 mg/m3	N.E.	N.E.	NO
04	N.E.	N.E.	N.E.	N.E.	N.E.	NO
05	10 ppm	15 ppm	N.E.	N.E.	N.E.	N.E.

(See Section 16 for abbreviation legend)

* The 2001 ACGIH Threshold Limit Values for Chemical Substances and Physical Agents lists the median Respirable Particulate Mass (RPM) point for crystalline silica at 4.0 microns in terms of the particle’s aerodynamic diameter.

Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); limits may vary between states.

Remaining ingredients are not considered hazardous per the OSHA Hazard Communication Standard.

(Continued on Page 2)

SECTION 3 - HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:
EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation.
EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May dry skin.
EFFECTS OF OVEREXPOSURE - INHALATION: Vapor may irritate nose and upper respiratory tract.

EFFECTS OF OVEREXPOSURE - INGESTION: None known.

EFFECTS OF OVER EXPOSURE – CHRONIC HAZARDS

The International Agency for Research on Cancer (IARC)has determined that crystalline silica in the form of quartz or cristobalite that is inhaled from occupational sources is carcinogenic to humans (Group 1– carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program (NTP) classifies respirable crystalline silica as known to be a human carcinogen. Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

Breathing dust containing respirable crystalline silica may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects: Excessive inhalation of respirable dust can cause pneumoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. Smoking exacerbates this disease. Individuals with pneumoconiosis are predisposed to develop tuberculosis. There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease.

This product may contain small amounts of vinyl acetate. Vinyl acetate is identified by IARC as a potential carcinogen. Lifetime exposure to high vapor concentrations (600 ppm) of vinyl acetate caused malignant and benign tumors of the respiratory tract of rats, but not mice.; this response possibly being associated with the irritant effect. Vinyl acetate has been tested for carcinogenic potential in rats in two separate drinking water studies. In one study in which animals were exposed to concentrations up to 0.5% in water, there was no evidence of carcinogenicity. Male rates receiving vinyl acetate at high concentrations in drinking water (0.5%) for two generations possibly demonstrated a decreased ability to produce offspring. In the second study, conducted at higher concentrations (up to 1% in water), evidence of cancer in the stomach and oral cavities was observed. There is no evidence that has caused cancer in humans. There should be minimal risk when used with ventilation adequate to keep the atmospheric concentration of vinyl acetate below the recommended exposure limit.

(Continued on Page 3)

SECTION 3 - HAZARDS IDENTIFICATION

Carcinogen Information Summary:

Chemical	ACGIH	OSHA	IARC	NTP
Vinyl Acetate	Confirmed animal carcinogen with unknown relevance to humans	----	Possible carcinogen	----

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY CONTACT: Asthma and asthma-like conditions may worsen from prolonged and repeated exposure.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT INHALATION

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Flush with large quantities of water until irritation subsides. Contact a physician.

SKIN CONTACT: Wash with soap and water.

INHALATION: Remove to fresh air. Contact a physician immediately.

INGESTION: DO NOT INDUCE VOMITING. Contact a physician or Regional Poison Control Center immediately.

COMMENTS: None.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: >200 F (SETAFLASH CLOSED CUP)
LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: N.E.

EXTINGUISHING MEDIA: CO2 DRY CHEMICAL FOAM

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

SPECIAL FIREFIGHTING PROCEDURES: Use water spray to cool exposed surfaces.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Scrape up dried material and place into containers.

SECTION 7 - HANDLING AND STORAGE

CAUTION! Removal of this product after use will result in the generation of dust. If dry-sanded, exposure to dust may result in build-up of material in eyes, ears, nose, and mouth which may cause irritation.

(Continued on Page 4)

SECTION 7 - HANDLING AND STORAGE

HANDLING INFORMATION: KEEP OUT OF REACH OF CHILDREN. Keep containers away from excessive heating and freezing. Avoid skin and eye contact. Do not inhale dusts of this product.

STORAGE INFORMATION: Store away from caustics and oxidizers. Keep containers tightly closed when not in use. Keep containers from excessive heat and freezing. Do not store at temperatures above 120 degrees F.

OTHER PRECAUTIONS: None.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: If dry-sanding, provide sufficient mechanical ventilation to maintain exposure below PEL and TLV.

RESPIRATORY PROTECTION:

Dry sanding of dried product results in the generation of dust which contains crystalline silica. Avoid exposure to dust by wearing an appropriate, properly fitted, dust respirator during dry sanding. Follow respiratory manufacturer’s directions for respirator use.

If the 8 hour exposure limit or value is exceeded for any component, use an approved NIOSH/OSHA respirator. Consult your safety equipment supplier and the OSHA regulation, 29 CFR 1910.134 for respirator requirements. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

The National Institute for Occupational Safety and Health (NIOSH) recommended permissible exposure limit of 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m3) as determined by a full shift sample up to 10 hour working day, 40 hours per week.

EYE PROTECTION: Safety glasses with side shields.

SKIN PROTECTION: Rubber gloves.

OTHER PROTECTIVE EQUIPMENT: None.

HYGIENIC PRACTICES: Remove contaminated clothing and wash before reuse.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: 210 - 220 F	VAPOR DENSITY	: Is heavier than air
ODOR	: Musty Odor		
APPEARANCE	: Gray/White Paste	EVAPORATION RATE	: Is slower than Butyl Acetate
SOLUBILITY IN H2O	: Soluble		
SPECIFIC GRAVITY	: 1.0752		
VAPOR PRESSURE	: 17.5 mm Hg @ 68 F		
PHYSICAL STATE	: Paste		

(See Section 16 for abbreviation legend)

(Continued on Page 5)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Strong oxidizers and caustics.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e. COx, NOx

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

No product or component toxicological information is available.

SECTION 12 - ECOLOGICAL INFORMATION

No Information.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT/DISPOSAL: This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous Waste Management Regulations, 40 CFR Section 261. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA WASTE CODE - If discarded (40 CFR 261): None.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not Regulated by D.O.T.

DOT HAZARD CLASS: NONE

DOT UN/NA NUMBER: NONE PACKING GROUP: NONE

(Continued on Page 6)

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

SARA SECTION 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

None

TOXIC SUBSTANCES CONTROL ACT:
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

NEW JERSEY RIGHT-TO-KNOW:
The following materials are non-hazardous, but are among the top five components in this product:

CHEMICAL NAME	CAS NUMBER
Water	7732-18-5
Magnesium aluminum silicate	12174-11-7
Vinyl Acetate Polymer	Proprietary

CHEMICAL NAME	CAS NUMBER

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

CHEMICAL NAME	CAS NUMBER
Water	7732-18-5

CALIFORNIA PROPOSITION 65:
WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer:

CHEMICAL NAME	CAS NUMBER
Crystalline Silica	14808-60-7
Polygorskite	12174-11-7

INTERNATIONAL REGULATIONS: AS FOLLOWS -

(Continued on Page 7)

SECTION 15 - REGULATORY INFORMATION

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: No information available.

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 09/17/2002

VOC less water, less exempt solvent: 0.1-0.3 g/L
VOC material : 0.1-0.3 g/L

LEGEND: ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
N.A. - NOT APPLICABLE
N.E. - NOT ESTABLISHED
PEL - PERMISSIBLE EXPOSURE LIMIT
NTP - NATIONAL TOXICOLOGY PROGRAM
SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
STEL - SHORT TERM EXPOSURE LIMIT
TLV - THRESHOLD LIMIT VALUE(8 HR. TIME WEIGHTED AVERAGE OR TWA)
VOC - VOLATILE ORGANIC COMPOUND
NJRTK - NEW JERSEY RIGHT TO KNOW LAW
N.D. - NOT DETERMINED

MSDS# 71084

(Continued on Page 8)

SECTION 16 - OTHER INFORMATION

This data is offered in good faith as typical values and not as a product specification. No warranty either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review the recommendations in specific context of the intended use and determine if they are appropriate.

< End OF MSDS >

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

THIS MSDS IS OFFERED IN CANADIAN-FRENCH UPON REQUEST.

PRODUCT NAME : DAP PLASTER OF PARIS, HOBBY AND CRAFT
UPC NUMBER : 7079853002, 7079853005, 7079853008, 7079860120
PRODUCT USE/CLASS : Plaster of Paris

MANUFACTURER:
DAP INC.
2400 BOSTON STREET
BALTIMORE, MD 21224

24 HOUR EMERGENCY:
TRANSPORTATION: 1-800-535-5053 (352-323-3500)
MEDICAL : 1-800-327-3874 (513-558-5111)

PREPARE DATE: 02/23/2000
REVISION NO.: 3
REVISION DATE: 12/17/2004

GENERAL INFORMATION:
DAP INC. : 1-888-DAP-TIPS (1-888-327-8477)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
01	Calcium Carbonate	1317-65-3	40.0-60.0 %
02	Calcium Sulfate	7778-18-9	40.0-60.0 %
03	Crystalline Silica	14808-60-7	0-1.0 %

EXPOSURE LIMITS

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	COMPANY TLV-TWA	SKIN
01	10 mg/m3	N.E.	15 mg/m3	N.E.	N.E.	NO
02	N.E.	N.E.	5 mg/m3	N.E.	N.E.	NO
03	0.05 mg/m3	N.E.	(10÷%SiO2)/2 mg/m3	N.E.	N.E.	NO

(See Section 16 for abbreviation legend)

Remaining ingredients are not considered hazardous per the OSHA Hazard Communication Standard.

Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); limits may vary between states.

(Continued on Page 2)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: WARNING! Injurious to eyes. May cause burns. May cause eye and skin irritation. Avoid skin and eye contact. Removal of this product after use will result in the generation of dust. If dry-sanded, exposure to dust may result in build-up of material in eyes, ears, nose, and mouth which may cause irritation.

POTENTIAL HEALTH EFFECTS: The International Agency for Research on Cancer (IARC)has determined that crystalline silica in the form of quartz or cristobalite that is inhaled from occupational sources is carcinogenic to humans (Group 1û carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program (NTP) classifies respirable crystalline silica as ôknown to be a human carcinogenö. Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May dry skin. May develop enough heat to cause burns if a large mass such as a cast of hand or arm, is kept in contact with skin while hardening.

EFFECTS OF OVEREXPOSURE - INHALATION: Exposure to dust may cause irritation to nose, throat, and respiratory system.

EFFECTS OF OVEREXPOSURE - INGESTION: Ingestion may result in obstruction when wetted plaster hardens.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Breathing dust containing respirable crystalline silica may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects: Excessive inhalation of respirable dust can cause pneumoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. Smoking exacerbates this disease. Individuals with pneumoconiosis are predisposed to develop tuberculosis. There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease.

(Continued on Page 3)

SECTION 3 - HAZARDS IDENTIFICATION

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY CONTACT: Asthma and asthma-like conditions may worsen from prolonged and repeated exposure.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT INHALATION

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Flush with large quantities of water until irritation subsides. Contact a physician.

SKIN CONTACT: Wash with soap and water.

INHALATION: Remove to fresh air. Contact a physician immediately.

INGESTION: DO NOT INDUCE VOMITING. Contact a physician or Regional Poison Control Center immediately.

COMMENTS: None.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: N.A.

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: N.E.

EXTINGUISHING MEDIA: CO2 DRY CHEMICAL FOAM

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known. Material will not burn.

SPECIAL FIREFIGHTING PROCEDURES: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Sweep up excess powder. Place remaining powder into containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING INFORMATION: KEEP OUT OF REACH OF CHILDREN. Avoid prolonged or repeated contact with skin. Avoid contact with eyes.

(Continued on Page 4)

SECTION 7 - HANDLING AND STORAGE

STORAGE INFORMATION: Store away from caustics and oxidizers. Keep containers tightly closed when not in use. Keep containers from excessive heat and freezing. Do not store at temperatures above 120 degrees F.

OTHER PRECAUTIONS: Use in a well ventilated area. Provide fresh air such that chemical odors cannot be detected during use and while drying.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: If dry-sanding, provide sufficient mechanical ventilation to maintain exposure below PEL and TLV. While mixing, provide sufficient mechanical ventilation (local or general exhaust) to maintain exposure below PEL and TLV.

RESPIRATORY PROTECTION: National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m3) as determined by a full shift sample up to 10 hour working day, 40 hours per week. The 1974 NIOSH Criteria for a recommended Standard for Occupational Exposure to Crystalline Silica should Be consulted for more detailed information. If 8 hour exposure limit or value is exceeded for any component, use an approved NIOSH/OSHA dust mask. Consult your safety equipment supplier and the OSHA regulation, 29 CFR 1910.134 for respirator requirements. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. If 8 hour exposure limit or value is exceeded for any component, use an approved NIOSH/OSHA respirator. Consult your safety equipment supplier and the OSHA regulation, 29 CFR 1910.134 for respirator requirements. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

EYE PROTECTION: Safety glasses with side shields recommended.

SKIN PROTECTION: Gloves recommended for repeated or prolonged contact with skin.

OTHER PROTECTIVE EQUIPMENT: Provide eyewash and coveralls if body contact may occur.

HYGIENIC PRACTICES: Remove contaminated clothing and wash before reuse.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE : N.A. VAPOR DENSITY : N.A.
ODOR : Low odor
APPEARANCE : Off-white powder EVAPORATION RATE: N.A.

(Continued on Page 5)

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

SOLUBILITY IN H2O : 0.2%
SPECIFIC GRAVITY : 2.8895
VAPOR PRESSURE : N.A.
PHYSICAL STATE : Powder

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Strong oxidizers and caustics.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e. COx, NOx

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

No product or component toxicological information is available.

SECTION 12 - ECOLOGICAL INFORMATION

No Information Available.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT/DISPOSAL: Dispose of according to Federal, State, and Local Standards. This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous Waste Management Regulations, 40 CFR Section 261. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA WASTE CODE - If discarded (40 CFR 261): None.

SECTION 14 - TRANSPORTATION INFORMATION

(Continued on Page 6)

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not Regulated by D.O.T.

DOT HAZARD CLASS: NONE

DOT UN/NA NUMBER: NONE PACKING GROUP: NONE

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

SARA SECTION 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
No SARA Section 313 components exist in this product.		

TOXIC SUBSTANCES CONTROL ACT:
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

CHEMICAL NAME	CAS NUMBER
None.	

NEW JERSEY RIGHT-TO-KNOW:
The following materials are non-hazardous, but are among the top five components in this product:

CHEMICAL NAME	CAS NUMBER
No non-hazardous materials are among the top five ingredients.	

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

CHEMICAL NAME	CAS NUMBER
No non-hazardous ingredients are present at greater than 3%.	

CALIFORNIA PROPOSITION 65:
WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer:

CHEMICAL NAME	CAS NUMBER
Crystalline silica	14808-60-7

(Continued on Page 7)

SECTION 15 - REGULATORY INFORMATION

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: Not regulated.

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2 FLAMMABILITY: 0 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 02/23/2000

REASON FOR CHANGE:
Section 1, Change UPC numbers.
Section 2, Add composition information.
Section 3, Additional hazard information.
Section 8, New respiratory protection information.
Section 16, Additional hazards and cautions.

VOC less water, less exempt solvent: 0 g/L
VOC material : 0 g/L

The International Agency for Research on Cancer (IARC) published monograph in 1997 (Volume 68, Silica, Some Silicates, Coal Dust and Para-Aramid Fibrils) changing its classification of crystalline silica from a Group 2A category (probably carcinogenic to humans) to a Group 1 category (carcinogenic to Humans) by concluding that ô there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silicaà from occupational sources.ö

In April 2000, the American Conference of Government Industrial Hygienists (ACGIH) classified crystalline silica as a ôSuspected Human Carcinogenö and reduced its recommended Threshold Limit Value for exposure to crystalline silica to .05 mg/m3 (respirable fraction) over an 8 hour tome weighted average.

In May 2000, the National Toxicology Program (NTP) changed its classification of respirable crystalline silica from ôreasonably anticipation to be a carcinogenö to ôknown to be a human carcinogenö.

The 2001 ACGIH Threshold Limit Values for Chemical Substances and Physical Agents lists the median Respirable Particulate Mass (RPM) point for crystalline silica at 4.0 microns in terms of the particle's aerodynamic diameter.

(Continued on Page 8)

SECTION 16 - OTHER INFORMATION

LEGEND: ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
N.A. - NOT APPLICABLE
N.E. - NOT ESTABLISHED
PEL - PERMISSIBLE EXPOSURE LIMIT
NTP - NATIONAL TOXICOLOGY PROGRAM
SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
STEL - SHORT TERM EXPOSURE LIMIT
TLV - THRESHOLD LIMIT VALUE(8 HR. TIME WEIGHTED AVERAGE OR TWA)
VOC - VOLATILE ORGANIC COMPOUND
NJRTK - NEW JERSEY RIGHT TO KNOW LAW
N.D. - NOT DETERMINED

MSDS# 79010

This data is offered in good faith as typical values and not as a product specification. No warranty either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review the recommendations in specific context of the intended use and determine if they are appropriate.

< End OF MSDS >

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : PLASTIC WOOD
UPC NUMBER : 7079821500, 7079821502, 7079821504, 7079821506, 7079821508, 7079821400, 7079821404, 7079821408, 7079821420, 7079821424, 7079821430, 7079821434, 7079821144, 7079821412
PRODUCT USE/CLASS : Wood Filler

MANUFACTURER:
DAP INC.
2400 BOSTON STREET
BALTIMORE, MD 21224

24 HOUR EMERGENCY:
TRANSPORTATION: 1-800-535-5053 (352-323-3500)
MEDICAL : 1-800-327-3874 (513-558-5111)

PREPARE DATE: 3/9/2001
REVISION NO.: 4
REVISION DATE: 3/3/2004

GENERAL INFORMATION:
DAP INC. : 1-888-DAP-TIPS (1-888-327-8477)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
01	Calcium carbonate	1317-65-3	30-60
02	Acetone	67-64-1	15-40
03	Cellulose	9004-34-6	7-13
04	n-Butyl acetate	123-86-4	5-10
05	Cellulose nitrate	9004-70-0	1-5
06	Isopropyl alcohol	67-63-0	1-5

EXPOSURE LIMITS

	ACGIH			OSHA			COMPANY
ITEM	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
01	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
02	500 PPM	750 PPM	N.E.	1000 PPM	N.E.	N.E.	No
03	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
04	150 PPM	200 PPM	N.E.	150 PPM	N.E.	N.E.	No
05	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
06	200 PPM	400 PPM	N.E.	400 PPM	N.E.	N.E.	No

(See Section 16 for abbreviation legend)

Remaining ingredients are not considered hazardous per the OSHA Hazard Communication Standard.

Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); limits may vary between states.

(Continued on Page 2)

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER! Extremely flammable liquid and vapor. Vapor may ignite explosively. Vapor may cause flash fire. Vapor harmful. Harmful or fatal if swallowed. Removal of this product after use will result in the generation of dust. If dry-sanded, exposure to dust may result in build-up of material in eyes, ears, nose, and mouth which may cause irritation.

POTENTIAL HEALTH EFFECTS:

EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Vapor harmful if inhaled. May cause irritation. May cause dizziness, headache or nausea.

EFFECTS OF OVEREXPOSURE - INGESTION: This material may be harmful or fatal if swallowed. If ingested this product may cause vomiting, diarrhea, and depressed respiration.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Reports have associated permanent brain and nervous system damage with prolonged and repeated occupational overexposure to solvents. Prolonged or repeated contact with skin can cause defatting of the skin which may lead to dermatitis. Inhalation of dust may result in pulmonary and respiratory damages.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY CONTACT: None known.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT INHALATION

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Flush with large quantities of water until irritation subsides.

SKIN CONTACT: Wash with soap and water.

INHALATION: Remove to fresh air.

INGESTION: DO NOT INDUCE VOMITING.

COMMENTS: Call 1-800-327-3874 if irritation persists or complications arise from any of the above exposures.

(Continued on Page 3)

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: <20 F (SETAFLASH CLOSED CUP)

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: N.E.

EXTINGUISHING MEDIA: CO2 DRY CHEMICAL FOAM

UNUSUAL FIRE AND EXPLOSION HAZARDS: Extremely Flammable. Material will readily ignite at room temperatures. Containers may explode if exposed to extreme heat. Eliminate sources of ignition: heat, electrical equipment, sparks, and flames. Do not put in contact with oxidizing or caustic materials.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment, including self-contained breathing apparatus, is recommended to protect from combustion products. Cool exposed containers with water.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Scrape up dried material and place into containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING INFORMATION: KEEP OUT OF REACH OF CHILDREN. Avoid skin and eye contact. Avoid breathing vapors. Use only in a well ventilated area.

STORAGE INFORMATION: Store away from caustics and oxidizers. Keep containers tightly closed when not in use. Keep containers from excessive heat and freezing. Do not store at temperatures above 120 degrees F.

OTHER PRECAUTIONS: Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal. Do not take internally.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide sufficient mechanical ventilation (local or general exhaust) to maintain exposure below PEL and TLV. Vapors are heavier than air and will collect in low areas. Check all low areas (basements, sumps, etc.) for vapor before entering. Provide eyewash and solvent impervious apron if body contact may occur.

(Continued on Page 4)

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: If 8 hour exposure limit or value is exceeded for any component, use an approved NIOSH/OSHA respirator. Consult your safety equipment supplier and the OSHA regulation, 29 CFR 1910.134 for respirator

requirements. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

EYE PROTECTION: Goggles or safety glasses with side shields.

SKIN PROTECTION: Solvent impervious gloves.

OTHER PROTECTIVE EQUIPMENT: Provide eyewash and solvent impervious apron if body contact may occur.

HYGIENIC PRACTICES: Wash contaminated clothing before reuse. Remove contaminated clothing and wash before reuse. Use only in a well ventilated area.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: N.E.	VAPOR DENSITY	: Is heavier than air
ODOR	: Strong solvent		
APPEARANCE	: Wood paste	EVAPORATION RATE	: Is faster than Butyl Acetate
SOLUBILITY IN H2O	: Negligible		
SPECIFIC GRAVITY	: 1.2		
VAPOR PRESSURE	: 185 mm Hg @ 68 F.		
PHYSICAL STATE	: Paste		

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Strong oxidizers and caustics.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e. COx, NOx

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

(Continued on Page 5)

SECTION 11 - TOXICOLOGICAL PROPERTIES

CASRN	Chemical Name	LD50	LC50
67-64-1	Acetone	-	Rat:50100 mg/m3/8H
9004-34-6	Cellulose	Oral Rat:>5 gm/kg	Rat:>5800mg/m3/4H
123-86-4	n-Butyl acetate	Rat:10768 MG/KG	Rat:2000 PPM
9004-70-0	Cellulose nitrate	Oral Rat:>5 gm/kg	
67-63-0	Isopropyl alcohol	Rat:5045 mg/kg	Rat:16000 ppm/8H

SECTION 12 - ECOLOGICAL INFORMATION

No Information Available.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT/DISPOSAL: Recycle or incinerate at an EPA approved facility or dispose in compliance with Federal, State, and local regulations. Do not reuse empty containers. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA WASTE CODE - If discarded (40 CFR 261): None, yields no liquid component when evaluated by EPA method 1311 (TCLP)

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Flammable Liquid, N.O.S. (Contains acetone) (Consumer Commodity*)

DOT HAZARD CLASS: 3(ORM-D*)

DOT UN/NA NUMBER: UN 1993(NONE*) PACKING GROUP: III(NONE*)

* For containers of 1 gallon or less

NOTE: the shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and / or non-domestic transport.

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

(Continued on Page 6)

SECTION 15 - REGULATORY INFORMATION

SARA SECTION 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER
Isopropyl Alcohol	67-63-0

TOXIC SUBSTANCES CONTROL ACT:
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

CHEMICAL NAME	CAS NUMBER
NONE	

NEW JERSEY RIGHT-TO-KNOW:
The following materials are non-hazardous, but are among the top five components in this product:

CHEMICAL NAME	CAS NUMBER
None	

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

CHEMICAL NAME	CAS NUMBER
None	

CALIFORNIA PROPOSITION 65:
WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer, birth defects or other reproductive harm:

CHEMICAL NAME	CAS NUMBER
None.	

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: No information available.

(Continued on Page 7)

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2 FLAMMABILITY: 3 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 4/8/2002

VOC less water, less exempt solvent: 220 – 250 g/L (8 – 12 %)
(where acetone is exempt)

LEGEND:
- ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
- N.A. - NOT APPLICABLE
- N.E. - NOT ESTABLISHED
- PEL - PERMISSIBLE EXPOSURE LIMIT
- NTP - NATIONAL TOXICOLOGY PROGRAM
- SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
- STEL - SHORT TERM EXPOSURE LIMIT
- TLV - THRESHOLD LIMIT VALUE(8 HR. TIME WEIGHTED AVERAGE OR TWA)
- VOC - VOLATILE ORGANIC COMPOUND
- NJRTK - NEW JERSEY RIGHT TO KNOW LAW
- N.D. - NOT DETERMINED

MSDS# 79201

This data is offered in good faith as typical values and not as a product specification. No warranty either express or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review the recommendations in specific context of the intended use and determine if they are appropriate.

< End OF MSDS >

XIAMETER(R)
Material Safety Data Sheet

DAP(R) 100% SILICONE RUBBER SEALANT CLEAR, 8641

1. PRODUCT AND COMPANY IDENTIFICATION

Dow Corning Corporation
South Saginaw Road
Midland, Michigan 48686

24 Hour Emergency Telephone: (989) 496-5900
Customer Service: (989) 496-6000
Product Disposal Information: (989) 496-6315
CHEMTREC: (800) 424-9300

MSDS No.: 04061395 Revision Date: 2005/06/01

Generic Description: Silicone elastomer
Physical Form: Paste
Color: Colorless
Odor: Acetic acid odor

NFPA Profile: Health 2 Flammability 1 Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

2. OSHA HAZARDOUS COMPONENTS

CAS Number	Wt %	Component Name
17689-77-9	1.0 - 5.0	Ethyltriacetoxysilane
4253-34-3	1.0 - 5.0	Methyltriacetoxysilane

The above components are hazardous as defined in 29 CFR 1910.1200.

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

Acute Effects

Eye: Direct contact may cause moderate irritation.

Skin: May cause moderate irritation.

Inhalation: Material is not likely to present an inhalation hazard at ambient conditions. However, if material is heated or high vapor/aerosol concentrations are attained, central nervous system depression may occur, which is characterized by drowsiness, dizziness, confusion or loss of coordination.

Oral: Low ingestion hazard in normal use.

Prolonged/Repeated Exposure Effects

Skin: No known applicable information.

Inhalation:	No known applicable information.
Oral:	No known applicable information.

Signs and Symptoms of Overexposure

No known applicable information.

Medical Conditions Aggravated by Exposure

No known applicable information.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

4. FIRST AID MEASURES

Eye:	Immediately flush with water for 15 minutes. Get medical attention.
Skin:	Remove from skin and wash thoroughly with soap and water or waterless cleanser. Get medical attention if irritation or other ill effects develop or persist.
Inhalation:	Material is not likely to present an inhalation hazard at ambient conditions. If material is heated or vapor/mist/dust/fumes are generated, care should be taken to prevent inhalation. In case of exposure to vapor/mist/dust/fumes, move to fresh air.
Oral:	No first aid should be needed.
Comments:	Treat according to person's condition and specifics of exposure.

5. FIRE FIGHTING MEASURES

Flash Point:	> 212 °F / > 100 °C (Closed Cup)
Autoignition Temperature:	Not determined.
Flammability Limits in Air:	Not determined.
Extinguishing Media:	On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO2), dry chemical or water spray. Water can be used to cool fire exposed containers.
Fire Fighting Measures:	Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.
Unusual Fire Hazards:	None.

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following hazardous

decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde.

6. ACCIDENTAL RELEASE MEASURES

Containment/Clean up: Observe all personal protection equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See section 8 for Personal Protective Equipment for Spills. Call (989) 496-5900, if additional information is required.

7. HANDLING AND STORAGE

Use with adequate ventilation. Product evolves acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection. Avoid eye contact. Avoid skin contact. Do not take internally. Avoid breathing vapor. Keep container closed.

Use reasonable care and store away from oxidizing materials. Keep container closed and store away from water or moisture.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

CAS Number	Component Name	Exposure Limits
17689-77-9	Ethyltriacetoxysilane	See acetic acid comments.
4253-34-3	Methyltriacetoxysilane	See acetic acid comments.

Acetic acid is formed upon contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 10 ppm and ACGIH TLV: TWA 10 ppm, STEL 15 ppm.

Engineering Controls

Local Ventilation: Recommended.
General Ventilation: Recommended.

Personal Protective Equipment for Routine Handling

DAP(R) 100% SILICONE RUBBER SEALANT CLEAR, 8641

Eyes:	Use proper protection - safety glasses as a minimum.
Skin:	Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.
Suitable Gloves:	Nitrile Rubber. Butyl Rubber.
Inhalation:	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. IH personnel can assist in judging the adequacy of existing engineering controls.
Suitable Respirator:	Respiratory protection is not needed under ambient conditions. If vapor/mist/dust/fumes are generated when material is heated or handled, the following is advised. General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

Personal Protective Equipment for Spills

Eyes:	Use full face respirator.
Skin:	Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.
Inhalation/Suitable Respirator:	Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
Precautionary Measures:	Avoid eye contact. Avoid skin contact. Do not take internally. Avoid breathing vapor. Keep container closed. Use reasonable care.
Comments:	Product evolves acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection. When heated to temperatures above 150 C (300 F) in the presence of air, product may form formaldehyde vapors. Physical and health hazard information is readily available from Dow Corning Corporation and the Material Safety Data Sheet.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Paste

Color:	Colorless
Odor:	Acetic acid odor
Specific Gravity @ 25°C:	1.007
Viscosity:	Not determined.
Freezing/Melting Point:	Not determined.
Boiling Point:	Not determined.
Vapor Pressure @ 25°C:	Not determined.
Vapor Density:	Not determined.
Solubility in Water:	Not determined.
pH:	Not determined.
Volatile Content:	Not determined.

Note: The above information is not intended for use in preparing product specifications.

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable.
Hazardous Polymerization:	Hazardous polymerization will not occur.
Conditions to Avoid:	None.
Materials to Avoid:	Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to form as described in Section 8.

11. TOXICOLOGICAL INFORMATION

Special Hazard Information on Components

No known applicable information.

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution

Complete information is not yet available.

Environmental Effects

Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants

Complete information is not yet available.

Ecotoxicity Classification Criteria

Hazard Parameters (LC50 or EC50)	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	<=1	>1 and <=100	>100
Acute Terrestrial Toxicity	<=100	>100 and <= 2000	>2000

DAP(R) 100% SILICONE RUBBER SEALANT CLEAR, 8641

This table is adapted from "Environmental Toxicology and Risk Assessment", ASTM STP 1179, p.34, 1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

13. DISPOSAL CONSIDERATIONS

RCRA Hazard Class (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste? No

State or local laws may impose additional regulatory requirements regarding disposal.

Call (989) 496-6315, if additional information is required.

14. TRANSPORT INFORMATION

DOT Road Shipment Information (49 CFR 172.101)

Not subject to DOT.

Ocean Shipment (IMDG)

Not subject to IMDG code.

Air Shipment (IATA)

Not subject to IATA regulations.

15. REGULATORY INFORMATION

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances (40 CFR 355):
None.

Section 304 CERCLA Hazardous Substances (40 CFR 302):
None.

Section 311/312 Hazard Class (40 CFR 370):
Acute: Yes
Chronic: No
Fire: No

Pressure: No
Reactive: No

Section 313 Toxic Chemicals (40 CFR 372):
None present or none present in regulated quantities.

Supplemental State Compliance Information

California

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

None known.

Massachusetts

CAS Number	Wt %	Component Name
7631-86-9	7.0 - 13.0	Silica, amorphous

New Jersey

CAS Number	Wt %	Component Name
70131-67-8	> 60.0	Dimethyl siloxane, hydroxy-terminated
7631-86-9	7.0 - 13.0	Silica, amorphous
64742-46-7	<=7.0	Hydrotreated middle petroleum distillates
17689-77-9	1.0 - 5.0	Ethyltriacetoxysilane
4253-34-3	1.0 - 5.0	Methyltriacetoxysilane

Pennsylvania

CAS Number	Wt %	Component Name
70131-67-8	> 60.0	Dimethyl siloxane, hydroxy-terminated
7631-86-9	7.0 - 13.0	Silica, amorphous
64742-46-7	<=7.0	Hydrotreated middle petroleum distillates

DAP(R) 100% SILICONE RUBBER SEALANT CLEAR, 8641

16. OTHER INFORMATION

Prepared by: Dow Corning Corporation

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

XIAMETER(R) is a trademark of Dow Corning Corporation

http://www.xiameter.com

DOW CORNING

XIAMETER(R)
Hoja de Datos de Seguridad del Material

Versión: 1.5
Fecha de revisión: 2005/08/05

DAP(R) 100% SILICONE RUBBER SEALANT CLEAR, 8641

1. IDENTIFICACIÓN DE LA SUSTANCIA Y DE LA COMPAÑÍA

Dow Corning de Mexico, S.A. de C.V.
Campos Eliseos #345-5 Piso
Col. Polanco
C.P. 11550
Mexico D.F. MEXICO

Teléfono

Argentina: **54(11)4814-9600**
Colombia: **(571)621-0677**
Puerto Rico: **(809)783-8500**
Venezuela: **58(212)261-2672**

Mexico: **(52 55)327-1300**
Local: **(52 55)227-7979**

Dow Corning Corporation
South Saginaw Road
Midland, Michigan 48686

Teléfono de Emergencia 24 Horas: **(989) 496-5900**
Información de Producto: (989) 496-6000

MSDS No.: 04061395 Fecha de revisión: 2005/08/05

Descripción Genérica: Elastómero de silicón.
Forma Física: Pasta.
Color: Incoloro.
Olor: Olor a ácido acético.

Perfil NFPA: Salud 2 Flamabilidad 1 Inestabilidad / Reactividad 0

Nota: NFPA = National Fire Protection Association - Asociación Nacional de Protección contra Incendios

2. COMPONENTES PELIGROSOS POR OSHA-ASOCIACIÓN DE SALUD Y SEGURIDAD OCUPACIONAL

Número CAS	% Peso	Nombre del Componente
17689-77-9	1.0 - 5.0	Etiltriacetoxisilano
4253-34-3	1.0 - 5.0	Metiltriacetoxisilano

Los componentes arriba mencionados son peligrosos de acuerdo a la definición en 29 CFR 1910.1200.

3. IDENTIFICACIÓN DE RIESGOS

EFECTOS POTENCIALES SOBRE LA SALUD

Efectos agudos

Ojos: El contacto directo puede ocasionar una irritación moderada.

Piel: Puede causar irritacion moderada.

Inhalación:	No es probable que el material presente peligro de inhalación en condiciones ambiente. No obstante, si el material se calienta o se alcanzan altas concentraciones de vapor y/o aerosol, puede ocurrir una depresión del sistema nervioso central, caracterizada por mareos, confusión o descoordinación.
Oral:	Riesgo bajo si se ingiere durante su uso normal.

Efectos por Exposición Prolongada / Repetida

Piel:	No hay información aplicable que se conozca.
Inhalación**:**	No hay información aplicable que se conozca.
Oral:	No hay información aplicable que se conozca.

Señales y Síntomas de Sobreexposición

No hay información aplicable que se conozca.

Condiciones Médicas Agravadas por Exposición

No hay información aplicable que se conozca.

Los efectos potenciales enumerados arriba por sobrexposición se basan en datos actuales, resultados de estudios llevados a cabo en composiciones similares, datos de los componentes o revisiones expertas del producto. Por favor refierase a la Seccion 11 para información toxicológica detallada.

4. PRIMEROS AUXILIOS

Ojos:	Enjuague inmediatamente con agua durante 15 minutos. Obtenga atención médica.
Piel:	Remover de la piel y lavar abundantemente con agua y jabón o agua limpia. Obtenga atención médica si persiste, o se desarrolla, irritación u otros malestares.
Inhalación:	No es probable que el material presente peligro de inhalación en condiciones ambiente. Si se calienta el material o se genera vapor, niebla y/o humo, se debe prevenir la inhalación. En caso de exposición a vapor, niebla y/o humo, diríjase hacia un sitio con aire puro.
Oral:	No deberían necesitarse primeros auxilios.
Comentarios:	Tratar de acuerdo a condiciones específicas de exposición de la persona.

5. MEDIDAS PARA COMBATIR INCENDIOS

Punto de inflamación:	No aplicable.
Temperatura de autoignición:	No determinada.

Limites de Flamabilidad en Aire:	No determinada.
Medios de Extinción:	Utilice químicos secos, espuma o rocíe agua para fuegos grandes. Utilice dioxido de carbono (CO2), polvo quimico o rocie agua para incendios pequeños. Se puede utilizar agua para enfriar los envases expuestos al fuego.
Medidas para el Combate de Incendios:	Equipos de respiración autónoma y ropa protectora deben ser utilizados cuando se atacan fuegos en que se encuentren productos quimicos presentes. Determinar la necesidad de evacuar o aislar el área de acuerdo con su plan local de emergencia. Ninguno(a). El material no se quema.
Peligros inusuales de Incendio:	Ninguno/a.

Productos Peligrosos de la Descomposición

Los siguientes productos peligrosos por la descomposición pueden evolucionar debido a la ruptura térmica de este producto durante un incendio, o condiciones de temperatura muy altas.: Óxidos de carbono y trazas de compuestos de carbono no completamente quemados. Dióxido de silicio. Formaldehído.

6. MEDIDAS QUE DEBAN TOMARSE EN CASO DE VERTIDO ACCIDENTAL

Contención / Limpieza:	Siga todas las recomendaciones descritas en las secciones 5 y 8 respecto al equipo de protección personal. Junte o Separe para recuperarlo o Destruirlo. Limpie el área como sea apropiado, ya que algunos materiales del silicón, aún en pequeñas cantidades, puede representar un riesgo de resbalar. La limpieza final puede requerir el uso de vapor, solventes o detergentes. Deseche apropiadamente el absorbente saturado, o los materiales de limpieza, ya que puede ocurrir un calentamiento espontáneo. Leyes y reglamentos locales, federales y estatales deben ser verificadas para la disposición del material. asi mismo como los materiales y equipos utilizados en la limpieza para la destrucción. Es necesario determinar cuales leyes y reglamentos deben ser aplicados n las materias arriba mencionadas. Secciones 13 y 15 de MDMS contienen informacion en referencia a los requerimientos federales y estatales.

Nota: Vea la Sección 8 para Equipo de Protección Personal para Derrames.

7. MANIPULACION Y ALMACENAMIENTO

Utilicese con ventilación adecuada. El producto libera ácido acético (HOAc) cuando se expone al agua o aire húmedo. Proporcione ventilación durante su uso para controlar el HOAc dentro de los lineamientos de exposición (vea la Sección 2) o use protección respiratoria. Evítese el contacto con los ojos. Evítese el contacto con la piel. No lo ingiera. Evite respirar los vapores. Conserve cerrado el recipiente.

Use un cuidado razonable, y almacénelo lejos de materiales oxidantes. Manténgase el envase cerrado y almacenarlo lejos del agua o della umedad.

8. CONTROL DE EXPOSICIÓN / PROTECCIÓN INDIVIDUAL

Límite de Exposición al Componente

Número CAS	Nombre del Componente	Límites de exposición
17689-77-9	Etiltriacetoxisilano	Ver comentarios sobre el acido acético.
4253-34-3	Metiltriacetoxisilano	Ver comentarios sobre el acido acético.

Se forma ácido acético al entrar en contacto con agua o aire humedo.

Controles de Ingeniería

Ventilación Local: Recomendado(a).
Ventilación General: Recomendado(a).

Equipo de Protección Personal para la Manipulación Rutinaria

Ojos: Use protección apropiada - lentes de seguridad como mínimo.

Piel: Lávese antes de los alimentos y al final del turno. Deben retirarse ropas y calzado contaminado tan pronto sea práctico, y limpiarlos exhaustivamente antes de volver a usarse. Se recomienda el uso de guantes protectores contra químicos.

Guantes Apropiados: Hule Nitrilo Hule butilo.

Inhalación: Utilícese protección respiratoria a menos que se proporcione una ventilación local adecuada de los gases producidos o que una evaluación de la exposición demuestre que las exposiciones se encuentran dentro de las directrices de exposición recomendadas. El personal de IH puede ayudar a juzgar la idoneidad de los controles de ingeniería existentes.

Respirador Apropiado: No es necesaria una protección respiratoria bajo condiciones ambiente. Si se genera vapor, niebla y/o humo cuando se calienta o manipula el material, se recomienda lo siguiente. Se recomienda una ventilación general y local de los gases producidos para mantener las exposiciones al vapor por debajo de los límites recomendados. Si las concentraciones son superiores a los límites recomendados o se desconocen, se debe llevar una protección respiratoria adecuada. Siga las normativas para mascarillas de la OSHA (29 CFR 1910.134) y utilice mascarillas aprobadas por NIOSH/MSHA.

Equipo de Protección Personal en Caso de Derrames

Ojos: Use respirador facial completo.

Piel: Lávese antes de los alimentos y al final del turno. Deben retirarse ropas y calzado contaminado tan pronto sea práctico, y limpiarlos exhaustivamente antes de volver a usarse. Se recomienda el uso de guantes protectores contra químicos.

Inhalación/Respirador Apropiado:	Se recomienda la protección respiratoria. Siga las normas sobre respiradores de OSHA (29 CFR 1910.134) y use respiradores aprobados por NIOSH/MSHA. La protección proporcionada por respiradores de purificación de aire es limitada para cualquier producto químico peligroso. Use un respirador de suministro de aire con presión positivasi existe algún potencial para liberación no controlada, se desconocen los niveles de exposición, o cualquier otra circunstancia en la que los respiradoes de purificación de aire no puedan proporcionar protección adecuada.
Medidas Precautorias:	Evítese el contacto con los ojos. Evítese el contacto con la piel. No lo ingiera. Evite respirar los vapores. Conserve cerrado el recipiente. Use con cuidado razonable.
Comentarios:	El producto libera ácido acético (HOAc) cuando se expone al agua o aire húmedo. Proporcione ventilación durante su uso para controlar el HOAc dentro de los lineamientos de exposición (vea la Sección 2) o use protección respiratoria. Cuando el producto se calienta a temperaturas sobre los 150 C (300 F) en presencia del aire, el mismo puede crear vapores de formaldehído. Dow Corning Corporation y la hoja de datos de seguridad del material proporcionan información sobre los riesgos físicos y de la salud.

Nota: Estas precauciones son para el manejo a temperatura ambiente. El uso de temperatura, o aplicaciones en aerosol/rocío, pueden requerir precauciones adicionales.

9. PROPIEDADES FÍSICAS Y QUÍMICAS

Forma Física:	Pasta.
Color:	Incoloro.
Olor:	Olor a ácido acético.
Gravedad Específica @ 25°C:	1.007
Viscosidad:	No determinada.
Punto de Congelamiento / Fusión:	No determinada.
Punto de Ebullición:	No determinada.
Presión de Vapor @ 25°C:	No determinada.
Densidad de Vapor:	No determinada.
Solubilidad en Agua:	No determinada.
pH:	No determinada.
Contenido de Volátiles:	No determinada.

Nota: La información prevedente no debe ser usada para elaborar especificaciones del producto.

10. ESTABILIDAD Y REACTIVIDAD

Estabilidad Química:	Estable.
Polimerización peligrosa:	No ocurrirá polimerización peligrosa.
Condiciones que deben evitarse:	Ninguno/a.

Materiales que deben evitarse:	El material oxidante puede causar una reacción. El agua, humedad, o aire húmedo pueden causar la formación de vapores peligrosos, tal como se describe en la Sección 8.

11. INFORMACIÓN TOXICOLÓGICA

Información Especial sobre Riesgo en los Componentes

No hay información aplicable que se conozca.

12. INFORMACIÓN ECOLÓGICA

Destino Ambiental y Distribución

Aún no hay información completa disponible.

Efectos Ambientales

Aún no hay información completa disponible.

Destino y Efectos en las Plantas de Tratamiento de Aguas Residuales

Aún no hay información completa disponible.

Criterio de Clasificación de Ecotoxicidad

Parámetros de Peligro (CL50 oe CE50)	Alto(a)	Medio(a)	Bajo(a)
Toxicidad Acuática Aguda (mg/L)	<=1	>1 and <=100	>100
Toxicidad Terrestre Aguda	<=100	>100 and <= 2000	>2000

Esta tabla está adaptada de "Evaluación de Riesgo y Toxicología Ambiental", ASTM STP 1179, p.34, 1993.

Esta tabla puede usarse para clasificar la ecotoxicidad de este producto o cuando se enumere arriba la ecotoxidad. Por favor lea la otra información presentada en la seccion que concierne a la seguridad ecologica total de este material.

13. CONSIDERACIONES PARA EL DESECHO

Clase de Peligro RCRA - Acta de Recuperación y Conservación de Recursos (40 CFR 261)

Cuando se toma una decisión de desechar este material, tal cómo se recibió, ¿se clasifica este como residuo peligroso?

Las leyes estatales o locales pueden imponer requisitos normativos adicionales respecto al desecho.

Consult Section 1 to obtain telephone numbers.

14. INFORMACIÓN RELATIVA AL TRANSPORTE

Camino México (Basado en Reglamentos IMDG)

No sujeto al reglamento de tránsito local.

Embarque Marítimo (IMDG - Bienes Peligrosos Marítimos Internacionales)

No está sujeto al código de IMDG.

Embarque Aéreo (ICAO - Organización Internacional de Aviación Civil)

No está sujeto a las normas de IATA.

15. INFORMACIÓN REGLAMENTARIA

El contenido de esta MSDS cumple con el Estándar de Comunicación de Peligros de OSHA 29 CFR 1910.1200.

Estado TSCA - Acta del Control de Sustancias Tóxicas: Toda substancia quimica presente en este producto cumple con los requerimientos reportado en el "act inventory" de control de substancias toxicas, o bien está exento de estos.

Listas Químicas Título III EPA SARA - Agencia de Protección Ambiental - Acta de Fondos de Reautorización y Enmiendas

Sección 302 Sustancias Extremadamente Peligrosas (40 CFR 355):
Ninguno/a.

Sección 304 Sustancias Peligrosas CERCLA - Acta de Responsabilidad, Compensación y Respuesta Ambiental Amplia (40 CFR 302):
Ninguno/a.

Sección 311/312 Clase de Peligro (40 CFR 370):

Agudo:	Y
Crónico:	N
Fuego:	N
Presión:	N
Reactivo:	N

Sección 313 Químicos Tóxicos (40 CFR 372):
Ninguno(a) presente, o ninguno(a) presente en cantidades reguladas.

Información Suplementaria de Cumplimiento Estatal

California

Advertencia: Este producto contiene el siguiente químico(s) enumerado por el Estado de California bajo el Acta de Aplicación de Agua Potable Segura de 1986 (Proposicion 65), el cual se conoce que causa cancer, defectos en el nacimiento u otros daños reproductivos.

Ninguno(a) conocido(a).

Massachusets

Número CAS	% Peso	Nombre del Componente

7631-86-9	7.0 - 13.0	Silica, amorfa

Nueva Jersey

Número CAS	% Peso	Nombre del Componente
70131-67-8	> 60.0	Dimetil Siloxano, Hidroxi-terminal
7631-86-9	7.0 - 13.0	Silica, amorfa
64742-46-7	<=7.0	Destilados (petróleo), fracción intermedia tratada con hidrógeno
17689-77-9	1.0 - 5.0	Etiltriacetoxisilano
4253-34-3	1.0 - 5.0	Metiltriacetoxisilano

Pennsylvania

Número CAS	% Peso	Nombre del Componente
70131-67-8	> 60.0	Dimetil Siloxano, Hidroxi-terminal
7631-86-9	7.0 - 13.0	Silica, amorfa
64742-46-7	<=7.0	Destilados (petróleo), fracción intermedia tratada con hidrógeno

16. OTRAS INFORMACIONES

Preparado por: Dow Corning Corporation

Estos datos se ofrecen de buena voluntad como valores típicos, y no como especificaciones para productos. No se hace aquí una garantía, expresa ni implícita. Se cree que las recomendaciones de higiene industrial y procedimientos para manipulación segura son aplicables en general. Sin embargo, cada usuario debe de revisar estas recomendaciones para determinar si son o no apropiadas dentro del contexto específico del uso pretendido.

XIAMETER(R) is a trademark of Dow Corning Corporation

http://www.xiameter.com

XIAMETER(R)
Fiche Signalétique

DAP(R) 100% SILICONE RUBBER SEALANT CLEAR, 8641

1. IDENTIFICATION DU PRODUIT ET DE LA SOCIETE

No. de la F.S.: 04061395

NOM DU FOURNISSEUR:
Dow Corning Corporation
South Saginaw Road
Midland, Michigan 48686

Préparé par Hazard Communication: (989) 496-6000
Téléphone d'urgence 24 heures: (989) 496-5900
CANUTEC: (613) 996-6666

NOM DU FABRICANT:
Dow Corning Corporation
South Saginaw Road
Midland, Michigan 48686

Téléphone d'urgence 24 heures: (989) 496-5900

CLASSIFICATION SIMDUT: Catégorie D, Division 2A.
Catégorie D, Division 2B.

Utilisation du Produit: Materiau d'etancheite et adhesif

2. COMPOSITION / INFORMATIONS SUR LES COMPOSANTS

Numéro de CAS	Pds (%)	Nom du composant
7631-86-9	7.0 - 13.0	Silice, amorphe
17689-77-9	1.0 - 5.0	Triacétoxyéthylsilane
4253-34-3	1.0 - 5.0	Méthyltriacétoxysilane
556-67-2	0.1 - 1.0	Octaméthylcyclotétrasiloxane

Les ingrédients énumérés ci-dessus sont des produits contrôlés selon le Règlement sur les produits contrôlés (RPC) modifié. SOR/88-555.

3. IDENTIFICATION DES DANGERS

MESURES D'URGENCE GENERALES

Description Générique: Elastomère de silicone .
Etat Physique: Pâte.
Couleur: Incolore.
Odeur: D'acide acétique.

De l'acide acétique se forme au contact de l'eau ou de l'air humide. Assurer une ventilation suffisante pour limiter l'exposition conformément aux limites OSHA PEL : 10 mg/l (TWA) et ACGIH TLV : 10 mg/l (TWA), 15 mg/l (STEL).

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DAP(R) 100% SILICONE RUBBER SEALANT CLEAR, 8641

EFFETS SUR LA SANTE POTENTIELS

Effets aigus

Yeux:	Le contact direct peut entraîner une irritation d'intensité moyenne.
Peau:	Peut causer une irritation modérée.
Inhalation:	Ce produit ne devrait pas présenter de dangers d'inhalation dans conditions ambiantes. Par contre, si le produit est chauffé ou s'il atteint des concentrations d'aérosol ou de hautes vapeurs, il pourrait y avoir une dépression du système nerveux central caractérisée par la somnolence, des étourdissements, la confusion ou la perte de coordination.
Ingestion:	Faible danger d'ingestion pour une utilisation normale.

Effets suite a une exposition répétée/prolongée

Peau:	Aucun renseignement applicable connu.
Inhalation**:**	Aucun renseignement applicable connu.
Ingestion:	Aucun renseignement applicable connu.

Signes et Symptômes d'une surexposition

Aucun renseignement applicable connu.

Certains Malaises et Maladies sont aggravés par suite d'une exposition

Aucun renseignement applicable connu.

Les effets potentiels d'une surexposition énumérés ci-dessus sont fondés sur des données et des résultats d'études menées sur des compositions similaires, des données portant sur les composants et/ou des études d'experts menées sur le produit. Veuillez vous référer à la section 11 pour connaître le détail des renseignements d'ordre toxicologique.

4. PREMIERS SECOURS

Yeux:	Rincer immédiatement à grande eau pendant 15 minutes. Consulter un médecin.
Peau:	Retirer de la peau et bien laver à l'eau et au savon ou à l'aide de détergent à sec. Consulter un médecin si l'irritation ou d'autres malaises se développent ou persistent.
Inhalation:	Ce produit ne devrait pas présenter de dangers aux conditions ambiantes. Si ce produit est chauffé ou si les vapeurs/brume/poussière/fumées sont produits, il faut être prudent pour éviter l'inhalation. En cas d'exposition aux vapeurs/brume/poussière/fumées, allez à l'air frais.
Ingestion:	Aucune mesure d'urgence n'est requise.
Commentaires:	Traiter selon l'état de la personne et les conditions d'exposition.

DAP(R) 100% SILICONE RUBBER SEALANT CLEAR, 8641

5. MESURES DE LUTTE CONTRE L'INCENDIE

Point d'éclair:	Non applicable.
Auto-Inflammation:	Pas disponible.
Limites D'inflammabilité dans l'air:	Pas disponible.
Moyens d'extinction:	Pour les gros incendies, utiliser de la poudre extinctrice, de la mousse ou de l'eau pulvérisée. Pour les petits incendies, utiliser du dioxyde de carbone (CO2), de la poudre extinctrice ou de l'eau pulvérisée. L'eau peut être utilisée pour refroidir les récipients exposés au feu.
Mesures de lutte contre l'incendie:	Il convient de porter un appareil respiratoire autonome et des vêtements de protection pour combattre de gros incendies de produits chimiques. Déterminer la nécessité d'évacuer ou d'isoler la zone en accord avec le plan d'urgence en vigueur. Aucun. Le produit ne brûle pas
Risques d'incendie inhabituels:	Aucun(e).

Produits de décomposition dangereux

La décomposition thermique de ce produit durant un incendie ou dans des conditions très extrêmes de chaleur peut dégager ces produits de décomposition dangereux suivants: Oxydes de carbone et traces de résidus de combustion de composés carbonés. Dioxyde de silicium. Formaldéhyde.

6. MESURES A PRENDRE EN CAS DE DISPERSION ACCIDENTELLE

Retenue/Nettoyage:	Respecter toutes les recommandations liées au matériel de protection personnelle (décrites aux sections 5 et 8). Essuyer ou racler et contenir à des fins de récupération ou d'élimination. Nettoyer la zone de façon appropriée puisque certains produits de silicone, méme en petites quantités, peuvent présenter un risque de dérapage. Le nettoyage final peut exiger l'utilisation de vapeur, de solvants ou de détergents. Éliminer l'absorbant ou les produits de nettoyage saturés de façon appropriée, puisqu'une combustion spontanée peut se produire. Des lois et des règlements locaux, provinciaux et fédéraux peuvent s'appliquer aux déversements et à l'élimination de ce produit et des produits et des articles utilisés pour le nettoyage des déversements.

Note: Voir la section 8 sur l'équipement de protection personnelle sur les déversements. Appelez au (989) 496-5900, pour de plus amples renseignements.

7. MANIPULATION ET STOCKAGE

Employer en présence d'un système de ventilation adéquate. Ce produit dégage de l'acide acétique (HOAC) lorsqu'il est exposé à l'eau ou à l'air humide. Assurer une ventilation au cours de l'utilisation du produit afin de limiter la présence de HOAC conformément aux limites d'exposition (voir section 2) ou utiliser une protection respiratoire. Eviter tout contact avec les yeux. Eviter tout contact avec la peau. Ne pas ingerer. Éviter d'inhaler les vapeurs. Maintenir le contenant fermé

Faire preuve de diligence raisonnable et entreposer à l'écart des substances comburantes. Maintenir le récipient fermé et

conserver à l'abri de l'eau et de l'humidité.

8. CONTROLE DE L'EXPOSITION / PROTECTION INDIVIDUELLE

Limite d'exposition du composant

Consultez les autorités locales afin d'obtenir les normes provinciales acceptables.

Numéro de CAS	Nom du composant	Limites d'exposition
7631-86-9	Silice, amorphe	OSHA PEL (final rule): TWA 80mg/m3/%SiO2. NIOSH REL: TWA 6mg/m3.
17689-77-9	Triacétoxyéthylsilane	Consulter les commentaires de l'Acide Acetique. LD50: 1,460 mg/kg - Ingestion Rat
4253-34-3	Méthyltriacétoxysilane	Consulter les commentaires de l'Acide Acetique. LD50: 2,060 mg/kg - Ingestion Rat
556-67-2	Octaméthylcyclotétrasiloxane	Guide Dow Corning: MPT (TWA) 10 ppm. LC50: 36 mg/L - Inhalation Rat LD50: > 2,000 mg/kg - Ingestion Rat

De l'acide acétique se forme au contact de l'eau ou de l'air humide. Assurer une ventilation suffisante pour limiter l'exposition conformément aux limites OSHA PEL : 10 mg/l (TWA) et ACGIH TLV : 10 mg/l (TWA), 15 mg/l (STEL).

Contrôles D'ngénierie

Ventilation du poste de travail:	Recommandé.
Ventilation générale:	Recommandé.

Equipements de Protection Individuelle pour les Manipulations de Routine

Yeux:	Utiliser des mesures de protection appropriées - minimum : lunettes de sécurité.
Peau:	Se laver au moment des repas et à la fin des quarts de travail. Les vêtements et les souliers contaminés doivent être retirés dès que possible et bien lavés avant d'être réutilisés. Le port de gants de protection contre les produits chimiques est recommandé.
Gants convenables:	Caoutchouc nitrile Butylcaoutchouc.
Inhalation:	Utilisez une protection respiratoire à moins d'avoir une ventilation d'aspiration locale adéquate ou que l'évaluation de l'exposition indique que les expositions se situent dans les limites des directives d'exposition recommandées. Le personnel IH peut aider à juger la suffisance des contrôles techniques actuels.

Respirateur Convenable:	Une protection respiratoire n'est normalement pas requise sous des conditions ambiantes. Si des vapeurs/brume/poussière/fumées sont produites lorsque le produit est chauffé ou manipulé, voici ce qui est conseillé. Une ventilation aspirante générale et locale est conseillée pour garder le niveau d'exposition aux vapeurs en dessous des seuils recommandés. Lorsque l'échantillonnage de l'air révèle des concentrations dépassant les seuils recommandés ou que ces concentrations sont inconnues, il faut porter une protection adéquate des voies respiratoires. Respectez la norme ACNOR Z94.4-93 et utilisez des respirateurs homologués NIOSH / ACNOR.

Equipements de Protection Individuelle en Cas de Déversements

Yeux:	Utiliser un respirateur à masque complet.
Peau:	Se laver au moment des repas et à la fin des quarts de travail. Les vêtements et les souliers contaminés doivent être retirés dès que possible et bien lavés avant d'être réutilisés. Le port de gants de protection contre les produits chimiques est recommandé.
Inhalation/Respirateur Convenable:	Protection des voies respiratoires conseillée. Respectez la norme ACNOR Z94.4-93 et utilisez les respirateurs homologués NIOSH / ACNOR. La protection assurée par les respirateurs à adduction d'air filtré contre l'exposition à tout produit chimique dangereux est limitéeUtilisez un respirateur à adduction d'air à pression positive en cas de possibilité d'émission incontrôlée, si les niveaux d'exposition sont inconnus ou dans toute autre situation où la protection assurée par les respirateurs à adduction d'air filtré peut être insuffisante.
Mesures de Précaution:	Eviter tout contact avec les yeux. Eviter tout contact avec la peau. Ne pas ingerer. Éviter d'inhaler les vapeurs. Maintenir le contenant fermé Veuillez apporter de soin raisonnable
Commentaires:	Ce produit dégage de l'acide acétique (HOAC) lorsqu'il est exposé à l'eau ou à l'air humide. Assurer une ventilation au cours de l'utilisation du produit afin de limiter la présence de HOAC conformément aux limites d'exposition (voir section 2) ou utiliser une protection respiratoire.

Note: Ces précautions concernent une manipulation à la température de la pièce. L'utilisation a des températures élevées ou les applications en aérosol peut nécessiter des précautions supplémentaires.

9. PROPRIETES PHYSIQUES ET CHIMIQUES

Etat Physique:	Pâte.
Couleur:	Incolore.
Odeur:	D'acide acétique.
Seuil olfactif:	Non disponible.
Densité @ 25°C:	1.007
Viscosité:	Pas disponible.
Point de Congélation:	Pas disponible.
Point Ebullition:	Pas disponible.
Tension de Vapeur @ 25°C:	Pas disponible.
Densité de la vapeur:	Pas disponible.
Taux d'évaporation:	Non disponible.
Solubilité dans l'eau:	Pas disponible.
Coefficient de répartition eau / huile:	Non disponible.

pH: Pas disponible.
Contenu Volatile: Pas disponible.

Note: Ces informations ne sont pas destinées à la redaction de specification de produits.

10. STABILITE ET REACTIVITE

stabilité chimique:	Stable.
Polymérisation dangereuse:	La polymérisation dangereuse ne se produira pas.
Conditions à Eviter:	Aucun(e).
Materiaux à Eviter:	Les comburants peuvent entraîner une réaction. L'eau, l'humidité ou l'air humide peuvent entraîner la formation de vapeurs dangereuses tel que le décrit la section 8.

11. INFORMATIONS TOXICOLOGIQUES

Renseignements sur la toxicité des composants

L'inhalation ou l'exposition orale répétées, chez la souris et le rat, à l'octaméthylcyclotétrasiloxane et au décaméthylcyclopentasiloxane ont produit une augmentation de la taille du foie. Aucun effet histopathologique macroscopique ni aucune donnée identifiées comme les causes sous-jacentes de l'augmentation de la taille du foie. Les mécanismes biochimiques produisant ces effets sont extrêmement sensibles chez les rongeurs, tandis que les mécanismes semblables chez l'humain sont insensibles. De bonne pratiques d'hygiène industrielle minimisent l'exposition par inhalation à tout produit chimique. Dow Corning a établi une limite d'exposition de 10 mg/l (TWA) pour ces deux produits.

Des études de toxicité vis-à-vis du développement au cours desquelles des rats et des lapins ont été respectivement exposés à des concentrations en vapeur d'octaméthyltétrasiloxane de 700 ppm et 500 ppm n'ont mis en évidence aucun effet tératogène.

L'administration d'octaméthylcyclotétrasiloxane à des rats par inhalation globale à des concentrations de 500 et de 700 mg/l pendant 70 jours avant l'accouplement et pendant l'accouplement, la gestation et la lactation a entraîner une réduction du nombre de descendants vivants. De plus, une hausse de l'incidence des accouchements inhabituellement longs (dystocie) a été observée à ces concentrations. Aucune altération statistiquement significative de ces paramètres n'a été observée pour les concentrations évaluées les plus faibles (300 et 70 mg/l). Au cours d'une étude de dosage précédente, les rats exposés à des concentrations de vapeur de 700 mg/l ont connu des baisses du nombre de sites d'implantation et de descendants vivants. La signification de ces résultats pour les humains n'est pas connue.

On a effectué un dosage combiné chronique/cancérogène de 2 ans de l'octaméthyl-cyclotetrasiloxane (D4). 344 rats Fischer ont été exposés à une inhalation de vapeur de tout le corps pendant 6 h/jr, 5 jr/sem jusqu'à 104 semaines à des niveaux de D4 de 0,10, 30,150 ou 700 ppm. On a observé une augmentation statistiquement significative de l'incidence d'hyperplasie des cellules endométriales (utérine) et d'anénomes utérins (tumeurs bénignes) chez les rates à 700 ppm. Puisque ces effets n'apparaissent qu'à 700 ppm, un niveau qui dépasse beaucoup l'exposition courante ou du milieu de travail typique, il est peu probable que les utilisation courantes, commerciales ou industrielles des produits contenant de l'OMCS/D4 pourraient causer des risques importants pour les humains

Renseignements sur les dangers particuliers des Composants

Des effets Reproducteurs

Numéro de CAS	Pds (%)	Nom du composant	
556-67-2	0.1 - 1.0	Octaméthylcyclotétrasiloxane	Preuve des effets sur la reproduction chez les animaux de laboratoire.

12. INFORMATIONS ECOLOGIQUES

Distribution et Evolution dans l'environnement

Les renseignements complets ne sont pas encore disponibles.

Les effets sur l'environnement

Les renseignements complets ne sont pas encore disponibles.

Evolution et les effets dans les stations d'épuration des eaux usée

Les renseignements complets ne sont pas encore disponibles.

Critère de classification de l'écotoxicité

Parametres De Danger (LC50 OR EC50)	Elevé	Moyen	Faible
Toxicité Aigue en milieu Aquatique (MG/L)	<=1	>1 and <=100	>100
Toxicité Aigue en milieu terrestre (MG/L)	<=100	>100 and <= 2000	>2000

Ce Tableau est Adapté de "ENVIRONMENTAL TOXICOLOGY AND RISK ASSESSMENT", ASTM STP 1179, P. 34, 1993.

Ce Tableau peut être utilisé pour classifier l'écotoxicité du produit quand des données ecotoxiques sont inscritent au dessus. Veuillez lire l'autre information sur la sécurité écologique de cette matière dans son ensemble.

13. CONSIDERATIONS RELATIVES A L'ELIMINATION

Peut être incinéré conformément aux réglementations locales.

Appelez la société locale d'élimination des déchets dangereux ou les autorités provinciales en matière de déchets pour plus de renseignements.

14. INFORMATIONS RELATIVES AU TRANSPORT

Route du Canada (selon les règlements du code IMDG)

N'est pas soumis aux règlements locaux sur les routes.

IMDG Maritime

Non dangereux selon IMDG.

ICAO Aérien

DAP(R) 100% SILICONE RUBBER SEALANT CLEAR, 8641

Non dangereux selon l'IATA.

15. INFORMATIONS REGLEMENTAIRES

Ce produit a été classé conformément aux critères de danger énoncés dans le RPC, et la fiche signalétique contient tous les renseignements exigés par le RPC.

CLASSIFICATION	Catégorie D, Division 2A.
SIMDUT:	Catégorie D, Division 2B.
DSL STATUS:	Toutes les substances chimiques dans ce produit figurent sur la LIS ou sont exemptées.

16. AUTRES INFORMATIONS

Redigé par: Dow Corning Corporation

Ces Données sont proposées de bonne foi comme valeurs typiques et non comme une spécification du produit. Aucune garantie, expresse ou tacite, n'est établie par la présente. Les méthodes recommandées pour l'hygiène industrielle et une manipulation sans risques sont considérées comme étant généralement applicables. Cependant, chaque utilisateur/trice devrait revoir ces recommandations dans le contexte spécifique de l'utilisation prévue et déterminer si celles-ci sont appropriées.

XIAMETER(R) is a trademark of Dow Corning Corporation

http://www.xiameter.com

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : WALLBOARD JOINT COMPOUND RTU
UPC NUMBER : 7079810100, 7079810102
PRODUCT USE/CLASS : Joint Compound

MANUFACTURER:
DAP INC.
2400 BOSTON STREET
BALTIMORE, MD 21224

24 HOUR EMERGENCY:
TRANSPORTATION: 1-800-535-5053 (352-323-3500)
MEDICAL : 1-800-327-3874 (513-558-5111)

PREPARE DATE: 12/23/1999
REVISION NO.: 9
REVISION DATE: 07/28/2003

GENERAL INFORMATION:
DAP INC. : 1-888-DAP-TIPS (1-888-327-8477)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	RANGE WT/WT %
01	Mica	12001-26-2	1.0-5.0 %
02	Calcium Carbonate	1317-65-3	60.0-65.0 %
03	Crystalline Silica	14808-60-7	0.1-0.5 %
04	Attapulgite(polygorskite)	12174-11-7	0.1-5.0 %

EXPOSURE LIMITS

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	COMPANY TLV-TWA	SKIN
01	3 mg/m3-dust	N.E.	3 mg/m3-dust	N.E.	N.E.	NO
02	10 mg/m3	N.E.	**	N.E.	N.E.	NO
03	0.05 mg/m3*	N.E.	10 mg/m3dust	N.E.	N.E.	NO
04	N.E.	N.E.	N.E.	N.E.	N.E.	NO

(See Section 16 for abbreviation legend)

* The 2001 ACGIH Threshold Limit Values for Chemical Substances and Physical Agents lists the median Respirable Particulate Mass (RPM) point for crystalline silica at 4.0 microns in terms of the particle's aerodynamic diameter.

** 10 mg/m3 / (% SiO2 + 2): Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size selector with the following characteristics

Aerodynamic diameter (unit density sphere)	Percent passing selector
2	90
2.5	75
3.5	50
5.0	25
10	0

Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); limits may vary between states. Remaining ingredients are not considered hazardous per the OSHA Hazard Communication Standard.

(Continued on Page 2)

SECTION 3 - HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May dry skin.

EFFECTS OF OVEREXPOSURE - INHALATION: Vapor may irritate nose and upper respiratory tract.

EFFECTS OF OVEREXPOSURE - INGESTION: None known.

EFFECTS OF OVER EXPOSURE – CHRONIC HAZARDS

The International Agency for Research on Cancer (IARC)has determined that crystalline silica in the form of quartz or cristobalite that is inhaled from occupational sources is carcinogenic to humans (Group 1– carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program (NTP) classifies respirable crystalline silica as known to be a human carcinogen. Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

Breathing dust containing respirable crystalline silica may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects: Excessive inhalation of respirable dust can cause pneumoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. Smoking exacerbates this disease. Individuals with pneumoconiosis are predisposed to develop tuberculosis. There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY CONTACT: Asthma and asthma-like conditions may worsen from prolonged and repeated exposure.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT INHALATION

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Flush with large quantities of water until irritation subsides. Contact a physician.

SKIN CONTACT: Wash with soap and water.

(Continued on Page 3)

SECTION 4 - FIRST AID MEASURES

INHALATION: Remove to fresh air. Contact a physician immediately.

INGESTION: DO NOT INDUCE VOMITING. Contact a physician or Regional Poison Control Center immediately.

COMMENTS: In case of a medical emergency call: 1-800-327-3874.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: >200 F (SETAFLASH CLOSED CUP)

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: N.E.

EXTINGUISHING MEDIA: CO2 DRY CHEMICAL FOAM

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

SPECIAL FIREFIGHTING PROCEDURES: Use water spray to cool exposed surfaces.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Scrape up dried material and place into containers.

SECTION 7 - HANDLING AND STORAGE

CAUTION! Removal of this product after use will result in the generation of dust. If dry-sanded, exposure to dust may result in build-up of material in eyes, ears, nose, and mouth which may cause irritation.

HANDLING INFORMATION: KEEP OUT OF REACH OF CHILDREN. Keep containers away from excessive heating and freezing. Avoid skin and eye contact. Do not inhale dusts of this product.

STORAGE INFORMATION: Store away from caustics and oxidizers. Keep containers tightly closed when not in use. Keep containers from excessive heat and freezing. Do not store at temperatures above 120 degrees F.

OTHER PRECAUTIONS: None.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

(Continued on Page 4)

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: If dry-sanding, provide sufficient mechanical ventilation to maintain exposure below PEL and TLV. Wet sanding is recommended to avoid generation of dust.

RESPIRATORY PROTECTION:
Dry sanding of dried product results in the generation of dust which contains crystalline silica. Avoid exposure to dust by wearing an appropriate, properly fitted, dust respirator during dry sanding. Follow respiratory manufacturer's directions for respirator use.

If the 8 hour exposure limit or value is exceeded for any component, use an approved NIOSH/OSHA respirator. Consult your safety equipment supplier and the OSHA regulation, 29 CFR 1910.134 for respirator requirements. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

The National Institute for Occupational Safety and Health (NIOSH) recommended permissible exposure limit of 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m3) as determined by a full shift sample up to 10 hour working day, 40 hours per week.

EYE PROTECTION: Safety glasses with side shields.

SKIN PROTECTION: Gloves recommended for repeated or prolonged contact with skin.

OTHER PROTECTIVE EQUIPMENT: None.

HYGIENIC PRACTICES: Remove contaminated clothing and wash before reuse.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: 210 - 220 F	VAPOR DENSITY	: Is heavier than air
ODOR	: Musty Odor		
APPEARANCE	: Gray Color Paste	EVAPORATION RATE	: Is slower than Butyl Acetate
SOLUBILITY IN H2O	: Miscible		
SPECIFIC GRAVITY	: 1.7157		
VAPOR PRESSURE	: 17.5 mm Hg@68F.		
PHYSICAL STATE	: Paste		

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Strong oxidizers and caustics.

(Continued on Page 5)

SECTION 10 - STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e. COx, NOx

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

No product or component toxicological information is available.

SECTION 12 - ECOLOGICAL INFORMATION

No Information.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT/DISPOSAL: This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous Waste Management Regulations, 40 CFR Section 261. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA WASTE CODE - If discarded (40 CFR 261): None.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not Regulated by D.O.T.

DOT HAZARD CLASS: NONE

DOT UN/NA NUMBER: NONE PACKING GROUP: NONE

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

(Continued on Page 6)

SECTION 15 - REGULATORY INFORMATION

SARA SECTION 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
No SARA Section 313 components exist in this product.		

TOXIC SUBSTANCES CONTROL ACT:
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

CHEMICAL NAME	CAS NUMBER
No TSCA 12(B) chemicals are known to exist in this product.	

NEW JERSEY RIGHT-TO-KNOW:
The following materials are non-hazardous, but are among the top five components in this product:

CHEMICAL NAME	CAS NUMBER
Water	7732-18-5
Magnesium aluminum silicate	12174-11-7
Vinyl Acetate Polymer	TSRN-618608-5185P

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

CHEMICAL NAME	CAS NUMBER
Water	7732-18-5

CALIFORNIA PROPOSITION 65:
WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer:

CHEMICAL NAME	CAS NUMBER
Crystalline Silica	14808-60-7

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: No information available.

(Continued on Page 7)

SECTION 15 - REGULATORY INFORMATION

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 09/10/2002

REASON FOR REVISION:
Section 2. Update exposure limits for crystalline silica.

VOC less water, less exempt solvent: 15-20 g/L
VOC material : 5-10 g/L

LEGEND: ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
N.A. - NOT APPLICABLE
N.E. - NOT ESTABLISHED
PEL - PERMISSIBLE EXPOSURE LIMIT
NTP - NATIONAL TOXICOLOGY PROGRAM
SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
STEL - SHORT TERM EXPOSURE LIMIT
TLV - THRESHOLD LIMIT VALUE(8 HR. TIME WEIGHTED AVERAGE OR TWA)
VOC - VOLATILE ORGANIC COMPOUND
NJRTK - NEW JERSEY RIGHT TO KNOW LAW
N.D. - NOT DETERMINED

MSDS# 70288

This data is offered in good faith as typical values and not as a product specification. No warranty either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review the recommendations in specific context of the intended use and determine if they are appropriate.

< End OF MSDS >

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

THIS MATERIAL SAFETY DATA SHEET IS AVAILABLE IN SPANISH UPON REQUEST.

LOS DATOS DE SEGURIDAD DEL PRODUCTO PUEDEN OBTENERSE EN ESPANOL SI LO REQUIERE.

PRODUCT NAME : CONTACT CEMENT
UPC NUMBER : 00101, 00102, 00104, 00105, 00107, 00127
PRODUCT USE/CLASS : Contact Adhesive

MANUFACTURER:
DAP INC.
2400 BOSTON STREET
BALTIMORE, MD 21224

24 HOUR EMERGENCY:
TRANSPORTATION: 1-800-535-5053 (352-323-3500)
MEDICAL : 1-800-327-3874 (513-558-5111)

PREPARE DATE : 05/08/1996
REVISION NO. : 9
REVISION DATE: 12/30/1999

GENERAL INFORMATION:
DAP INC. : 1-888-DAP-TIPS (1-888-327-8477)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
01	Toluene	108-88-3	15.0-20.0 %
02	N-Hexane	110-54-3	10.0-5.0 %
03	Aliphatic Petroleum Distillate	64742-89-8	30.0-35.0 %
04	Acetone	67-64-1	15.0-20.0 %

EXPOSURE LIMITS

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	COMPANY TLV-TWA	SKIN
01	50 ppm.	N.E.	100 ppm.	N.E.	N.E.	YES
02	50 ppm	N.E.	50 ppm	N.E.	N.E.	NO
03	400 ppm	N.E.	400 ppm	N.E.	N.E.	NO
04	750 ppm	1000 ppm	750 ppm	N.E.	N.E.	NO

(See Section 16 for abbreviation legend)

Remaining ingredients are not considered hazardous per the OSHA Hazard Communication Standard.

Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); limits may vary between states.

(Continued on Page 2)

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER! Extremely flammable liquid and vapor. Vapor harmful. Vapors may cause flash fire or explosion. Aspiration hazard if swallowed - can enter lungs and cause damage. Harmful if inhaled.

POTENTIAL HEALTH EFFECTS:

EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May irritate skin. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

EFFECTS OF OVEREXPOSURE - INHALATION: Vapor harmful if inhaled. Vapor may irritate nose and upper respiratory tract. Vapor inhalation may affect the brain or nervous system causing dizziness, headache or nausea.

EFFECTS OF OVEREXPOSURE - INGESTION: Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal. If ingested, this product may cause vomiting, diarrhea, and depressed respiration.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Reports have associated permanent brain and nervous system damage with prolonged and repeated occupational overexposure to solvents. Overexposure or misuse of toluene can cause liver, kidney, and brain damage as well as cardiac abnormalities. Hexane exposure can cause nerve damage to arms and legs which may permanent. Symptoms include: loss of memory, loss of intellectual ability, and loss of coordination.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY CONTACT: None known.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT INHALATION

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Flush with large quantities of water until irritation subsides.

SKIN CONTACT: Wash with soap and water.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

(Continued on Page 3)

SECTION 4 - FIRST AID MEASURES

INGESTION: DO NOT INDUCE VOMITING.

COMMENTS: Call Medical in Section 1 if irritation or complications arise from any of the above routes of exposure.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: -50 F (SETAFLASH CLOSED CUP)

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: N.E.

EXTINGUISHING MEDIA: CO2 DRY CHEMICAL FOAM

UNUSUAL FIRE AND EXPLOSION HAZARDS: Extremely flammable. Material will readily ignite at room temperature. Vapors may form an explosive mixture with air. Vapors can travel through a source of ignition and flashback. Containers may explode if exposed to extreme heat. Eliminate sources of ignition: heat, electrical equipment, sparks, and flames. Do not put in contact with oxidizing or caustic materials.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment, including self-contained breathing apparatus, is recommended to protect from combustion products. Cool exposed containers with water.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Dike spill area. Immediately eliminate sources of ignition. Use absorbent material or scrape up dried material and place into containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING INFORMATION: KEEP OUT OF REACH OF CHILDREN. Avoid skin and eye contact. Avoid breathing vapors. Use only in a well ventilated area.

STORAGE INFORMATION: Store away from caustics and oxidizers. Keep away from heat, spark, and flame. Keep containers tightly closed when not in use. Keep containers from excessive heat and freezing. Do not store at temperatures above 120 degrees F.

(Continued on Page 4)

SECTION 7 - HANDLING AND STORAGE

OTHER PRECAUTIONS: Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal. Do not take internally. Construction and repair activities can adversely affect indoor air quality. Consult with the occupants or a representative(i.e. maintenance, building manager, industrial hygienist, or safety officer) to determine ways to minimize any impact.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide sufficient mechanical ventilation (local or general exhaust) to maintain exposure below PEL and TLV. Vapors are heavier than air and will collect in low areas. Check all low areas (basements, sumps, etc.) for vapors before entering.

RESPIRATORY PROTECTION: If 8 hour exposure limit or value is exceeded for any component, use an approved NIOSH respirator. Consult your safety equipment supplier and the OSHA regulation, 29 CFR 1910.134 for respirator requirements. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

EYE PROTECTION: Goggles or safety glasses with side shields.

SKIN PROTECTION: Solvent impervious gloves.

OTHER PROTECTIVE EQUIPMENT: Provide eyewash and solvent impervious apron if body contact may occur.

HYGIENIC PRACTICES: Remove contaminated clothing and wash before reuse.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE : 130 - 140 F
VAPOR DENSITY : Is heavier than air
ODOR : Gasoline-like
APPEARANCE : Tan mobile liquid
EVAPORATION RATE: Is faster than Butyl Acetate
SOLUBILITY IN H2O : Negligible
SPECIFIC GRAVITY : 0.8040
VAPOR PRESSURE : 400 mm Hg @ 100 F.
PHYSICAL STATE : Liquid

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Strong oxidizers and caustics.

(Continued on Page 5)

SECTION 10 - STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e. COx, NOx

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

No product or component toxicological information is available.

SECTION 12 - ECOLOGICAL INFORMATION

No Information.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT/DISPOSAL: Dispose of according to Federal, State, and Local Standards. Discarded material should be incinerated at a permitted facility. Liquids cannot be disposed of in a landfill. Do not reuse empty container. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA WASTE CODE - If discarded (40 CFR 261): D001-Ignitable.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Adhesive(Consumer Commodity*)

DOT HAZARD CLASS: 3(ORM-D*)

DOT UN/NA NUMBER: UN 1133(NONE*) PACKING GROUP: II(NONE*)

* For containers of 1 gallon or less.

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

(Continued on Page 6)

SECTION 15 - REGULATORY INFORMATION

SARA SECTION 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
Toluene	108-88-3	15.0-20.0 %
N-Hexane	110-54-3	10.0-15.0 %

TOXIC SUBSTANCES CONTROL ACT:
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

CHEMICAL NAME	CAS NUMBER
No information is available.	

NEW JERSEY RIGHT-TO-KNOW:
The following materials are non-hazardous, but are among the top five components in this product:

CHEMICAL NAME	CAS NUMBER
Polychlorinated Rubber	TSRN-618608-5001P

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

CHEMICAL NAME	CAS NUMBER
Polychlorinated Rubber	proprietary
Phenolic resin	proprietary
Polychlorinated Rubber	proprietary

CALIFORNIA PROPOSITION 65:
WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause birth defects or other reproductive harm:

CHEMICAL NAME	CAS NUMBER
Toluene	108-88-3

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: Consumer Commodity sold on retail market only.

(Continued on Page 7)

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2 FLAMMABILITY: 3 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 02/01/1997

REASON FOR REVISION:
SECTION 1: Address change and new emergency contact phone numbers.

VOC less water, less exempt solvent: 600-610 gm/l(75-76%)where acetone is exempt
VOC material: 490-500 gm/l(61-62%)

LEGEND: ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
N.A. - NOT APPLICABLE
N.E. - NOT ESTABLISHED
PEL - PERMISSIBLE EXPOSURE LIMIT
NTP - NATIONAL TOXICOLOGY PROGRAM
SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
STEL - SHORT TERM EXPOSURE LIMIT
TLV - THRESHOLD LIMIT VALUE(8 HR. TIME WEIGHTED AVERAGE OR TWA)
VOC - VOLATILE ORGANIC COMPOUND
NJRTK - NEW JERSEY RIGHT TO KNOW LAW
N.D. - NOT DETERMINED

MSDS# 30202

This data is offered in good faith as typical values and not as a product specification. No warranty either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review the recommendations in specific context of the intended use and determine if they are appropriate.

< End OF MSDS >

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

THIS MATERIAL SAFETY DATA SHEET IS AVAILABLE IN SPANISH UPON REQUEST.

LOS DATOS DE SEGURIDAD DEL PRODUCTO PUEDEN OBTENERSE EN ESPANOL SI LO REQUIERE.

PRODUCT NAME : WELDWOOD NONFLAMMABLE CONTACT ADHESIVE
UPC NUMBER : 25330, 25332, 25336, 25338
PRODUCT USE/CLASS : Waterbased Adhesive

MANUFACTURER:
DAP INC.
2400 BOSTON STREET
BALTIMORE, MD 21224

24 HOUR EMERGENCY:
TRANSPORTATION: 1-800-535-5053 (352-323-3500)
MEDICAL : 1-800-327-3874 (513-558-5111)

PREPARE DATE : 08/13/1997
REVISION NO. : 3
REVISION DATE: 12/30/1999

GENERAL INFORMATION:
DAP INC. : 1-888-DAP-TIPS (1-888-327-8477)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
01	Toluene	108-88-3	1.0-5.0 %
02	Carbamide	Proprietary	1.0-5.0 %

EXPOSURE LIMITS

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	COMPANY TLV-TWA	SKIN
01	50 PPM	N.E.	100 PPM	N.E.	N.E.	YES
02	N.E.	N.E.	N.E.	N.E.	N.E.	NO

(See Section 16 for abbreviation legend)

Remaining ingredients are not considered hazardous per the OSHA Hazard Communication Standard.

Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); limits may vary between states.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: WARNING! Combustible liquid and vapor.

(Continued on Page 2)

SECTION 3 - HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May irritate skin. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

EFFECTS OF OVEREXPOSURE - INHALATION: Vapor harmful if inhaled. Vapor may irritate nose and upper respiratory tract. Vapor inhalation may affect the brain or nervous system causing dizziness, headache or nausea.

EFFECTS OF OVEREXPOSURE - INGESTION: This material may be harmful or fatal if swallowed. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal. If ingested, this product may cause vomiting, diarrhea, and depressed respiration.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Reports have associated permanent brain and nervous system damage with prolonged and repeated occupational overexposure to solvents. Overexposure or misuse of toluene can cause liver, kidney, and brain damage as well as cardiac abnormalities. Symptoms include: loss of memory, loss of intellectual ability, and loss of coordination.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY CONTACT: None known.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT INHALATION

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Flush with large quantities of water until irritation subsides.

SKIN CONTACT: Wash with soap and water.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

INGESTION: DO NOT INDUCE VOMITING.

COMMENTS: Call Medical in Section 1 if irritation or complications arise from any of the above exposures.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: >145 F (PENSKY-MARTENS C.C.)

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

(Continued on Page 3)

SECTION 5 - FIRE FIGHTING MEASURES

AUTOIGNITION TEMPERATURE: N.E.

EXTINGUISHING MEDIA: CO2 DRY CHEMICAL FOAM WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustible. Vapor from this material will readily at temperatures above 150° F. if an ignition source is present. Vapors may form an explosive mixture with air at tempertures above 150° F. Containers may explode if exposed to extreme heat. Eliminate sources of ignition: heat, electrical equipment, sparks, and flames. Do not put in contact with oxidizing or caustic materials.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment, including self-contained breathing apparatus, is recommended to protect from combustion products. Cool exposed containers with water.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Dike spill area. Immediately eliminate sources of ignition. Use absorbent material or scrape up dried material and place into containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING INFORMATION: KEEP OUT OF REACH OF CHILDREN. Avoid skin and eye contact. Avoid breathing vapors. Use only in a well ventilated area.

STORAGE INFORMATION: Store away from caustics and oxidizers. Keep away from heat, spark, and flame. Keep containers tightly closed when not in use. Keep containers from excessive heat and freezing. Do not store at temperatures above 120 degrees F.

OTHER PRECAUTIONS: Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal. Do not take internally.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide sufficient mechanical ventilation (local or general exhaust) to maintain exposure below PEL and TLV. Vapors are heavier than air and will collect in low areas. Check all low areas (basements, sumps, etc.) for vapors before entering.

RESPIRATORY PROTECTION: If 8 hour exposure limit or value is exceeded for any component, use an approved NIOSH/OSHA respirator. Consult your safety equipment supplier and the OSHA regulation, 29 CFR 1910.134 for respirator requirements. A respiratory protection program that meets OSHA 1910.134 and

(Continued on Page 4)

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ANSI Z88.2 requirements must be followed whenever workplace condtions warrant a respirator's use.

EYE PROTECTION: Goggles or safety glasses with side shields.

SKIN PROTECTION: Solvent impervious gloves.

OTHER PROTECTIVE EQUIPMENT: Provide eyewash and solvent impervious apron if body contact may occur.

HYGIENIC PRACTICES: Remove contaminated clothing and wash before reuse.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: 210 - 220 F	VAPOR DENSITY	: Is heavier than air
ODOR	: Mild Odor		
APPEARANCE	: White/green	EVAPORATION RATE	: Is slower than Butyl Acetate
SOLUBILITY IN H2O	: Soluble		
SPECIFIC GRAVITY	: 1.1005		
VAPOR PRESSURE	: 98 mm Hg @122F.		
PHYSICAL STATE	: Liquid		

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Strong oxidizers and caustics.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decompositon products, i.e. COx, NOx

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

No product or component toxicological information is available.

SECTION 12 - ECOLOGICAL INFORMATION

No Information.

(Continued on Page 5)

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT/DISPOSAL: Dispose of according to Federal, State, and Local Standards. Discarded material should be incinerated at a permitted facility. Liquids cannot be disposed of in a landfill. Do not reuse empty container. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsiblity for proper waste disposal is with the owner of the waste.

EPA WASTE CODE - If discarded (40 CFR 261): None.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not Regulated by D.O.T.

DOT HAZARD CLASS: NONE

DOT UN/NA NUMBER: NONE PACKING GROUP: NONE

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

SARA SECTION 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
Toluene	108-88-3	1.0-5.0 %

TOXIC SUBSTANCES CONTROL ACT:
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

CHEMICAL NAME	CAS NUMBER
No information is available.	

NEW JERSEY RIGHT-TO-KNOW:
The following materials are non-hazardous, but are among the top five components in this product:

CHEMICAL NAME	CAS NUMBER
Water	7732-18-5
Polychlorinated Rubber	TSRN-618608-5001P
Rosin Ester	TSRN-618608-5151P

(Continued on Page 6)

SECTION 15 - REGULATORY INFORMATION

Phenolic Resin	TSRN-618608-5179P

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

CHEMICAL NAME	CAS NUMBER
Water	7732-18-5
Polychlorinated Rubber	Proprietary
Rosin Ester	Proprietary
Phenolic Resin	Proprietary

CALIFORNIA PROPOSITION 65:
WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause birth defects or other reproductive harm:

CHEMICAL NAME	CAS NUMBER
Toluene	108-88-3

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: B3 Combustible liquid sold as Consumer Commodity

(Continued on Page 7)

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 1 FLAMMABILITY: 2 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 08/13/1997

REASON FOR REVISION:
SECTION 1: Address change and new emergency contact phone numbers.

VOC LESS WATER, LESS EXEMPT SOLVENT: 85-90 gm/l(7-8%)
VOC MATERIAL: 40-45gm/l(4-5%)

LEGEND: ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
N.A. - NOT APPLICABLE
N.E. - NOT ESTABLISHED
PEL - PERMISSIBLE EXPOSURE LIMIT
NTP - NATIONAL TOXICOLOGY PROGRAM
SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
STEL - SHORT TERM EXPOSURE LIMIT
TLV - THRESHOLD LIMIT VALUE(8 HR. TIME WEIGHTED AVERAGE OR TWA)
VOC - VOLATILE ORGANIC COMPOUND
NJRTK - NEW JERSEY RIGHT TO KNOW LAW
N.D. - NOT DETERMINED

MSDS# 30534 Revision 1

This data is offered in good faith as typical values and not as a product specification. No warranty either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review the recommendations in specific context of the intended use and determine if they are appropriate.

< End OF MSDS >

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

THIS MATERIAL SAFETY DATA SHEET IS AVAILABLE IN SPANISH UPON REQUEST.

LOS DATOS DE SEGURIDAD DEL PRODUCTO PUEDEN OBTENERSE EN ESPANOL SI LO REQUIERE.

PRODUCT NAME : DAP WOOD DOUGH
UPC NUMBER : 7079811008, 7079821141, 7079821142, 7079821143, 7079821144, 7079821146, 7079821147, 7079821151, 7079821152, 7079821161, 7079821162, 7079821166, 7079821167, 7079821171, 7079821172, 7079821176, 7079821177, 7079821181, 7079821186, 7079899940, 7079899941
PRODUCT USE/CLASS : Wood Filler

MANUFACTURER:
DAP INC.
2400 BOSTON STREET
BALTIMORE, MD 21224

24 HOUR EMERGENCY:
TRANSPORTATION: 1-800-535-5053 (352-323-3500)
MEDICAL : 1-800-327-3874 (513-558-5111)

PREPARE DATE: 02/06/1996
REVISION NO.: 15
REVISION DATE: 03/12/2001

GENERAL INFORMATION:
DAP INC. : 1-888-DAP-TIPS (1-888-327-8477)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
01	Isopropanol	67-63-0	1.0-5.0 %
02	Acetone	67-64-1	30.0-35.0 %
03	n-Butyl acetate	123-86-4	5.0-10.0 %
04	Cellulose nitrate	9004-34-6	5.0-10.0 %

EXPOSURE LIMITS

	ACGIH		OSHA		COMPANY	
ITEM	TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING	TLV-TWA	SKIN
01	400 ppm	500 ppm	400 ppm	N.E.	N.E.	NO
02	750 ppm	1000 ppm	750 ppm	N.E.	N.E.	NO
03	150 ppm	200 ppm	150 ppm	N.E.	N.E.	NO
04	N.E.	N.E.	N.E.	N.E.	N.E.	NO

(See Section 16 for abbreviation legend)

Remaining ingredients are not considered hazardous per the OSHA Hazard Communication Standard.
Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); limits may vary between states.

(Continued on Page 2)

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER! Extremely flammable liquid and vapor. Vapor harmful. Harmful or fatal if swallowed. Removal of this product after use will result in the generation of dust. If dry-sanded, exposure to dust may result in build-up of material in eyes, ears, nose, and mouth which may cause irritation.

POTENTIAL HEALTH EFFECTS:

EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Vapor harmful if inhaled.

EFFECTS OF OVEREXPOSURE - INGESTION: This material may be harmful or fatal if swallowed. If ingested this product may cause vomiting, diarrhea, and depressed respiration.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Reports have associated permanent brain and nervous system damage with prolonged and repeated occupational overexposure to solvents. Prolonged or repeated contact with skin can cause defatting of the skin which may lead to dermatitis. Inhalation of dust may result in pulmonary and respiratory damages.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY CONTACT: None known.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT INHALATION

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Flush with large quantities of water until irritation subsides.

SKIN CONTACT: Wash with soap and water.

INHALATION: Remove to fresh air.

INGESTION: DO NOT INDUCE VOMITING.

COMMENTS: Call 1-800-327-3874 if irritation persists or complications arise from any of the above exposures.

(Continued on Page 3)

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: <20 F (SETAFLASH CLOSED CUP)

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: N.E.

EXTINGUISHING MEDIA: CO2 DRY CHEMICAL FOAM

UNUSUAL FIRE AND EXPLOSION HAZARDS: Extremely Flammable. Material will readily ignite at room temperatures. Containers may explode if exposed to extreme heat. Eliminate sources of ignition: heat, electrical equipment, sparks, and flames. Do not put in contact with oxidizing or caustic materials.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment, including self-contained breathing apparatus, is recommended to protect from combustion products. Cool exposed containers with water.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Scrape up dried material and place into containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING INFORMATION: KEEP OUT OF REACH OF CHILDREN. Avoid skin and eye contact. Avoid breathing vapors. Use only in a well ventilated area.

STORAGE INFORMATION: Store away from caustics and oxidizers. Keep containers tightly closed when not in use. Keep containers from excessive heat and freezing. Do not store at temperatures above 120 degrees F.

OTHER PRECAUTIONS: Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal. Do not take internally.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide sufficient mechanical ventilation (local or general exhaust) to maintain exposure below PEL and TLV. Vapors are heavier than air and will collect in low areas. Check all low areas (basements, sumps, etc.) for vapor before entering. Provide eyewash and solvent impervious apron if body contact may occur.

(Continued on Page 4)

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: If 8 hour exposure limit or value is exceeded for any component, use an approved NIOSH/OSHA respirator. Consult your safety equipment supplier and the OSHA regulation, 29 CFR 1910.134 for respirator requirements. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

EYE PROTECTION: Goggles or safety glasses with side shields.

SKIN PROTECTION: Solvent impervious gloves.

OTHER PROTECTIVE EQUIPMENT: Provide eyewash and solvent impervious apron if body contact may occur.

HYGIENIC PRACTICES: Wash contaminated clothing before reuse. Remove contaminated clothing and wash before reuse. Use only in a well ventilated area.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: N.E.	VAPOR DENSITY	: Is heavier than air
ODOR	: Strong solvent		
APPEARANCE	: Wood paste	EVAPORATION RATE	: Is faster than Butyl Acetate
SOLUBILITY IN H2O	: Negligible		
SPECIFIC GRAVITY	: 1.1901		
VAPOR PRESSURE	: 185 mm Hg @ 68 F.		
PHYSICAL STATE	: Paste		

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Strong oxidizers and caustics.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e. COx, NOx

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

(Continued on Page 5)

SECTION 11 - TOXICOLOGICAL PROPERTIES

No product or component toxicological information is available.

SECTION 12 - ECOLOGICAL INFORMATION

No Information Available.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT/DISPOSAL: Recycle or incinerate at an EPA approved facility or dispose in compliance with Federal, State, and local regulations. Do not reuse empty containers. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA WASTE CODE - If discarded (40 CFR 261): None, yields no liquid component when evaluated by EPA method 1311 (TCLP)

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Flammable Liquid, N.O.S. (Contains acetone)
(Consumer Commodity*)

DOT HAZARD CLASS: 3(ORM-D*)

DOT UN/NA NUMBER: UN 1993(NONE*) PACKING GROUP: III(NONE*)

* For containers of 1 gallon or less

NOTE: the shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and / or non-domestic transport.

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

(Continued on Page 6)

SECTION 15 - REGULATORY INFORMATION

SARA SECTION 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
None.		

TOXIC SUBSTANCES CONTROL ACT:
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

CHEMICAL NAME	CAS NUMBER
Isopropanol	67-63-0
Acetone	67-64-1
n-Butyl acetate	123-86-4
dinonyl phthalate (branched and linear isomers)	68515-45-7
diheptyl phthalate (branched and linear isomers)	68515-44-6
di(heptyl, nonyl) phthalate (branched and linear isomers)	111381-89-6
lead	7439-92-1

NEW JERSEY RIGHT-TO-KNOW:
The following materials are non-hazardous, but are among the top five components in this product:

CHEMICAL NAME	CAS NUMBER
Calcium carbonate	1317-65-3
Glycerol rosin ester	NJTSRN 618608-5072P

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

CHEMICAL NAME	CAS NUMBER
Calcium carbonate	1317-65-3
Glycerol rosin ester	Proprietary

CALIFORNIA PROPOSITION 65:
WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer, birth defects or other reproductive harm:

CHEMICAL NAME	CAS NUMBER
None.	

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: No information available.

(Continued on Page 7)

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2 FLAMMABILITY: 3 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 12/29/1999

REASON FOR REVISION:
SECTION 2: Change in composition
SECTION 4: Addition of medical emergency phone number
SECTION 13: Change is RCRA waste code information
SECTION 14: Addition of a qualifier on shipping information
SECTION 15: Change in list of 313 chemicals, TSCA chemicals and RTK info.
SECTION 16: Change in VOC

VOC less water, less exempt solvent: 225-230 g/L (18.0-20.0%)
(where acetone is exempt)

LEGEND:
- ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
- N.A. - NOT APPLICABLE
- N.E. - NOT ESTABLISHED
- PEL - PERMISSIBLE EXPOSURE LIMIT
- NTP - NATIONAL TOXICOLOGY PROGRAM
- SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
- STEL - SHORT TERM EXPOSURE LIMIT
- TLV - THRESHOLD LIMIT VALUE(8 HR. TIME WEIGHTED AVERAGE OR TWA)
- VOC - VOLATILE ORGANIC COMPOUND
- NJRTK - NEW JERSEY RIGHT TO KNOW LAW
- N.D. - NOT DETERMINED

MSDS# 10504

This data is offered in good faith as typical values and not as a product specification. No warranty either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review the recommendations in specific context of the intended use and determine if they are appropriate.

< End OF MSDS >

MATERIAL SAFETY DATA SHEET

Section 1 – Product & Company Identification

Product Name	:	RIDGID Dark Thread Cutting Oil
Product Catalog No.	:	41590, 70830, 41610, 41600
Company Name	:	Ridge Tool Company
Address	:	400 Clark Street
	:	Elyria, Ohio 44035-6001
Telephone	:	1-800-519-3456 (USA) (8:00 am – 5:00 pm EST, M-F)
Emergency Telephone	:	call 9-1-1 or local emergency number
Website	:	www.RIDGID.com
Issue Date	:	June 13, 2013

Section 2 – Hazards Identification

EMERGENCY OVERVIEW:

This product is a liquid that is insoluble in water. Direct eye contact may cause minor, short term irritation. Short term skin exposure is not expected to be irritating. Inhalation and ingestion are not anticipated routes of exposure during normal conditions of use.

POTENTIAL HEALTH EFFECTS AND SYMPTOMS FROM SHORT TERM / ACUTE EXPOSURE:

- Eye
  This product is not expected to cause eye irritation under normal conditions of use. Symptoms of slight eye irritation may result when direct contact occurs, or when exposed to high mist levels in poorly ventilated areas.

- Skin
  Short term skin contact is not expected to cause skin irritation. Prolonged or repeated direct exposure to the skin may result in symptoms of irritation and redness. In severe cases, prolonged or repeated contact may result in dermatitis accompanied by symptoms of irritation, itching, dryness, cracking and/or inflammation.

- Inhalation:
  This product has low volatility and so is not expected to cause respiratory tract irritation during normal conditions of use. Exposure to high mist levels in poorly ventilated areas may cause upper respiratory tract irritation and difficulty breathing.

Product Name ..... : RIDGID Dark Thread Cutting Oil

- Ingestion:
  Ingestion may cause slight stomach irritation and discomfort.
- Potential Chronic Health Effects
  No further data known.
- Medical Conditions Aggravated By Exposure:
  No further data known.
- Carcinogenicity:
  This product is not listed as a known or suspected carcinogen by IARC, OSHA or the NTP.

HMIS RATING:

Health	Flammability	Reactivity	PPE
1	1	0	X

Section 3 – Composition / Information On Ingredients

Components listed in this section may contribute to the potential hazards associated with exposure to the concentrate. The product may contain additional non-hazardous or trade secret components.

Component:	CAS #	% By Weight
Mineral Oil	64742-54-7	> 90
Sulfur Additive Package	Mixture	< 10

This product does not contain silicone.

Product Name ..... : RIDGID Dark Thread Cutting Oil

Section 4 – First Aid Measures

EYE CONTACT:

Upon direct eye contact, hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. If irritation is due to exposure to mist or vapors, remove the individual to fresh air. If irritation persists, flush the eyes with clean water until the irritation subsides. If symptoms persist, contact a physician.

SKIN CONTACT:

Remove product from the skin by washing with a mild soap and water. Contaminated clothing should be removed to prevent prolonged exposure. If symptoms of exposure persist, contact a physician.

INHALATION:

Inhalation is not an expected route of exposure. If respiratory irritation or distress occurs, remove the employee to fresh air. Contact a physician or other medical professional if irritation or distress persists.

INGESTION:

If small amounts are ingested, first aid measures are not likely to be necessary. If larger amounts are ingested or if symptoms of ingestion occur, dilute stomach contents with two glasses of water or milk. (NOTE: Do NOT give anything by mouth to an unconscious person.) Do not induce vomiting without medical supervision. If vomiting occurs spontaneously, keep airway clear. If symptoms of ingestion persist, seek medical attention.

Section 5 – Fire Fighting Measures

FIRE AND EXPLOSIVE PROPERTIES:

Flashpoint..... :	385°F Cleveland Open Cup
Flammability Limits..... :	LEL - N/A
	UEL - N/A

Product Name ..... : RIDGID Dark Thread Cutting Oil

EXTINGUISH MEDIA:

In accordance with NFPA guidance, dry chemical, foam or CO2 fire extinguishers are all acceptable. Note that while water fog extinguishers are also acceptable, do NOT apply a direct stream of water onto burning product because it may cause spreading and increase fire intensity.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

No further data known.

FIRE-FIGHTING PROCEDURES AND EQUIPMENT:

Emergency responders in the danger area should wear bunker gear and self-contained breathing apparatus for fires beyond the incipient stage. See Section 8 of the MSDS for other PPE to be worn as conditions warrant.

Section 6 – Accidental Release Measures

PERSONAL PRECAUTIONS:

Use personal protection recommended in Section 8.

ENVIRONMENTAL:

This material is a water pollutant. Do not let spilled or leaking material enter waterways.

CLEAN-UP MEASURES:

Important: As with any spill or leak, before responding, ensure that you are familiar with the potential hazards and recommendations of the MSDS. Appropriate personal protective equipment must be worn.

If possible, safely contain the spill with dikes or other spill response equipment appropriate for petroleum or organic material releases. Take measures to prevent spreading of product. Note that while product will ignite, it will not readily burn. However, as a precaution, eliminate ignition sources. Prevent from entering sewers or waterways. Large volumes may be transferred to an appropriate container for proper disposal. Small volumes or residues may be soaked up with absorbents. Spill response materials should be collected for proper disposal.

Product Name ..... : RIDGID Dark Thread Cutting Oil

Section 7 – Handling And Storage

HANDLING:

As with any industrial chemical, handle the product in a manner that minimizes exposure to practicable levels. Prior to handling, consult Section 8 of this MSDS to evaluate personal protective equipment needs. Open containers slowly to relieve any pressure. Follow all other standard industrial hygiene practices.

Empty containers may contain product residue. All safety precautions taken when handling this product should also be taken when handling empty drums and containers. Keep containers closed when not in use.

Product residue in empty containers is combustible but will not readily burn. Note, however, that excessive heating or cutting of empty containers may create an ignition source sufficient to start a fire and, in extreme cases, cause an explosion.

STORAGE:

Protect product quality by storing indoors and away from extreme temperatures. Close all containers when not in use.

Section 8 – Exposure Controls / Personal Protection

EXPOSURE GUIDELINES:

Component		
Mineral Oil	ACGIH TLV: ACGIH STEL: OSHA PEL:	5 mg / m3 (as mist) 10 mg / m3 (as mist) 5 mg / m3 (as mist
Sulfur Additive Package	No information	

ENGINEERING CONTROLS:

Normal general ventilation is expected to be adequate. It is recommended that ventilation be designed in all instances to maintain airborne concentrations at lowest practicable levels. Ventilation should, at a minimum, prevent airborne concentrations from exceeding any exposure limits.

The user may wish to refer to 29 CFR 1910.1000(d) (2) and the ACGIH "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices" (Appendix C) for the determination of exposure limits of mixtures. An industrial hygienist or similar professional may be consulted to confirm that the calculated exposure limits apply.

PERSONAL PROTECTIVE EQUIPMENT:

Selection of personal protective equipment should be based upon the anticipated exposure and made in accordance with OSHA's Personal Protective Equipment Standard found in 29 CFR 1910 Subpart I. The following information may be used to assist in PPE selection.

- Eye Protection
  Wear eye protection appropriate to prevent eye exposure. Where splashing is not likely, chemical safety glasses with side shields are recommended. Where splashing may occur, chemical goggles or full face shield is recommended.

- Skin Protection
  Gloves are not normally needed during normal conditions of use. If health effects are experienced, oil or chemical resistant gloves such as butyl or nitrile are recommended. Where splashing or soaking is likely, wear oil or chemical resistant clothing to prevent exposure.

- Respiratory Protection
  A respirator may be worn to reduce exposure to vapors, dust or mist. Select a NIOSH/MSHA approved respirator appropriate for the type and physical character of the airborne material. A self-contained breathing apparatus is recommended in all situations where airborne contaminant concentration has not been confirmed to be below safe levels. Respirator use should comply with the OSHA Respirator Protection Standard found in 29 CFR 1910.134.

- General Hygiene Considerations
  Wash thoroughly after handling.

Product Name ..... : RIDGID Dark Thread Cutting Oil

Section 9 – Physical And Chemical Properties

Physical Appearance:..... : Black
Odor. ..... : Mild Petroleum
Physical State ..... : Liquid
Water Solubility ..... : Insoluble
Specific Gravity ..... : .878
VOC ……: 2.5%

Section 10 – Stability And Reactivity

STABILITY:

This product is stable.

CONDITIONS TO AVOID:

Avoid contact with incompatible materials and exposure to extreme temperatures.

INCOMPATIBLE MATERIALS:

This product is incompatible with strong oxidizing agents.

DECOMPOSITION PRODUCTS MAY INCLUDE:

Thermal decomposition products are dependent on combustion conditions. A complex mixture of airborne solid, liquid, particulates and gasses may evolve when the material burns. Combustion by-products may include:

oxides of carbon

oxides of sulfur

incompletely burned hydrocarbons as fumes and smoke

POSSIBILITY OF HAZARDOUS REACTIONS:

This product is not expected to polymerize

Product Name ..... : RIDGID Dark Thread Cutting Oil

Section 11 – Toxicological Information

ACUTE:

Oral LD_{50}: Not determined
Inhalation LC_{50}: Not determined

CHRONIC: No further toxicological data known.

SENSITIZATION: No further toxicological data known.

REPRODUCTIVE EFFECTS: No further toxicological data known.

TERATOGENIC EFFECTS: No further toxicological data known.

MUTAGENICITY: No further toxicological data known.

SYNERGISTIC MATERIALS: No further toxicological data known.

CARCINOGENICITY: This product is not listed as a known or suspected carcinogen by IARC, OSHA or the NTP.

Section 12 – Ecological Information

ECOTOXICOLOGICAL INFORMATION:

This product has not been evaluated for ecotoxicity. As with any industrial chemical, exposure to the environment should be prevented and minimized wherever possible.

ENVIRONMENTAL FATE:

The degree of biodegradability and persistence of this product has not been determined.

VOC CONTENT:

2.5%

Product Name ..... : RIDGID Dark Thread Cutting Oil

Section 13 – Disposal Consideration

WASTE DISPOSAL:

Ensure that collection, transport, treatment and disposal of waste product and containers complies with all applicable laws and regulations. Note that use, mixture, processing or contamination of the product may cause the material to be classified as a hazardous waste. It is the responsibility of the product user or owner to determine at the time of disposal whether the product is regulated as a hazardous waste.

Section 14 – Transportation Information

U.S. DOT HAZARDOUS MATERIAL INFORMATION:

Not DOT regulated.

CANADA TRANSPORT OF DANGEROUS GOODS:

This material is not TDG regulated.

Section 15 – Regulatory Information

FEDERAL REGULATIONS:

SARA 313:

This product contains NONE of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

CLEAN WATER ACT:

This product contains mineral oil and is subject to regulation by Section 311 of the Clean Water Act and the Oil Pollution Act. Releases of the product into or leading to surface waters must be reported to the National Response Center at 1-800-424-8802.

CERCLA REPORTABLE QUANTITY:

Any components listed below have been assigned a reportable quantity (RQ) by the Federal EPA. Releases of the product into the environment that exceed the RQ for a particular component must be reported to the National Response Center at 1-800-424-8802.

None to report

TOXIC SUBSTANCE CONTROL ACT:

The components of this product are listed on the TSCA Inventory.

OZONE DEPLETING SUBSTANCES:

This product contains no ozone depleting substances as defined by the Clean Air Act.

HAZARDOUS AIR POLLUTANTS:

Any components listed below are defined by the Federal EPA as hazardous air pollutants:

None to report

STATE REGULATIONS

This product contains mineral oil, and as used, may be regulated by state used oil regulations. Check with the appropriate state agency to determine whether such a regulation exists.

CANADA

WHMIS Classification: Not controlled under WHMIS

DSL:

The components of this product are listed on DSL Inventory.

Product Name ..... : RIDGID Dark Thread Cutting Oil

Section 16 – Other Information

Prepared by:. . . . . Ridge Tool Company

Issue Date: . . . . . June 13, 2013
Last Revision Date: . . . . . October 12, 2009

RIDGE TOOL BELIEVES THE STATEMENTS, TECHNICAL INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE RELIABLE BUT THEY ARE GIVEN WITHOUT WARRANTY OR GUARANTEE OF ANY KIND, EXPRESSED OR IMPLIED, AND WE ASSUME NO RESPONSIBILITY FOR ANY LOSS, DAMAGE OR EXPENSE, DIRECT OR CONSEQUENTIAL, ARISING OUT OF THEIR USE.

SAFETY DATA SHEET

Issuing Date: 09-Jan-2015 **Revision Date:** 07-Apr-2015 **Version** 2

1. IDENTIFICATION

Product Name	Dawn Professional® Manual Pot and Pan Detergent - Made From Concentrate
Product Code(s)	1-00
Product ID:	96283502_DIL_PROF_NG
Product Type:	Finished Product - Professional Use Only
Recommended Use	Dish Care
Restrictions on Use	Use only as directed on label.
Manufacturer	Procter & Gamble Professional 2 P&G Plaza Cincinnati, Ohio 45202 Procter & Gamble Inc. P.O. Box 355, Station A Toronto, ON M5W 1C5 1-800-332-7787
E-mail Address	pgsds.im@pg.com
Emergency Telephone	Transportation (24 HR) CHEMTREC - 1-800-424-9300 (U.S./ Canada) or 1-703-527-3887 Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

This product is classifed under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.

Not Classified.

Hazard Statements	None
Hazard pictograms	None
Precautionary Statements - Prevention	None
Precautionary Statements - Response	None
Precautionary Statements - Storage	None
Precautionary Statements - Disposal	None

Hazards not otherwise classified (HNOC) None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

Hazardous ingredients None.

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact Rinse with plenty of water. Get medical attention immediately if irritation persists.

Skin contact Rinse with plenty of water. Get medical attention if irritation develops and persists.

Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Most important symptoms/effects, acute and delayed None under normal use conditions.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Dry chemical, CO_2, alcohol-resistant foam or water spray. Dry chemical. Alcohol-resistant foam.

Unsuitable Extinguishing Media None.

Special hazard None known.

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific hazards arising from the chemical None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment. Do not get in eyes, on skin, or on clothing.

Advice for emergency responders Use personal protective equipment as required.

Environmental precautions Keep out of waterways. Do not discharge product into natural waters without pre-treatment

or adequate dilution.

Methods and materials for containment and cleaning up

Methods for containment Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible products None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines No exposure limits noted for ingredient(s).

Exposure controls

Engineering Measures

Distribution, Workplace and Household Settings:
Ensure adequate ventilation

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction

Personal Protective Equipment

Eye Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Use appropriate eye protection

Hand Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Protective gloves

Skin and Body Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Wear suitable protective clothing

Respiratory Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
In case of insufficient ventilation wear suitable respiratory equipment

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C	liquid
Appearance	clear
Odor	Scented
Odor threshold	No information available

Property	Values	Note
pH value	8.67	
Melting/freezing point	No information available	
Boiling point/boiling range	100 °C / 212 °F	
Flash point	> 93.3 °C / > 200 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limit	No information available	
Lower Flammability Limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	1.00	
Water solubility	100%	
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	.
Decomposition temperature	No information available	.
Viscosity of Product	No information available <10 cps	

VOC Content (%) Products comply with US state and federal regulations for VOC content in consumer products.

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.

Stability Stable under normal conditions.

Hazardous polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

Conditions to Avoid None under normal processing.

Materials to avoid None in particular.

Hazardous Decomposition Products None under normal use.

11. TOXICOLOGICAL INFORMATION

Product Information
Information on likely routes of exposure

Inhalation No known effect.

Skin contact	No known effect.
Ingestion	No known effect.
Eye contact	No known effect.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity	No known effect.
Skin corrosion/irritation	No known effect.
Serious eye damage/eye irritation	No known effect.
Skin sensitization	No known effect.
Respiratory sensitization	No known effect.
Germ cell mutagenicity	No known effect.
Neurological Effects	No known effect.
Reproductive toxicity	No known effect.
Developmental toxicity	No known effect.
Teratogenicity	No known effect.
STOT - single exposure	No known effect.
STOT - repeated exposure	No known effect.
Target Organ Effects	No known effect.
Aspiration hazard	No known effect.
Carcinogenicity	No known effect.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
Mobility	No information available.
Other adverse effects	No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from Residues / Unused Products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.
California Hazardous Waste Codes (non-household setting)	331

14. TRANSPORT INFORMATION

DOT	Not applicable - diluted product is not intended to be shipped
IMDG	Not applicable - diluted product is not intended to be shipped
IATA	Not applicable - diluted product is not intended to be shipped

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

California Proposition 65
This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)
This product does not contain any substances regulated by state right-to-know regulations

International Inventories

United States
All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada
This product is in compliance with CEPA for import by P&G.

Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

HMIS Ratings

Health hazard	0
Flammability	1
Physical hazard	0

NFPA Ratings

Health hazard	0
Flammability	1
Instability	0

Issuing Date:	09-Jan-2015
Revision Date:	07-Apr-2015

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

MATERIAL SAFETY DATA SHEET

FILE NUMBER:
NAME OF PRODUCT: DAZZLING METALLICS ALUMINUM
MSDS DATE: 2-27-06

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	**DAZZLING METALLICS**
SYNONYMS:	
PRODUCT CODES:	**DAO70**
MANUFACTURER:	**DECOART, INC.**
ADDRESS:	**JUNCTION HWYS 150 & 27; STANFORD, KY 40484**
DOMESTIC EMERGENCY PHONE:	**CHEMTREC – (800) 424-9300**
OTHER CALLS:	**(606) 365-3193**
FAX PHONE:	**(606) 365-9739**
CHEMICAL NAME:	**MIXTURE**
CHEMICAL FAMILY:	**PAINT**
CHEMICAL FORMULA:	**MIXTURE**
PRODUCT USE:	**ART AND CRAFT PAINT FOR DECORATIVE PAINTING PROJECTS.**
PREPARED BY:	**D. KELLY**
MSDS PREPARATION DATE:	**1-17-06**

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: ALUMINUM

CAS NO. % 7429-90-5 **WT % 5-9%** **SARA 313 REPORTABLE: YES**
OSHA TLV-: 10MG/M3 **OSHA STEL: N.E.**

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

ROUTES OF ENTRY: **Inhalation: No; Skin: Yes; Eyes: Yes; Ingestion: Yes**

POTENTIAL HEALTH EFFECTS

EYES:	**May exhibit redness and primary irritation.**
SKIN:	**May cause dermatitis.**
INGESTION:	**Non-toxic**
INHALATION:	**None expected.**
ACUTE HEALTH HAZARDS:	**.**
CHRONIC HEALTH HAZARDS:	**Confined to persons suffering from pre-existing Wilson's disease**

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
PERSONS AFFECTED WITH PRE-EXISTING SKIN DISORDERS

CARCINOGENICITY
OSHA: NO: NTP:NO IARC:NO
OTHER: **None known.**

SECTION 4: FIRST AID MEASURES

EYES: Flush with clean water for 15 minutes occasionally lifting eyelids. Consult a physician, especially if irritation persists.

SKIN: Remove contaminated clothing, Launder before re use. Wash skin with mild soap and water: apply a good quality skin cream; if irritation persists, consult a physician.
INGESTION: Do not induce vomiting. Consult a physician.
INHALATION: Immediately remove person from contaminated area to fresh air. If unconscious, keep breathing passage open and have emergency assistance summoned immediately. If breathing is irregular or stopped, start resuscitation immediately. Administer oxygen if available, and have emergency medical assistance summoned immediately.
NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: No significant hazards known.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER:	**N/A**
(% BY VOLUME) LOWER:	**N/A**
FLASH POINT:	
F:	**N/A**
C:	**N/A**
METHOD USED:	**N/A**
AUTOIGNITION TEMPERATURE:	
F:	**N/A**
C:	**N/A**
NFPA HAZARD CLASSIFICATION	
HEALTH:	**0**
FLAMMABILITY:	**0**
REACTIVITY:	**0**
OTHER:	**N/A**
HMIS HAZARD CLASSIFICATION	
HEALTH:	**1**
FLAMMABILITY:	**1**
REACTIVITY:	**1**
PROTECTION:	**B**
EXTINGUISHING MEDIA:	**Class D Fire Extinguisher with low velocity nozzle**
SPECIAL FIRE FIGHTING PROCEDURES:	**DO NOT use fire extinguishers with halogenated hydrocarbons. DO NOT use water on burning aluminum**
UNUSUAL FIRE AND EXPLOSION HAZARDS:	**Burning plastic containers may emit hazardous fumes.**
HAZARDOUS DECOMPOSITION PRODUCTS:	**Usual products of combustion: CO_2, CO,**

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:	**Collect and dispose of in accordance with local, state and federal regulations.**

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE:	**Store in cool, dry place**
OTHER PRECAUTIONS:	**Good personal hygiene, wash hands before eating or smoking or using toilet facilities**

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:	
VENTILATION :	**Local exhaust recommended.**
RESPIRATORY PROTECTION:	**None generally required.**
EYE PROTECTION:	**Safety glasses.**
SKIN PROTECTION:	**None normally required.**
OTHER PROTECTIVE CLOTHING OR EQUIPMENT:	**Eye wash station should be available.**
WORK HYGIENIC PRACTICES:	**Wash hands prior to smoking or eating.**
EXPOSURE GUIDELINES:	**N/A**

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	**Colored Viscous Liquid.**
ODOR:	**Very low odor product. Not offensive.**
PHYSICAL STATE:	**Viscous liquid.**
pH AS SUPPLIED:	**7.0 – 9.0**
pH (Other):	**N/A**
BOILING POINT:	
F:	**100°F**
C:	**212°C**
MELTING POINT:	
F:	**32°F**
C:	**0°C**
FREEZING POINT:	
F:	**32°F**
C:	**0°C**
VAPOR PRESSURE (mmHg):	**17**
@	
F:	**77°F**
C:	**25°C**
VAPOR DENSITY (AIR = 1):	**0.18**
@	
F:	**122°F**
C:	**50°C**
SPECIFIC GRAVITY (H2O = 1):	**1.07 – 1.12**
@	
F:	**77°F**
C:	**25°C**
EVAPORATION RATE:	
BASIS (=1):	
SOLUBILITY IN WATER:	**Infinite.**
PERCENT SOLIDS BY WEIGHT:	**38-42%**
PERCENT VOLATILE:	
BY WT/	**58—62%**
BY VOL	**63--67%**
F:	**77°F**
C:	**25°C**
VOLATILE ORGANIC COMPOUNDS (VOC):	
WITHOUT WATER:	**.6-.7 LBS/GAL**
MOLECULAR WEIGHT:	**N/A**
VISCOSITY:	**approx 7000cps**
@	
F:	**77°F**
C:	**25°C**

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	**Stable**
CONDITIONS TO AVOID (STABILITY):	**Smoking, open flames**
INCOMPATIBILITY (MATERIAL TO AVOID):	**Acids, alkalies, halogenated hydrocarbons, oxidizing agents**
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:	**Usual products of combustion: CO_2, CO,**
HAZARDOUS POLYMERIZATION:	**Will not occur.**
CONDITIONS TO AVOID (POLYMERIZATION):	**None known.**

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: This product contains aluminum.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: This product contains aluminum, which is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right To Know Act.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Collect and dispose of in accordance with local, state and federal regulations.
RCRA HAZARD CLASS: This product contains no RCRA regulated materials.
SECTION 313 NOTES: This product contains Section 313 regulated materials.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
PROPER SHIPPING NAME: PAINT-NOI W/CONT O/T PLASTIC TUBES
HAZARD CLASS: NONREGULATED
ID NUMBER: N/A
PACKING GROUP: N/A
LABEL STATEMENT: N/A
WATER TRANSPORTATION
PROPER SHIPPING NAME: PAINT-NOI W/CONT O/T PLASTIC TUBES
HAZARD CLASS: NONREGULATED
ID NUMBER: N/A
PACKING GROUP: N/A
LABEL STATEMENTS: N/A
AIR TRANSPORTATION
PROPER SHIPPING NAME: PAINT-NOI W/CONT O/T PLASTIC TUBES
HAZARD CLASS: NONREGULATED
ID NUMBER: N/A
PACKING GROUP: N/A
LABEL STATEMENTS: N/A
OTHER AGENCIES: N/A

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS
TSCA (TOXIC SUBSTANCE CONTROL ACT): N/A
CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): N/A
SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): N/A
311/312 HAZARD CATEGORIES: N/A
313 REPORTABLE INGREDIENTS: N/A
STATE REGULATIONS: N/A
INTERNATIONAL REGULATIONS: N/A

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: N/A
PREPARATION INFORMATION: N/A

Meguiar's USA
17991 Mitchell South
Irvine, CA 92614
Tel: 949-752-8000
Fax: 949-752-5784

In case of **emergency or spill,** contact CHEMTREC at 800-424-9300

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name: G104 - Deep Crystal Economy Car Wash

Print date: 07/14/2007 **Reference Number:** 18-20G **Prepared Date:** 06/13/2007

Use of the Substance/Preparation

Recommended use: Car shampoo.

Company/Undertaking Identification

Meguiar's Holland
Laan der Verenigde Naties 40
33174 DA Dordrecht
Holland
Tel: 31-78-6210268

Meguiar's Hong Kong
Suite 6-7, 20/F Marina House
68 Hing Man Street
Shaukeiwan
Hong Kong
Tel: 852-2967-0202

Meguiar's France
3 rud de Verdun - Bât. D
78590 Noisy Le Roi
France
Tel: 33-1-30-80-02-16

Meguiar's UK Ltd.
3 Lamport Court
Heartlands
Daventry NN11 8UF
Tel: 0870 241 6696
Fax: 01327 300 116

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients

Components	CAS #	% Weight	OSHA PEL TWA	EINECS No.	Classification
Cocamido Propyl Betaine	61789-40-0	5-10	None	263-058-8	Xi; R36/38
Lauryl Ether Sulfate	68585-34-2	5-10	None	500-223-8	XI; R36/38

3. HAZARDS IDENTIFICATION

Most important hazards: No hazards resulting from material as supplied

4. FIRST AID MEASURES

General Advice: In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Inhalation: Prolonged or intentional exposure to high concentrations may cause respiratory track irritation. Move to fresh air.

Skin contact: Thoroughly wash exposed area with water.

Eye contact: Flush eyes with water as a precaution. If eye irritation persists, consult a specialist.

Ingestion: Rinse mouth. Drink 1 or 2 glasses of water. Consult a physician if necessary.

5. FIRE-FIGHTING MEASURES

NFPA:
Health: 1 **Flammability:** 0 **Reactivity:** 0

Suitable extinguishing media:
Use dry chemical, CO2, water spray or alcohol-resistant foam.

Specific hazards:
Not applicable

Special protective equipment for firefighters:
In the event of fire, wear self-contained breathing apparatus.

Extinguishing media which must not be used for safety reasons:
Not applicable

Specific methods:
Not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Ensure adequate ventilation.

Environmental precautions: Local authorities should be advised if significant spillages cannot be contained. Prevent further leakage or spillage.

Methods for cleaning up: Wipe up with absorbent material (e.g. cloth, fleece).

7. HANDLING AND STORAGE

Handling:

Technical measures/precautions:
Use only in area well ventilated area

Safe handling advice:
None under normal processing

Storage:

Store at room temperature in the original container.

Incompatible products:
No materials to be specially mentioned

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure: Ensure adequate ventilation.

Respiratory protection: No special precautions required.

Skin and body protection: No special precautions required.

Eye protection: Avoid contact with eyes. If splashes are likely to occur, wear:. Goggles.

Hand protection: Preventative skin protection:. Rubber gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Appearance: Liquid
Physical state: Liquid
Color: Blue green
Odor: Sweet

Important Health Safety and Environmental Information

pH @70° F: 6.5
Flash point: Does not flash **Method:** PMCC-ASTM D93-90
Boiling point/range: 212 (°F), 100 (°C)
Water Solubility: Completely soluble
Evaporation rate: Water
VOC content: N/A
Specific gravity: 1.00

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Polymerization: None under normal processing.

Conditions to avoid: Extremes of temperature and direct sunlight

Materials to avoid: Not applicable

Hazardous decomposition products: None under normal use

11. TOXICOLOGICAL INFORMATION

Component Information

Additional Information: The product is not subject to classification according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version. When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Product Information

Aquatic toxicity: No information available

Component Information

Ecotoxicity effects: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

Contaminated packaging:
Disposal must be made according to local and federal regulations.

Ewc waste disposal no:
Not applicable

Further information
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific

14. TRANSPORT INFORMATION

General Transportation Statement This product does not require classification by DOT, IATA, ICAO or IMDG.

Other information:
The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements and mode-specific or quantity-specific shipping requirements.

15. REGULATORY INFORMATION

CERCLA/SARA 313 Emission reporting
None

16. OTHER INFORMATION

Prepared by: Health & Safety
Literary reference: None

Disclaimer: To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist

End of Safety Data Sheet

Material Safety Data Sheet

Complies with OSHA's Hazard Communication Standard 29 CFR 1910.1200

NFPA Fire: 4
Health: 1
Reactivity: 1

SECTION I - IDENTITY AND MANUFACTURER'S INFORMATION

Manufacturer's Name, Address **Franklin Cleaning Technology - PO Box 214 Great Bend KS 67530**

Product Name: Deep Luster Stainless Steel Cleaner — Product Number: F4230
Chemical Family: Pressurized emulsion with mineral oil — Package Size: 18 oz.

EPA Reg. No: n/a — Emergency Telephone No. 620-792-1711
Preparer: Bill Dayton — Date: 05/06/02 — Signature:

SECTION II - HAZARDOUS INGREDIENTS IDENTITY INFORMATION

Hazardous Components	CAS#	OSHA TWA	ACGIH TWA	Percent
Mineral Oil	8042-47-5	NE	NE	<25
Mineral Spirits	64742-48-9	500 ppm	350 ppm	<10
Isobutane	75-28-5	1000 ppm	800 ppm	<10
Propane	74-98-6	1000 ppm	1000 ppm	<5
*Water	7732-18-5			

SECTION III - PHYSICAL AND CHEMICAL CHARACTERISTICS

No Physical Hazards		Flammable Gas		Flammable Liquid/Solid		Water Reactive	
Combustible		Flammable Aerosol		Pyrophoric		Oxidizer	
Compressed Gas	x	Explosive		Unstable - Reactive:		Organic Peroxide	

Boiling Point, °F: Compressed Gas — Solubility in Water: Dispersible — Evaporation Rate: >1
Vapor Pressure: 40 psig — Specific Gravity (water =1): 0.880 — pH: 10/5
Vapor Density: Unknown — %Volatiles by Weight: .76

Appearance and Odor: Aerosol spray, characteristic spray

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method): Conc. >200 F — Flammable Limits: LEL: Unknown — UEL: Unknown
Extinguishing Media: Co2, Water Foam, Dry Chemical, ABC Fire Extinguisher

Special Fire Fighting Procedures: Keep aerosols cooled to prevent bursting

Unusual Fire and Explosion Hazards: Contents under pressure: Temperatures in excess of 120 F may cause bursting. Contents of cans contribute combustible materials in the event of a fire.

SECTION V - REACTIVITY DATA

Stability: Unstable [ ] Stable [x] — Conditions to Avoid: N/A

Incompatability: (Materials to Avoid): Do not mix with any other material.

Hazardous Decomposition Products or Byproducts: With extreme heat or fire, releases typical hydrocarbon decomposition by-products.

Hazardous Polymerization: May Occur: [ ] Will Not Occur: [x]
Conditions to Avoid: N/A

Comments:
* Added to comply with the Pennsylvania Worker Right to Know Act & the New Jersey Worker & Community Right to Know Act.

SECTION VI - HEALTH HAZARD DATA

Route (s) of entry: Inhalation [x] Skin: [x] Eye: [x] Ingestion: [x]

No Health Hazard		Reproductive toxin		Sensitizer	
Toxic		Irritant		Carcinogen	
Highly Toxic		Corrosive		See Target Organs	x

TARGET ORGANS

Lungs	x	Eyes	x	Blood		Teratogen		Mucous Membranes	x
Heart		Skin	x	Liver		Central Nervous System	x	Autonomic Nervous System	
Kidney		Prostrate		Mutagen		Cardiovascular System		Respiratory System	x

Carcinogenicity: None Known [x] NTP: [ ] IARC: [ ] OSHA Regulated [ ]

Medical Conditions Generally Aggravated by Exposure:
None known

Signs and Symptoms of Exposure:
May cause eye or skin irritation, dizziness, nausea, anesthetic effects. Aspiration may product pulmonary complications.

Emergency and First Aid Procedures:
If sprayed in eyes or on skin, rinse with water for 15 minutes. Contact a physician if irritation persists. If swallowed, DO NOT induce vomiting (aspiration hazard). Call a physician or Poison Control Center immediately. If inhaled, remove to fresh air.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:
Mop up, rinse with detergent and water.

Waste Disposal Method:
Do not puncture or incinerate. For single units, wrap in newspaper and dispose in trash container. Dispose of multiple units in accordance with Local, State and Federal Regulations.

Potential EPA Hazardous Waste Code(s): D001

Steps to be taken in handling and storage:
NFPA "Level 2 Aerosols". Store at 40 - 90F. Read and follow label use directions. Keep out of reach of children.

SECTION VIII - CONTROL MEASURES

Respiratory Protection(Specify Type):
Type for organic mist recommended

Ventilation: Local Exhaust: Special:
Mechanical: Optional

Protective Gloves: Recommended Eye Protection: Recommended

Other Protective Clothing and Equipment:
None Required

SECTION IX - SHIPPING INFORMATION

DOT Proper Shipping Name and Number:
Consumer Commodity, ORM-D

NE = Not Established
N/A = Not Applicable

Material Safety Data Sheet

Revision Date *06-Jun-2013*

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product code DL1521 05
Product name DEFEND
Recommended Use Sealant

Supplier Drummond, A Lawson Brand
Lawson Products, Inc.
8770 W.Bryn Mawr Ave.- Suite 900
Chicago, IL 60631
1-866-529-7664

Emergency telephone number (888) 426-4851

2. HAZARDS IDENTIFICATION

Emergency Overview
Mild eye irritation.

Aggravated Medical Conditions
Pre-existing skin conditions may be aggravated by exposure to this product.

Principal Routes of Exposure
Eyes. Ingestion.

Potential health effects

Eyes Moderately irritating to the eyes.

Skin Moderate irritation.

Inhalation No information available.

Ingestion May cause the following effects. Stomach distress. Nausea. Vomiting. Diarrhea.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Diethylene glycol monomethyl ether	111-77-3	1-5
Diethylene glycol-monoethyl-ether	111-90-0	1-5
Propylene Glycol Dibenzoate	19224-26-1	1-5

4. FIRST AID MEASURES

Eye contact Flood with warm water for at least 15 minutes. Remove contact lenses. Blink as much as possible and continue flooding for 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin contact Remove contaminated clothing. Flush area with water for 15 minutes.

Ingestion Do Not induce vomiting. Give victim a glass of water or milk. Seek medical attention.

Inhalation No specific treatment is necessary since this material is not likely to be hazardous by inhalation.

5. FIRE FIGHTING MEASURES

Flash point °C Not Applicable
Flash point °F Not Applicable
Method Not Applicable

Autoignition temperature °C No data available
Autoignition temperature °F No data available

Flammability Limits (% in Air)
Upper No data available
Lower No data available

Suitable extinguishing media
Water spray. Dry chemical powder. Carbon dioxide (CO2). Alcohol foam.

Special protective equipment for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Sensitivity to shock
No information available.

Sensitivity to static discharge
No information available.

6. ACCIDENTAL RELEASE MEASURES

Methods for cleaning up
Evacuate area of unprotected and unnecessary personnel. Personnel should wear appropriate protective equipment. Follow all precautions for handling. Please refer to appropriate sections of MSDS for additional information. Shut off source of leak if safe to do so. Ventilate area to maintain exposure below permissible exposure limits. Do not allow product to reach sewage system, soil, surface or ground water, or any water course. Notify proper authorities if entry occurs. Soak up with noncombustible inert absorbent material. Flush area with water. Use caution as spill may create a slip hazard.

Clean-up methods - large spill
Dike or dam large spills.

7. HANDLING AND STORAGE

Handling
Use only according to label directions. Avoid contact with skin and eyes. Do not swallow. Handle carefully to avoid damaging . Keep out of reach of children. Remove and wash contaminated clothing before re-use. Handle empty containers as if they were full.

Storage
Keep in properly labelled containers. Rotate stock regularly. Keep container tightly closed. Store at temperatures between 40 degrees F and 120 degrees F. Keep away from direct sunlight. Do not freeze. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	OSHA PEL (TWA)	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Propylene Glycol Dibenzoate	-	-	-	-
Diethylene glycol-monoethyl-ether	-	-	-	-
Diethylene glycol monomethyl ether	-	-	-	-

Ventilation and Environmental Controls
None required. Normal ventilation is adequate.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands after handling the product.

Respiratory protection
None necessary under normal conditions.

Hand Protection
The following gloves are recommended for prolonged or repeated contact: . Rubber gloves.

Eye protection
None necessary under normal use conditions.

Skin and body protection
None necessary under normal conditions

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Liquid
Color	Opaque White
Odor	Faint
Odor Threshold	Not Applicable
pH	8.5
Specific Gravity	1.027
Vapor pressure	Not Applicable
Vapor density	Not Applicable
Evaporation Rate	Not Applicable
Water solubility	Moderately soluble
VOC Content	4.20%
Partition Coefficient (n-octanol/water)	Not Applicable
Boiling point/range °C	Not Applicable
Boiling point/range °F	Not Applicable
Melting point/range °C	Not Applicable
Melting point/range °F	Not Applicable
Flash point °C	Not Applicable
Flash point °F	Not Applicable

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to avoid
Do not store in temperatures above 120 degrees F. Do not allow to freeze. Avoid mixing with any other cleaning product. Mix only with water.

Incompatability
Incompatible with oxidizing agents.

Hazardous Decomposition Products
Carbon oxides. Toxic fumes.

Polymerization
Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Component Information

Chemical Name	LD50 (oral,rat)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat)
Propylene Glycol Dibenzoate 19224-26-1	-	-	-
Diethylene glycol-monoethyl-ether 111-90-0	1920 mg/kg	-	5240 mg/m^3
Diethylene glycol monomethyl ether 111-77-3	-	-	-

Synergistic Products None known

Potential health effects

Sensitization None known

Chronic toxicity See Section 2 .

Mutagenic effects None known

Teratogenic effects None known

Reproductive toxicity None known

Target Organ Effects See Section 2

Carcinogenic effects See table below

Chemical Name	ACGIH OEL - Carcinogens	IARC	NTP - Known Carcinogens	NTP - Suspected Human Carcinogens	OSHA RTK Carcinogens
Propylene Glycol Dibenzoate	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Diethylene glycol-monoethyl-ether	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Diethylene glycol monomethyl ether	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

Diethylene glycol monomethyl ether

Microtox Data

Pseudomonas putida EC50>10000 mg/L (17 h)

Water Flea Data

Daphnia magna EC50>500 mg/L (48 h)

Diethylene glycol-monoethyl-ether

Water Flea Data

Daphnia magna EC503940 - 4670 mg/L (48 h)

13. DISPOSAL CONSIDERATIONS

Disposal Information

Dispose in accordance with federal, state, and local regulations.

Waste from residues / unused products

Do not reuse container. Rinse empty container thoroughly with water before discarding. Please recycle empty container whenever possible.

14. TRANSPORTATION INFORMATION

DOT

Not Regulated

TDG

Not Regulated

15. REGULATORY INFORMATION

Chemical Name	US EPA SARA 313 Emission Reporting
Diethylene glycol-monoethyl-ether	Listed
Diethylene glycol monomethyl ether	Listed

State Regulations

Chemical Name	New Jersey - RTK	Pennsylvania - RTK	California Prop. 65
Propylene Glycol Dibenzoate	Not Listed	Not Listed	Not Listed
Diethylene glycol-monoethyl-ether	Not Listed	Not Listed	Not Listed
Diethylene glycol monomethyl ether	Not Listed	Listed	Not Listed

International Inventories

Chemical Name	EINECS	DSL	NDSL	TSCA
Propylene Glycol Dibenzoate	X	-	X	X
Diethylene glycol-monoethyl-ether	X	X	-	X
Diethylene glycol monomethyl ether	X	X	-	X

CPR

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all of the information required by the Controlled Product Regulations

16. OTHER INFORMATION

NFPA

Health - 1
Flammability - 0
Reactivity - 0

HMIS

Health - 1
Flammability - 0
Physical Hazard - 0

Prepared By V. Shargorodsky, Regulatory Affairs Engineer

The information accumulated herein is believed to be accurate, but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

MATERIAL SAFETY DATA SHEET

JohnsonDiversey
Clean is just the beginning

DEFOAMER

HMIS		NFPA	Personal protective equipment
Health	1	1	None / Aucune / Ninguno
Fire Hazard	0	0	
Reactivity	0	0	

Version Number: 2 *Preparation date: 2008-09-03*

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: DEFOAMER

MSDS #: MS0300154
Product Code: 5002620
Recommended use: Carpet Care. This product is intended to be diluted prior to use.

Manufacturer, importer, supplier:

US Headquarters
JohnsonDiversey, Inc.
8310 16th St.
Sturtevant, Wisconsin 53177-1964
Phone: 1-888-352-2249
MSDS Internet Address:
www.johnsondiversey.com

Canadian Headquarters
JohnsonDiversey - Canada, Inc.
2401 Bristol Circle
Oakville, Ontario L6H 6P1
Phone: 1-800-668-3131

Emergency telephone number: 1-800-851-7145 (Prosar); 1-651-917-6133 (Int'l Prosar); 01-800-710-3400 (México)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
CAUTION. MAY BE MILDLY IRRITATING TO EYES.

Principle routes of exposure: Eye contact. Skin contact. Inhalation.
Eye contact: May be mildly irritating to eyes.
Skin contact: None known.
Inhalation: None known.
Ingestion: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients

Ingredient(s)	CAS #	Weight %	LD50 Oral - Rat (mg/kg)	LD50 Dermal - Rabbit	LC50 Inhalation - Rat
Silicones	63148-62-9	1 - 5%	17000	>2 g/kg	Not available

4. FIRST AID MEASURES

Eye contact: Flush immediately with plenty of water. If irritation persists, get medical attention.
Skin contact: Flush immediately with plenty of water. If irritation develops, get medical attention.
Inhalation: No specific first aid measures are required.
Ingestion: If swallowed, give a cupful of water or milk.
Aggravated Medical Conditions: None known.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: The product is not flammable. Extinguish fire using agent suitable for surrounding fire.
Specific hazards: Not applicable
Unusual hazards: None known
Specific methods: No special methods required

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
Extinguishing media which must not be used for safety reasons: No information available

6. ACCIDENTAL RELEASE MEASURES

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment

Environmental precautions and clean-up methods: Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling:
Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.

Storage:
Protect from freezing. Keep tightly closed in a dry, cool and well-ventilated place. KEEP OUT OF REACH OF CHILDREN.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
No special ventilation requirements. General room ventilation is adequate.

Personal Protective Equipment

Eye protection:	No special requirements under normal use conditions.
Hand protection:	No special requirements under normal use conditions
Skin and body protection:	No special requirements under normal use conditions.
Respiratory protection:	No special requirements under normal use conditions.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid	**Bulk density:**	No information available
pH:	8.25	**Dilution pH:**	8.25
Appearance:	Liquid	**Vapor density:**	No information available
Color:	Milky Cream	**Evaporation Rate**	No information available
Odor:	Bland	**Boiling point/range:**	Not determined
Specific gravity:	1.003	**Melting point/range:**	Not determined
Density:	8.37 lbs/gal	**Decomposition temperature:**	Not determined
VOC:	0% *	**Autoignition temperature:**	No information available
Flash point:	>200°F >93.3°C	**Partition coefficient (n-octanol/water):**	No information available
Solubility:	completely soluble	**Solubility in other solvents:**	No information available
Viscosity:	No information available	**Elemental Phosphorus:**	0 %P

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Stability: The product is stable

Polymerization: Hazardous polymerization does not occur

Hazardous decomposition products: None reasonably foreseeable.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Oral LD50 estimated to be greater than 5000 mg/kg

Component Information: See Section 3

Chronic toxicity: None known

Specific effects

Carcinogenic effects:	None known
Mutagenic effects:	None known
Reproductive toxicity:	None known
Target organ effects:	None known

12. ECOLOGICAL INFORMATION

Environmental Information: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Dispose of according to all federal, state and local applicable regulations

14. TRANSPORT INFORMATION

DOT/TDG: Please refer to the Bill of Lading/receiving documents for up to date shipping information

15. REGULATORY INFORMATION

International Inventories
All components of this product are listed on the following inventories: U.S.A. (TSCA), Canada (DSL/NDSL).

U.S. Regulations
California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65

STATE RIGHT TO KNOW

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Silicones	63148-62-9	-	-	-	-
Water	7732-18-5	-	-	-	-

CERCLA/ SARA
None

SARA 311/312 Hazard Categories

Immediate:	-
Delayed:	-
Fire:	-
Reactivity:	-
Sudden Release of Pressure:	-

Canada
WHMIS hazard class: Non-controlled.

16. OTHER INFORMATION

Reason for revision:	Not applicable
Prepared by:	NAPRAC
Additional advice:	None

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Safety Data Sheet
Spartan Chemical Company, Inc.

Revision Date: 28-Jul-2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name: **DEFOAMER**
Product Number: 3024
Recommended Use: Defoamer
Uses Advised Against: For Industrial and Institutional Use Only

Manufacturer/Supplier:
Spartan Chemical Company, Inc.
1110 Spartan Drive
Maumee, Ohio 43537 USA
800-537-8990 (Business hours)
www.spartanchemical.com

24 Hour Emergency Phone Numbers:
Medical Emergency/Information: 888-314-6171
Transportation/Spill/Leak: CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION

GHS Classification
Not Classified Not dangerous according to the Globally Harmonized System (GHS)

GHS Label Elements
Signal Word: **No signal word**
Symbols:
Hazard Statements: No hazard statements
Precautionary Statements:
Prevention: Not Applicable
Response:
-Specific Treatment: See Safety Data Sheet Section 4: "FIRST AID MEASURES" for additional information.

Storage: Not Applicable
Disposal: Not Applicable

Hazards Not Otherwise Classified: Not Applicable

Other Information:
- May be harmful if swallowed.
- May cause eye irritation.
- May cause skin irritation.
- Keep out of reach of children.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
water	7732-18-5	60-100
organosiloxane	PROPRIETARY	1-5

Specific chemical identity and/or exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

-Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

-Skin Contact: Wash with soap and water. If skin irritation occurs: Get medical attention.

-Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison control center or physician if you feel unwell.

-Ingestion: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if you feel unwell.

Note to Physicians: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Product does not support combustion, Use extinguishing agent suitable for type of surrounding fire

Specific Hazards Arising from the Chemical: Dried product is capable of burning. Combustion products are toxic.

Hazardous Combustion Products: May include Carbon monoxide Carbon dioxide and other toxic gases or vapors.

Protective Equipment and Precautions for Firefighters: Wear MSHA/NIOSH approved self-contained breathing apparatus (SCBA) and full protective gear. Cool fire-exposed containers with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Environmental Precautions: Do not rinse spill onto the ground, into storm sewers or bodies of water.

Methods for Clean-Up: Prevent further leakage or spillage if safe to do so. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

7. HANDLING AND STORAGE

Advice on Safe Handling: Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

Storage Conditions: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: None established.

Engineering Controls: Provide good general ventilation.
If work practices generate dust, fumes, gas, vapors or mists which expose workers to chemicals above the occupational exposure limits, local exhaust ventilation or other engineering controls should be considered.

Personal Protective Equipment

Eye/Face Protection: Not required with expected use.

Skin and Body Protection: Not required with expected use.

Respiratory Protection: Not required with expected use.
If occupational exposure limits are exceeded or respiratory irritation occurs, use of a NIOSH/MSHA approved respirator suitable for the use-conditions and chemicals in Section 3 should be considered.

General Hygiene Considerations: Wash hands and any exposed skin thoroughly after handling.
See 29 CFR 1910.132-138 for further guidance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical State:	Liquid
Color:	White emulsion
Odor:	Bland
pH:	9.0-10.0
Melting Point / Freezing Point:	No information available.
Boiling Point / Boiling Range:	100 °C / 212 °F
Flash Point:	> 100 °C / > 212 °F ASTM D56
Evaporation Rate:	< 1 (Butyl acetate = 1)
Flammability (solid, gas)	No information available.
Upper Flammability Limit:	No information available.
Lower Flammability Limit:	No information available.
Vapor Pressure:	No information available.
Vapor Density:	No information available.
Specific Gravity:	1.00
Solubility(ies):	Miscible in water
Partition Coefficient:	No information available.
Autoignition Temperature:	No information available.
Decomposition Temperature:	No information available.
Viscosity:	No information available.

10. STABILITY AND REACTIVITY

Reactivity: This material is considered to be non-reactive under normal conditions of use.
Chemical Stability: Stable under normal conditions.
Possibility of Hazardous Reactions: Not expected to occur with normal handling and storage.
Conditions to Avoid: Extremes of temperature and direct sunlight.
Incompatible Materials: Strong oxidizing agents. Strong acids.
Hazardous Decomposition Products: May include carbon monoxide, carbon dioxide (CO2) and other toxic gases or vapors.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eyes, Skin, Ingestion, Inhalation.
Symptoms of Exposure:
-Eye Contact: Pain and redness.
-Skin Contact: Drying of the skin.
-Inhalation: Nasal discomfort and coughing.
-Ingestion: Pain, nausea, vomiting and diarrhea.
Immediate, Delayed, Chronic Effects
Product Information: Data not available or insufficient for classification.

Numerical Measures of Toxicity
The following acute toxicity estimates (ATE) are calculated based on the GHS document.
Data not available or insufficient for classification.

Component Acute Toxicity Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
water 7732-18-5	> 90 mL/kg (Rat)	Not Available	Not Available

Carcinogenicity: No components present at 0.1% or greater are listed as to being carcinogens by ACGIH, IARC, NTP or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Persistence and Degradability: No information available.

Bioaccumulation: No information available.

Other Adverse Effects: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal of Wastes: Dispose of in accordance with federal, state and local regulations.
Contaminated Packaging: Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT: Not Regulated
Proper Shipping Name: Non-Hazardous Product
Special Provisions: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Check with a trained hazardous materials transportation expert for information specific to your situation.

IMDG: Not Regulated
Proper Shipping Name: Non-Hazardous Product

15. REGULATORY INFORMATION

TSCA Status: (Toxic Substance Control Act Section 8(b) Inventory)
All chemical substances in this product are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

SARA 313
This product does not contain listed substances above the "de minimus" level

SARA 311/312 Hazard Categories

Acute Health Hazard:	Yes
Chronic Health Hazard:	No
Fire Hazard:	No
Sudden release of pressure hazard:	No
Reactive Hazard:	No

California Proposition 65
This product is not subject to warning requirements under California Proposition 65.

16. OTHER INFORMATION

NFPA	**Health Hazards:** 1	**Flammability:** 0	**Instability:** 0	**Special:** N/A
HMIS	**Health Hazards:** 1	**Flammability:** 0	**Physical Hazards:** 0	

Revision Date: 28-Jul-2015
Reasons for Revision: Section 14 and 15

Disclaimer:
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

HILLYARD
The Cleaning Resource®

SAFETY DATA SHEET

1. Identification

Product identifier **DEFOAMER II**

Other means of identification

SDS number 535N-78A

Product code HIL00183

Recommended use Defoamer

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Manufacturer

Company name HILLYARD INDUSTRIES

Address 302 North Fourth St.
St. Joseph, MO 64501

Contact person Regulatory Affairs

Telephone number (816) 233-1321 (Ext. 8285)

Fax (816) 383-8485

E-mail regulatoryaffairs@hillyard.com

Emergency telephone # (800) 424-9300
(Only in the event of chemical emergency involving a spill, leak, fire, exposure, or accident involving chemicals.)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law in compliance with applicable federal, state and local requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
1,2-Benzisothiazolin-3-one		2634-33-5	< 0.1
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	Chemical safety goggles when working with concentrate.
Skin protection	
Hand protection	Use protective gloves when dealing with the concentrate.

Other	None normally required. If unable to avoid prolonged or repeated contact with skin, wear impervious clothing.
Respiratory protection	Not normally required with adequate ventilation.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	White, opaque, viscous liquid
Physical state	Liquid.
Form	Liquid.
Color	Not available.
Odor	Non-objectionable
Odor threshold	Not available
pH	6 - 9 Concentrate
Melting point/freezing point	Not applicable / Not available
Initial boiling point and boiling range	206 °F (96.67 °C)
Flash point	> 200.0 °F (> 93.3 °C) Tag Closed Cup
Evaporation rate	< 1 Ethyl ether = 1
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	17.53 mm Hg
Vapor density	0.622 Air =1
Relative density	0.999 at 77°F
Solubility(ies)	
Solubility (water)	100 % Complete
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Density	8.32 lb/gal
Percent volatile	> 98 %
VOC (Weight %)	Not available

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.

Skin contact No adverse effects due to skin contact are expected.

Eye contact Direct contact with eyes may cause temporary irritation.

Ingestion Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Not available.

Product	Species	Test Results
DEFOAMER II		
Acute		
Dermal		
LD50	Rabbit	11439.6123 ml/kg estimated
Oral		
LD50	Guinea pig	11964.6494 g/kg estimated
	Rat	10061.1826 ml/kg estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Prolonged inhalation may be harmful.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product		Species	Test Results
DEFOAMER II			
Aquatic			
Fish	LC50	Fish	15986.6523 mg/l, 96 hours estimated
Components		**Species**	**Test Results**
1,2-Benzisothiazolin-3-one (CAS 2634-33-5)			
Aquatic			
Fish	LC50	Bleak (Alburnus alburnus)	8 - 13 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not contaminate ponds, waterways or ditches with chemical or used container. Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Waste from normal product use may be sewered to a public owned treatment works (POTW) in compliance with applicable Federal, State, and local pretreatment requirements.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Triple rinse (or equivalent). Then offer clean, dry container for recycling or reconditioning.

14. Transport information

DOT

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List or Exempt.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 03-05-2015

Version # 01

HMIS® ratings Health: 0
Flammability: 0
Physical hazard: 0

Disclaimer No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products.

Material Safety Data Sheet

For Coatings, Resins and Related Materials

•NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals

•24 Hour Emergency: 1-800-123-4567 CHEMTREC: 1-800-424-9300
•National Response in Canada CANUTEC: 613-996-6666
•Outside U.S. and Canada Chemtrec: 202-483-7616

Section 1 - Chemical Product / Company Information

Product Name:	AEROSOL DEFTHANE GLOSS	Revision Date:	12/13/2005
Identification Number:	23X37	Print Date:	04/21/2006
Product Use/Class:	POLYURETHANE		
Manufacturer:	Deft, Inc. (CAGE CODE 33461) 17451 Von Karman Ave Irvine, Ca. 92614	Information Phone: Emergency Phone:	(949) 474-0400 (800) 424-9300

Section 2 - Hazards Identification

*** Emergency Overview ***: Effects the central nervous system. Flammable liquid and vapors. Amber liquid in aerosol container, with solvent odor. Harmful by inhalation, in contact with skin, and if swallowed. Contact with eyes or skin causes irritation.

Effects Of Overexposure - Eye Contact: Exposure to liquid, aerosol, or vapors may cause irritation, tearing, redness, and swelling accompanied by a stinging sensation. Direct eye contact may cause irritation. Damage may occur to the cornea or lens of the eye.

Effects Of Overexposure - Skin Contact: Prolonged and repeated skin contact may cause dermatitis, drying, and defatting due to the solvent properties. Direct skin contact may cause irritation. Symptoms may include swelling, redness, and rash.

Effects Of Overexposure - Inhalation: Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes) & acute nervous system depression characterized by the following progressive steps: headache, dizziness, staggering gait, confusion, drowsiness, unconsciousness, coma, or possible death. Inhalation may cause headaches, difficult breathing, and loss of consciousness. The lungs may permanently scar when repeated exposures occur. Respiratory depression, failure, or death may result from overexposure. Exposure may cause coughing.

Effects Of Overexposure - Ingestion: Ingestion may cause a burning sensation in the mouth and esophagus. Vomiting may cause aspiration of the solvent, resulting in chemical pneumonitis. May result in possible corrosive action in the mouth, stomach tissue and digestive tract. Ingestion may cause gastrointestinal irritation, abdominal pain, nausea, vomiting and diarrhea. Harmful or fatal if swallowed. Ingestion causes damage to the central nervous system. It may include, acute nervous system depression, which is characterized by the following progressive steps: headache, dizziness, staggering gait, confusion, drowsiness, unconsciousness, or coma. Harmful: may cause lung damage if swallowed.

Effects Of Overexposure - Chronic Hazards: Kidney damage may occur form inhalation, skin absorption, or ingestion. A component has been shown to cause blood abnormalities, lower activity of certain immune system cells, effects the hearing, mild reversible liver effects, central nervous damage, and cataracts in laboratory animals. Contains components listed as a Carcinogen: NTP? : No, IARC Monographs? : Yes, OSHA Regulated? : No. Prolonged contact will cause drying and cracking of the skin, due to defatting action. Skin sensitization, asthma or other allergic responses may develop. Symptoms of overexposure may occur for up to 48 hours after the original exposure occurred.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 3 - Composition / Information On Ingredients

Component	CAS Number	Weight % Reporting Ranges
ISOBUTANE/PROPANE	68476-86-8	15-40
ACETONE	67-64-1	10-30
MINERAL SPIRITS	8052-41-3	10-30
METHYL n-PROPYL KETONE	107-87-9	7-13
VM & P NAPHTHA	64742-89-8	5-10
AROMATIC HYDROCARBON	64742-95-6	1-5
PAINT DRIER	22464-99-9	0.1-1.0
ETHYL BENZENE	100-41-4	0.1-1.0
ANTI-SKIN AGENT	96-29-7	0.0-0.1
COBALT CARBOXYLATE	TRADE SECRET	0.0-0.1
COBALT SALT	TRADE SECRET	0.0-0.1

THE ABOVE LISTED PRODUCTS ARE ON THE TSCA INVENTORY LIST. ALSO ANY UNLISTED INGREDIENTS.

Section 4 - First Aid Measures

First Aid - Eye Contact: If material gets into eyes, flush with water immediately for 20 minutes. Hold eyelids open to rinse out the entire eye. Consult a physician. If eyes are irritated from airborne exposure, move to fresh air.
First Aid - Skin Contact: In case of contact, immediately flush skin with plenty of water and wash affected areas thoroughly with soap and water. Remove contaminated clothing and shoes. If rash or irritation develops, consult a physician.
First Aid - Inhalation: Move to fresh air in case of accidental inhalation of vapors. In the case of inhalation of aerosol/mist call 911 immediately. Give oxygen or artificial respiration if needed. Asthmatic type symptoms may develop and maybe immediate or delayed by several hours.
First Aid - Ingestion: Do not induce vomiting. Do not give anything to an unconscious person. Obtain medical help.

Section 5 - Fire Fighting Measures

Flash Point (°F): Below 20 TCC LOWER EXPLOSIVE LIMIT (%): 0.9UPPER EXPLOSIVE LIMIT (%): 12.
Extinguishing Media: Alcohol Foam, Carbon Dioxide, Dry Chemical, Foam, Water Fog, Water Spray, Dry Sand
Unusual Fire And Explosion Hazards: Remove all sources of ignition. Toxic gases may form when product burns. Fire or intense heat may cause violent rupture of packages. Do not use a cutting or welding torch near or on a drum of product, because vapors can ignite explosively, even if the drum is empty and contains only product residue. Fire may ensue when product comes in contact with strong oxidizers. Keep containers tightly closed. Isolate from heat, sparks, electrical equipment and open flame. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to a distant ignition source and flashback. Application to hot surfaces requires special precautions.
Special Firefighting Procedures: In the event of fire, wear self-contained breathing apparatus. Flammable. Cool fire-exposed containers using water spray. Firefighters should wear full protective clothing.

Section 6 – Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Evacuate all non-essential personnel. Remove all sources of ignition. Ventilate area. Contain and remove spilled material with inert absorbent and non-sparking tools. Dike to prevent entering any sewer or waterway. Use personal protective equipment as necessary.

Section 7 - Handling and Storage

Handling: Handle in accordance with good industrial hygiene and safety practice. Do not drill, solder, pressurize, grind, cut, weld, or braze empty container. Do not expose empty container to static electricity, heat, flame, sparks, or any source of ignition. Keep away from heat and sources of ignition. Protect container against physical damage. Use only in ventilated areas. Always use grounding leads when transferring from one container to another.
Storage: Avoid storing near high temperatures, fire, open flames, and spark sources. Do not store with oxidizers. Store in buildings designed to comply with OSHA 1910.106. Keep containers upright to prevent leakage and tightly closed in a dry, cool and well-ventilated place.

Section 8 - Exposure Controls / Personal Protection

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
ISOBUTANE/PROPANE	1000 ppm	N.E.	1000 ppm	N.E.
ACETONE	500 ppm	750 ppm	750 ppm	1000 ppm
MINERAL SPIRITS	100 ppm	N.E.	500 ppm	N.E.
METHYL n-PROPYL KETONE	200 ppm	250 ppm	200 ppm	250 ppm
VM & P NAPHTHA	300 ppm	N.E.	300 ppm	400 ppm
AROMATIC HYDROCARBON	100 ppm	N.E.	N.E.	N.E.
PAINT DRIER	N.E.	N.E.	N.E.	N.E.
ETHYL BENZENE	100 ppm	125 ppm	100 ppm	125 ppm
ANTI-SKIN AGENT	N.E.	N.E.	N.E.	N.E.
COBALT CARBOXYLATE	N.E.	N.E.	N.E.	N.E.
COBALT SALT	0.02 mg/m3	N.E.	N.E.	N.E.

Notes

METHYL n-PROPYL KETONE CAS# 107-87-9 has been shown to cause harm to the fetus in laboratory animals. It only caused harm at levels of overexposure that would also harm the pregnant animal. The relevance to humans is unknown. It also has been shown to cause mild, reversible kidney effects and mild, reversible liver effects in laboratory animals.
PAINT DRIER CAS# 22464-99-9 - OSHA 29 CFR 1910.1000, Table Z-1 lists Zirconium Compounds (as Zr). ACGIH TWA/TLV 5 mg/m3; TLV/STEL 10 mg/m3
ETHYL BENZENE CAS# 100-41-4 - IARC Group 2B possibly carcinogenic to humans.
COBALT CARBOXLATE - New Jersey Trade Secret Registry Number 56705700001-5697P. Contains Cobalt compounds. Cobalt compounds are listed by IARC as a 2B possibly carcinogenic to humans. ACGIH TLV-TWA is 0.02 mg/m3 based on content of Cobalt.
COBALT SALT - Trade Secret - New Jersey Trade Secret Registry Number 5670570001-5015P. IARC Group 2B possibly carcinogenic to humans. ACGIH TLV-TWA is for exposure to cobalt and inorganic compounds.

Engineering Controls: Local ventilation of emission sources may be necessary to maintain ambient concentrations below permissible OSHA exposure limits. Remove all ignition sources (heat, sparks, flame, and hot surfaces).
Respiratory Protection: A respirator that is recommended or approved for use in an organic vapor environment (air purifying or fresh air supplied or NIOSH certified respirator for organic vapors, mists or fumes) is necessary. Ventilation should be provided to keep exposure levels below OSHA permissible limits. If TLV limits can be maintained and documented below the OSHA/ACGIH limits, an air supplied respirator may not be required. However, other OSHA/NIOSH approved respirators may be used.

Skin Protection: Chemical-resistant gloves (neoprene, natural rubber) should be used to prevent skin contact.
Eye Protection: Wear safety eyewear (safety glasses, safety glasses with side-shields, chemical goggles, or face shields) to prevent eye contact.
Other protective equipment: Safety shower and eyewash station should be located in immediate work area. Long sleeve and long leg clothing is recommended. Remove and wash contaminated clothing before reuse or discard.
Hygienic Practices: Wash hands before breaks, eating, smoking, and at the end of the workday.

Section 9 - Physical and Chemical Properties

Boiling Range (°F):	N.D. - 396	Vapor Density:	Heavier than air
Odor:	Solvent odor	Odor Threshold:	N.D.
Appearance:	Amber liquid inside aerosol container	Evaporation Rate:	1.46 x n-Butyl Acetate
Solubility in H2O:	Insoluble		
Freeze Point:	N.D.	Specific Gravity:	0.718
Vapor Pressure:	N.D.	PH:	N.A.
Physical State:	Liquid	Viscosity:	Thin liquid to heavy viscous material

(See section 16 for abbreviation legend)

Section 10 - Stability and Reactivity

Conditions To Avoid: Do not breathe vapors or spray mist. Avoid high temperatures, sparks, or open flames.
Incompatibility: Material is incompatible with strong oxidizers, reducing agents, strong acids, chromic anhydride, chromyl alcohol, hexachloromelamine, and hydrogen peroxide. Also, incompatible with permonosulfuric acid, chloroform, alkalis, chlorine compounds, potassium t-butoxide, and thioglycol.
Hazardous Decomposition: Metal oxides when burned. Thermal decomposition can lead to the generation and release of gases and vapors including carbon monoxide, carbon dioxide, oxides of nitrogen, and hydrocarbons.
Hazardous Polymerization: Will not occur.
Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: N.E. Product LC50: N.E.

Section 12 - Ecological Information

Ecological Information: No Information.

Section 13 - Disposal Information

Disposal Information: EPA Hazardous Waste Number/Code: D001, F003, F005. Dispose of waste in accordance with federal, state, and local environmental regulations. Empty containers will contain product residue and flammable vapors. Handle as hazardous material. Do not incinerate closed containers. Hazardous Waste Characteristics: Ignitability and Reactivity.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Consumer Commodity	Packing Group:	N.A.
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	ORM-D/Aerosol	Resp. Guide Page:	N.A.
DOT UN/NA Number:	N.A.		

Section 15 - Regulatory Information

CERCLA – SARA Hazard Category
This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories: IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Component	CAS Number	Percent By Weight
PAINT DRIER	22464-99-9	0.19
ETHYL BENZENE	100-41-4	0.15
COBALT CARBOXYLATE	TRADE SECRET	0.1
COBALT SALT	TRADE SECRET	0.1

Toxic Substances Control Act:
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

Component	CAS Number

METHYL ISOBUTYL KETONE	108-10-1
SOLVENT - NJTSR # 56705700001-5127P	TRADE SECRET

U.S. State Regulations: As follows –

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Component	CAS Number
ALKYD RESIN	TRADE SECRET

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Component	CAS Number
ALKYD RESIN	TRADE SECRET
URALKYD	TRADE SECRET

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

Component	CAS Number
ETHYL BENZENE	100-41-4
BENZENE	71-43-2
ETHYL BENZENE	100-41-4
NAPTHALENE	91-20-3
BENZENE	71-43-2

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

Component	CAS Number
BENZENE	71-43-2
TOLUENE	108-88-3
BENZENE	71-43-2

International Regulations: As follows –

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: N.A.

Section 16 - Other Information

HMIS Ratings:

Health: 3 Flammability: 4 Reactivity: 1 Personal Protection: G

VOLATILE ORGANIC COMPOUNDS, GR/LTR: 552.5

VOLATILE ORGANIC COMPOUNDS, LB/GAL: 4.6

VOLATILE ORGANIC COMPOUNDS MIXED, GR/LTR: <= N.D.

VOLATILE ORGANIC COMPOUNDS MIXED, LB/GAL: <= N.D.

REASON FOR REVISION: New Computer System. Information in Sections 2, 3, 4, 5, 6, 7, 8, 10, 14, and 15 have been updated.

REGULATORY CODE: 23X37

LAYOUT CODE: A2004R

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

United Asphalt Co.

Quality Products Since 1963

MATERIAL SAFETY DATA SHEET

HMIS RATING
HEALTH: 1
FLAMMABILITY: 2
REACTIVITY: 0

SECTION 1 – CHEMICAL PRODUCTS AND COMPANY IDENTIFICATION

IDENTITY:
DEL VAL FLASHING CEMENT
PHILADELPHIA FLASHING CEMENT

MANUFACTURER:

UNITED ASPHALT COMPANY
PO BOX 291
CEDAR BROOK NJ 08018

PHONE # 856-753-9811
24 HR CHEMTREC EMERGENCY # 800-424-9300

DATE: MARCH 11, 2005
REVISION 6

SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS #	OSHA PEL	ACGIH TLV	WT%
ASPHALT	8052-42-4	5mg/m³	5mg/m³	50 - 70
MINERAL SPIRIRTS	8052-41-3	100 ppm	100 ppm	20 - 30
MINERAL FIBERS	9004-34-6			20 - 30
CALCIUM CARBONATE	471-34-1			5 - 10
MAGNESIUM ALUMINUM SILICATE	12174-11-77			20-30

“THERE ARE NO SARA 313 INGREDIENTS IN THIS MATTER IN EXCESS OF DEMINIMUS AMOUNTS”

SECTION 3 – PHYSICAL CHEMICAL CHARACTERISTICS

BOILING POINT:	310 - 400º F
WEIGHT PER GALLON:	9.6 #
VAPOR PRESSURE (mmHg):	1-100@100ºF
MELTING POINT:	N/A LIQUID
VAPOR DENSITY (AIR = 1) :	HEAVIER
EVAPORATION RATE (BUTYL ACETATE = 1):	SLOWER
SOLUBILITY IN WATER:	INSOLUBLE
APPPEARANCE AND ODOR:	BLACK FLUID, CHARACTERISTIC OF PETROLEUM SLOVENT.

SECTION 4 FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED):	SETA 125 ºF
FLAMMABLE LIMITS:	
LEL:	0.6
UEL:	7.5
EXTINGUISHING MEDIA:	FOAM CO2, DRY CHEMICAL, AND COMBUSTABLE

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Don't mix or store with strong oxidants like liquid chlorine or oxygen. Keep containers tightly closed. Closed containers may explode when exposed to extreme heat. Application too hot surfaces require special precautions. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention

SECTION 5 – REACTIVITY DATA

STABILITY: **STABLE**
CONDITIONS TO AVOID: **KEEP FROM HEAT, SPARKS, OPEN FLAME**
INCOMPATIBILITY (MATERIAL TO AVOID): **SRONG OXIDANTS**
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: **FUMES, SMOKE AND CO2, CARBON MONOXIDE IF COMBUSTION IS COMPLETE**

HAZARDOUS POLYMENZATION:	WILL NOT OCCUR
CONDITIONS TO AVOID:	WATER, CONTAINERS OPEN TO AIR (MOISTURE)

SECTION 6 – HEALTH HAZARD DATA

ROUTE(S) OF ENTRY: INHALATION? Yes EYES? Yes SKIN? Yes INGESTION? Yes

HEALTH HAZARDS (**ACUTE** AND **CHRONIC**) AND SIGNS AND SYMPTOMS OF EXPOSURE:
ACUTE: Itching, unconsciousness, dizziness, dries skin, nausea.
CHRONIC: Difficulty breathing (cancer studies inconclusive)

EMERGENCY AND FIRST AID PROCEDURES

Large amounts may need immediate emergency treatment.

Inhalation: Get fresh air, administer oxygen

Eye Contact: Flush for 15 min. Get medical attention.

Skin Contact: Wash with soap and water. Get medical attention if irritation persists.

Ingested: Do not induce vomiting. Get medical attention quickly.

SECTION 7 – PRECAUTIONS FOR HANDLING AND USE

STEPS TO BE TAKEN INCASE MATERIAL IS RELEASED OR SPILLED
Keep people away. Recover free liquid. Add absorbent (sand, earth, sawdust, etc.) to spill area. Avoid breathing vapors. Ventilate confined spaces. Open all windows and doors. Keep products out of sewers and watercourse by diking or impounding else advise authorities.

WASTE DISPOSAL METHOD

Assure conformity with applicable disposal regulations. Dispose of absorbed material at an approved disposal site or facility.

SECTION 8 – PRECAUTIONS TO BE TAKEN IN HANDELING AND STORING

Keep containers closed when not in use. Do not handle or store near heat, sparks, flame or strong oxidants.
Adequate ventilation required.

OTHER PRECAUTIONS

Avoid breathing vapors. Avoid prolong or repeated contact with skin, avoid breathing vapors and mist. Remove contaminated clothing and launder before reuse. Remove contaminated shoes and thoroughly dry before reuse

SECTION 9 – CONTROL MEASURES

RESPIRATORY PROTECTION (SPECIFY TYPE)

Use organic vapor canister if in confined or enclosed space.

VENTILATION: LOCAL EXHAUST: Face velocity 60 fpm SPECIAL: Use with adequate ventilation

PROTECTION GLOVES: Use chemical – resistant gloves if needed to avoid repeated or prolonged skin contact.

EYE PROTECTION: Use splash goggles or face shield when eye contact may occur.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Use chemical-resistant apron or other clothing to avoid repeated or prolonged skin contact.

Section 10 – TRANSPORTATION DATA

D.O.T. regulated
Shipping Names: Tars, (contains Mineral Spirits)
Hazard Class: Combustible liquid
ID# 1999 (103)
Packing Group – 3
UN# 1999

United Asphalt Company
237 North Grove Street Williamstown Junction, NJ 08009
PO Box 291 Cedar Brook NJ
856-753-9811 ○ 800-843-0317 ○ FX: 856-753-9811
www.unitedasphalt.com

834

MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

Date of Prep: 01/25/06

SECTION 1

SUNNYSIDE CORPORATION
225 CARPENTER AVENUE
WHEELING, ILLINOIS 60090 (847) 541-5700
EMERGENCY TELEPHONE (800) 424-9300

FOR INFORMATION: (847) 541-5700
- SUNNYSIDE CORPORATION
- CHEM TREC

Product Class: Alcohol-mixture
Trade Name: DENATURED ALCOHOL SOLVENT

Manufacturer's Code: 834
NPCA HMIS:
Health: 1
Fire: 3
Reactivity: 0

Product Appearance and Odor: Clear, colorless liquid; characteristic alcohol odor.

SECTION 2 -- HAZARDOUS INGREDIENTS

OCCUPATIONAL EXPOSURE LIMITS

INGREDIENT	CAS #	WT. PERCENT	ACGIH TLV (TWA)	ACGIH TLV (STEL)	OSHA PEL (TWA)	OSHA PEL (STEL)	VAPOR PRESSURE
Ethyl Acetate	141-78-6	1.0	400 PPM		400 PPM		86 MM Hg @ 20°C
Ethyl Alcohol	64-17-5	85.7	1000 PPM		1000 PPM		40 MM Hg @ 55°F
Solvent Naphtha (petroleum) Light Aliphatic	64742-89-8	0.8	Not Est.		Not Est.		Not Known
Methyl Isobutyl Ketone	108-10-1	1.9	50 PPM	75 PPM	50 PPM	75 PPM	0.75 MM Hg @ 50°F
Methyl Alcohol	67-56-1	3.6	200 PPM (SKIN)	250 PPM	200 PPM (SKIN)	250 PPM	96 MM Hg @ 20°C

SECTION 3 -- EMERGENCY AND FIRST AID PROCEDURES

Ingestion: If victim is conscious and able to swallow, have victim drink water or milk to dilute. Never give anything by mouth if victim is unconscious or having convulsions. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY. Induce vomiting only if advised to do so by a physician or poison control center.

Inhalation: Immediately remove victim to fresh air. If victim has stopped breathing give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Eye Contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention. In case of irritation from airborne exposure, move to fresh air. Get medical attention if symptoms persist.

Skin Contact: Immediately flush affected area with plenty of cool water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

SECTION 4 -- PHYSICAL DATA

The following data represent approximate or typical values. They do not constitute product specifications.

Boiling Range: 165° F. (I.B.P.)
Evaporation Rate: Slower than ether
Weight Per Gallon: 6.78 Lbs.
Solubility in Water: Appreciable

Vapor Density: Heavier than air
% Volatile By Volume: 100%

SECTION 5 -- FIRE AND EXPLOSION DATA

Flammability Classification:	Flammable liquid - Class IB.
Flash Point:	41° F. Tag. Closed Cup
Autoignition Temperature:	795° F.
Lower Explosive Limit:	3.5% @ 77° F.
Extinguishing Media:	Water spray, dry chemical, C02, "Alcohol" Foam.
Unusual Fire and Explosion Hazards:	Flammable. Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations.
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Water may be ineffective for fire fighting, use water spray to keep fire-exposed containers cool.

SECTION 6 -- HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: EFFECTS OF EXPOSURE	See Section 2.
Inhalation:	High vapor concentrations may cause upper respiratory tract irritation and narcosis (sleepiness, dizziness, etc.)
Eye Contact:	Liquid or vapor causes irritation.
Skin Contact:	May cause irritation and defatting of skin on prolonged contact.
Ingestion:	Can cause depression of central nervous system, nausea, vomiting, diarrhea. Individual responses to methyl alcohol vary. Ingestion of less than 30 ml. has been fatal to humans. In general, a few ounces may cause blindness and death; as little as 4 ml. may be toxic if ingested.
Carcinogenicity:	Components of this product have not been identified as carcinogens by NTP, IARC or OSHA.

SECTION 7 -- REACTIVITY DATA

Stability:	Stable
Conditions to Avoid:	Keep away from heat, sparks and flame.
Incompatibility (Materials to Avoid):	Oxidizing materials can cause a vigorous reaction.
Hazardous Decomposition Products:	Combustion will produce carbon dioxide and probably carbon monoxide.
Hazardous Polymerization:	Will not occur.

SECTION 8 -- SPILL OR LEAK PROCEDURES

Steps to be taken in case material is spilled or released: Eliminate all ignition sources. Small spills may be collected with absorbent materials. For large spills flush area with water spray, prevent run off from entering drains, sewers or streams.

Waste disposal method: Incinerate under safe conditions, observe all federal, state and local laws concerning health and environment.

SECTION 9 -- SAFE HANDLING AND USE INFORMATION

Respiratory Protection:	An appropriate NIOSH-approved respirator for organic vapor should be worn if needed.
Ventilation:	Exposure levels should be maintained below applicable exposure limits - see Section 2. This product should not be used in confined spaces, or in a manner that will allow accumulation of high vapor concentrations. However, for controlled industrial uses when this product is used in confined spaces, heated above ambient temperatures or agitated, the use of explosion proof ventilation equipment is necessary.
Protective Gloves:	Solvent resistant protective gloves.
Eye Protection:	Safety glasses with side shields should be worn in any industrial operation. Wear a full-face respirator, if needed.
Other Protective Equipment:	Safety shower, eye wash, and washing facilities should be available.

SECTION 10 -- SPECIAL PRECAUTIONS

Dept. of Labor Storage Category:	Flammable Liquid - Class IB.
Hygienic Practices:	Keep away from heat, sparks and open flame, keep containers closed when not in use. Avoid eye contact. Avoid breathing mist or vapor. Avoid prolonged or repeated contact with skin. Wash skin with soap and water after contact.
Additional Precautions:	Ground containers when transferring liquid to prevent static accumulation and discharge. Additional information regarding safe handling of products with static accumulation potential can be ordered by contacting the American Petroleum Institute (API) for API Recommended Practice 2003, entitled "Protection Against Ignitions Arising Out of Static, Lighting, and Stray Currents" (American Petroleum Institute, 1720 L Street Northwest, Washington,DC 20005), or the National Fire Protection Association (NFPA) for NFPA 77 entitled "Static Electricity" (National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101).
Empty Container Warning:	"Empty" containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks or other sources of ignition. They may explode and cause injury or death. Do not attempt to clean since residue is difficult to remove. "Empty" drums should be completely drained, properly bunged and promptly returned to supplier or disposed of in an environmentally safe manner and in accordance with governmental regulations.

SECTION 11 -- ADDITIONAL INFORMATION

This product contains the following toxic chemical(s) which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

TOXIC CHEMICAL	CAS #	APPROXIMATE % BY WEIGHT
Methanol	67-56-1	3.6%
Methyl Isobutyl Ketone	108-10-1	1.9%

SARA Title III Hazard Categories:	Fire Hazard, Immediate (Acute) Health Hazard.
Common Names:	Denatured ethyl alcohol, "Tecsol" 3 Solvent, 95%
California Proposition 65:	This product contains chemicals known to the State of California to cause cancer, and birth defects or other reproductive harm.

TRANSPORTATION (U.S. D.O.T. land transportation in packages of 119 gallons or less)

U.S. D.O.T. Proper Shipping Name:	Ethanol Solutions
U.S. D.O.T. Hazard Class	3
U.S. D.O.T. I.D. Number:	UN 1170
U.S. D.O.T. Packaging Group	II
Hazardous Substances:	Methanol RQ 5000 lbs. Methyl Isobutyl Ketone RQ 5000 lbs.

Refer to 49 CFR for additional information. Exceptions or exemptions may exist for smaller quantities.

MATERIAL SAFETY DATA SHEET CHECK-MARK DEOSECT II FLYBAIT

DATE OF ISSUE: 05/05/2005
SUPERCEDES: 01/06/1999

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:	Trade Name & Synonyms:
N/A	CHECK-MARK DEOSECT II FLYBAIT
Chemical Family:	**Formula Mixture:**
THIOACETIMIDATE	X

Manufacturer's Name:
CHECK-MARK DIV. OF DM RESOURCES, INC.

Address:
1310 E. NORTHGATE DRIVE
IRVING, TEXAS 75062

Prepared By: M McDowell/Chemist
Product Code Number: 5780
Emergency Phone Number: 800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS:

Chemical Name (Ingredients): METHOMYL
Hazard: IRR/TOX
TLV: 2.5MG/M3 1
PEL: N/E 2
STEL: N/E
CAS#: 16752-77-5

SECTION III - PHYSICAL DATA

Boiling Point (f):	N/A
Specific Gravity (H20=1):	0.74
Vapor Pressure (MM HG):	N/A
Color:	BLUE
Vapor Density (Air=1):	>1
Odor:	SULFUR
PH @ 100%:	N/A
Clarity:	OPAQUE
Volatile by Volume:	0
Evaporation Rate (BU A/C=1):	<1
H20 Solubility:	APPRECIABLE
Viscosity:	GRANULAR

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point: NON-FLAM / N/A
Flammable Limits: N/A LEL: N/A UEL:N/A

Extinguishing Media:
Foam: X Alcohol Foam: X CO2: X
Dry Chemical: X Water Spray: X Other:

Special Fire Fighting Procedures:
FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. EXTINGUISHING MEDIA SHOULD BE CHOSEN BASED ON THE NATURE OF THE SURROUNDING FIRE.

Unusual Fire and Explosion Hazards:
MATERIAL WILL BURN WHEN EXPOSED TO INTENSE HEAT OR OPEN FLAME.

Aerosol Level (NFPA 30B): N/A
NFPA 704 Hazard Rating:
(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)
Health: 1 Flammability: 1 Instability: 0 Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:
2.5 MG/M3 AS METHOMYL 1.

Effects of Overexposure:
-Acute(Short Term Exposure)
EYE CONTACT: MAY CAUSE IRRITATION SEEN AS STINGING, TEARING, AND REDNESS.
SKIN CONTACT: MAY CAUSE IRRITATION SEEN AS ITCHING AND REDNESS. PRODUCT MAY BE ABSORBED THROUGH THE SKIN IN HARMFUL AMOUNTS CAUSING TOXIC EFFECTS SIMILAR TO INGESTION.
INHALATION: MAY CAUSE RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING. INHALATION OF LARGE AMOUNTS OF DUST MAY CAUSE TOXIC EFFECTS SIMILAR TO INGESTION.
INGESTION: METHOMYL IS A CHOLINESTERASE INHIBITOR AND IS TOXIC UPON INGESTION WITH EFFECTS SIMILAR TO ORGANOPHOSPHATE EXPOSURE. SYMPTOMS INCLUDE NAUSEA, HEADACHE, SALIVATION, VOMITING, ABDOMINAL PAIN, CYANOSIS, SKIN RASH, LOWERED RESPIRATIONS, HYPOTENSION, MUSCLE TWITCHING, AND IRREGULAR HEART RATE. LARGE AMOUNTS MAY RESULT IN ACUTE CIRCULATORY FAILURE AND POSSIBLY DEATH. MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS HEADACHE, DIZZINESS, WEAKNESS, STAGGERING GAIT, NAUSEA, BLURRED VISION, TREMOR, EXCITATION, AND IN EXTREME CASES COMA OR DEATH.

-Chronic (Long Term Exposure)
NO HUMAN CHRONIC EFFECTS KNOWN.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS.
TARGET ORGANS: HEART, LIVER, AND BLOOD. THE PRIMARY ROUTES OF EXPOSURE ARE SKIN AND EYE CONTACT.

Primary Routes of Entry: Inhalation: X Ingestion: X Absorption: X

Emergency and First Aid Procedures:
-Inhalation:
REMOVE FROM THE AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

-Eye Contact:

RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Skin Contact:
WASH AFFECTED AREAS WITH LARGE AMOUNTS OF SOAP AND WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

-Ingestion:
GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

-Notes to Physician:
IF SYMPTOMS OF CHOLINESTERASE INHIBITION ARE PRESENT, ATROPINE SULFATE IS ANTIDOTAL. 2-PAM IS ALSO ANTIDOTAL AND MAY BE ADMINISTERED IN CONJUNCTION WITH ATROPINE.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC	NTP	OSHA	ACGIH
No	No	No	No

OTHER: No

VOC CONTENT: <0.1% BY WEIGHT, <1% BY VOLUME, <1 G/L

PRODUCT MIXTURE

ORL-RAT LD50:	1400 MG/KG	4.
IHL-RAT LC50:	100 MG/L	4.
SKN-RBT LD50:	2010 MG/KG	4.

METHOMYL

ORL-RAT LD50:	12 MG/KG	3.
ORL-HMN LD:	12 MG/KG	3.
IHL-RAT LC50:	100 MG/M3	4.
SKN-RBT LD50:	556 MG/KG	3.

SECTION VII - REACTIVITY DATA

Stability: Stable: X Unstable:

Conditions to Avoid: NONE KNOWN
Incompatibility (Materials to Avoid):
STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE; STRONG ACIDS AND BASES.

Hazardous Decomposition Products:
OXIDES OF CARBON AND SULFUR.

Hazardous Polymerization:
May Occur: Will Not Occur: X

Conditions to Avoid: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:
WEAR APPROPRIATE PROTECTIVE CLOTHING. AVOID CREATING DUSTY CONDITIONS. TRANSFER SOLID INTO A PROPERLY LABELED CONTAINER FOR REUSE OR DISPOSAL. PREVENT PRODUCT FROM CONTAMINATING SOIL OR FROM ENTERING SEWAGE AND DRAINAGE SYSTEMS AND BODIES OF WATER. IF NECESSARY WASH AREA WITH WATER AND PICK UP WASH WATER FOR DISPOSAL.

Waste Disposal Method(s):
PESTICIDE OR RINSATE THAT CANNOT BE USED ACCORDING TO LABEL INSTRUCTIONS MUST BE DISPOSED OF ACCORDING TO APPLICABLE FEDERAL, STATE AND LOCAL GOVERNMENTAL PROCEDURES. WASTE RESULTING FROM THE USE OF THIS PRODUCT MAY BE DISPOSED OF ON SITE OR AT AN APPROVED WASTE DISPOSAL FACILITY.

Neutralizing Agent:
N/A

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:
LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE DUSTY CONDITIONS. LOCAL VENTILATION IS PREFERRED, BECAUSE IT PREVENTS DISPERSION INTO WORK AREAS BY CONTROLLING IT AT ITS SOURCE.

Respiratory Protection:
RESPIRATORS SHOULD BE SELECTED BY AND USED UNDER THE DIRECTION OF A TRAINED HEALTH AND SAFETY PROFESSIONAL FOLLOWING REQUIREMENTS FOUND IN OSHA'S RESPIRATOR STANDARD (29 CFR 1910.134) AND ANSI'S STANDARD FOR RESPIRATORY PROTECTION (Z88.2-1992). WEAR A NIOSH/MSHA APPROVED RESPIRATOR WITH A DUST CARTRIDGE FILTER IF EXPOSURE CAN EXCEED TLV/PEL. <10X PEL, USE AN N95 QUARTER OR HALF MASK RESPIRATOR; <50X PEL, USE A FULL FACE RESPIRATOR EQUIPPED WITH N95 FILTERS; <200X PEL, USE A POWERED AIR PURIFYING RESPIRATOR (POSITIVE PRESSURE) WITH N95 FILTERS; >200X PEL, USE A FULL FACE, TYPE C SUPPLIED AIR RESPIRATOR (CONTINUOUS FLOW MODE).

Glove Protection:
NEOPRENE OR NITRILE RUBBER GLOVES SHOULD BE WORN. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR HAND PROTECTION, 29 CFR 1910.138.

Eye Protection:
SAFETY GLASSES WITH SIDE SHIELDS IF THE METHOD OF APPLICATION PRESENTS THE LIKELIHOOD OF EYE CONTACT. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR EYE AND FACE PROTECTION, 29 CFR 1910.133.

Other Protection:
WEAR LONG SLEEVED SHIRTS AND PANTS, SOCKS AND SHOES, AND PROTECTIVE CLOTHING WHEN HANDLING. A SAFETY SHOWER AND AN EYEWASH STATION SHOULD BE AVAILABLE.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors: X Outdoors: Heated:
Refrigerated:

Minimum Temperature: 35°F Maximum Temperature: 120°F

Precautions to be taken in Handling and Storing:
DO NOT ALLOW PESTICIDE TO CONTAMINATE FOOD, FEED, OR NATURAL BODIES OF WATER. DO NOT USE AROUND OR INSIDE HOMES, OR ANY PLACE WHERE CHILDREN ARE LIKELY TO BE PRESENT.

Other Precautions:
KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. AVOID USE IN AREAS WHERE ANIMALS SUCH AS POULTRY OR LIVESTOCK ARE PRESENT.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III and of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2005.
2. OSHA PEL.
3. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFOWeb, 2005.
4. VENDOR'S MSDS.

ALL THE COMPONENTS OF THIS PRODUCT ARE IN COMPLIANCE WITH THE TOXIC SUBSTANCES CONTROL ACT (TSCA) AND ARE EITHER LISTED ON THE TSCA INVENTORY OR OTHERWISE EXEMPTED FROM LISTING. ----------

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOS:PARTICLES (INSOLUBLE) NOT OTHERWISE SPECIFIED, SDT:STANDARD DRAIZE TEST, ORL:ORAL, IHL:INHALATION, HMN:HUMAN
THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHECK-MARK DIV. OF DM RESOURCES, INC. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use,storage or disposal of the product.

MATERIAL SAFETY DATA SHEET

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: **DE-OX-4OZ, DE-OX5CC, DE-OX-5GAL, DE-OX-55GAL-DRUM, DE-OX-1GAL, DE-OX-1OZ, DE-OX-8OZ, UDE-OX-4OZ, UDE-OX-8OZ**

Product Use: Corrosion inhibitor.

Manufactured for and Distributed by:
ILSCO CORPORATION
4730 Madison Road
Cincinnati, OH 45227-1426

Emergency Contact: **INFOTRAC 1-800-535-5053**

International Contact; **INFOTRAC 1-352-323-3500**

Contract Number: **103492**

Contract Expiration: **12/21/2012**

Date of Preparation: December 19, 2011

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION

MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, and ingestion.

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation: Not a normal route of exposure.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Signs and Symptoms: Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Medical Conditions Aggravated By Exposure: Asthma. Allergies.

Target Organs: Eyes, skin, gastrointestinal tract.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	60 - 100

Section 4: FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses, if worn.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

Flammability: Not flammable by WHMIS/OSHA criteria.

Means of Extinction:

Suitable Extinguishing Media: Powder, water spray, foam, carbon dioxide.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: May include, and are not limited to: oxides of carbon.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

Protection of Firefighters: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental Precautions: Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Clean-Up: Vacuum or sweep material and place in a disposal container. Spills of this material are a slipping hazard.

Other Information: Not available.

Section 7: HANDLING AND STORAGE

Handling:
Avoid contact with skin and eyes. Do not swallow. Use only in well-ventilated areas. Handle and open container with care. When using do not eat or drink. Wash hands before eating, drinking, or smoking.

Storage:
Keep out of the reach of children. Keep container tightly closed.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

	Exposure Limits	
Ingredient	**OSHA-PEL**	**ACGIH-TLV**
Distillates (petroleum), hydrotreated heavy naphthenic	5 mg/m³ (mist)	5 mg/m³ (mist)

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment:

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Not applicable under normal conditions of use. Use only in well-ventilated areas. In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Paste-like compound.
Color:	Green.
Odour:	Slight odour.
Odour Threshold:	Not available.
Physical State:	Solid.
pH:	Not available.
Viscosity:	Not available.
Freezing Point:	Not available.
Boiling Point:	Not available.
Flash Point:	> 232.23 °C (> 450 °F)
Evaporation Rate:	Not available.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	> 1 (Air = 1)
Specific Gravity:	1.08
Solubility in Water:	Insoluble.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	Not available.

VOC content, wt. %: Not available.

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions.

Conditions of Reactivity: Heat. Incompatible materials.

Incompatible Materials: Oxidizers. Strong acids.

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon.

Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD_{50} (oral)	LC_{50}
Distillates (petroleum), hydrotreated heavy naphthenic	>5000 mg/kg, rat	2.18 mg/L 4hr, rat

Eye: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation: Not a normal route of exposure.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available.

Chronic Effects: Not hazardous by WHMIS/OSHA criteria.

Carcinogenicity: Not hazardous by WHMIS/OSHA criteria.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen *
Distillates (petroleum), hydrotreated heavy naphthenic	Not listed.

* See Section 15 for more information.

Mutagenicity: Not hazardous by WHMIS/OSHA criteria.

Reproductive Effects: Not hazardous by WHMIS/OSHA criteria.

Developmental Effects:

Teratogenicity: Not hazardous by WHMIS/OSHA criteria.

Embryotoxicity: Not hazardous by WHMIS/OSHA criteria.

Respiratory Sensitization: Not hazardous by WHMIS/OSHA criteria.

Skin Sensitization: Not hazardous by WHMIS/OSHA criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:
This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Section 14: TRANSPORTATION INFORMATION

DOT Classification
Not regulated

TDG Classification
Not regulated

Section 15: REGULATORY INFORMATION

Federal Regulations

Canadian: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

US: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200).

SARA Title III

Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Distillates (petroleum), hydrotreated heavy naphthenic	Not listed.	Not listed.	Not listed.	Not listed.

State Regulations

California Proposition 65:
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Global Inventories

Ingredient	Canada DSL/NDSL	USA TSCA
Distillates (petroleum), hydrotreated heavy naphthenic	DSL	Yes.

HMIS - Hazardous Materials Identification System

Health - 1 **Flammability -** 1 **Physical Hazard -** 0 **PPE –** B

NFPA - National Fire Protection Association:

Health - 1 **Fire -** 1 **Reactivity -** 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

Not controlled

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.
A1 - Confirmed human carcinogen.
A2 - Suspected human carcinogen.
A3 - Animal carcinogen.
A4 - Not classifiable as a human carcinogen.
A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.
1 - The agent (mixture) is carcinogenic to humans.
2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.
1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

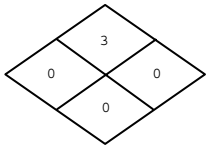
MATERIAL SAFETY DATA SHEET

Product Code: DERMAGEL SANITIZER
U.S.D.A. Authorized NDC 058575-130

Active Ingredient Ethyl Alcohol 62% 64-17-5

Product	CAS#
Deionized Water	7732-18-5
Citric Acid	77-92-9
Gelant	

Hazard Rating
N4 - Extreme
F3 - High
P2 - Moderate
A1 - Slight
0 - Insignificant



DIVISION AND LOCATION - SECTION I
DIVISION: Inopak, Ltd.
LOCATION: 24 Executive Parkway, Ringwood, NJ 07456
EMERGENCY TELEPHONE NUMBER: 1 (973) 962-1121
TRANSPORTATION EMERGENCY: CHEM TREC 1(800) 424-9300 (U.S. & CANADA)

CHEMICAL AND PHYSICAL PROPERTIES - SECTION II
CHEMICAL NAME: mixture of water & ethanol
FORMULA: No data available
HAZARDOUS DECOMPOSITION PRODUCTS: carbon monoxide and carbon dioxide from burning
INCOMPATIBILITY (Keep away from): strong oxidizers such as hydrogen peroxide, bromine, and chromic acid
TOXIC AND HAZARDOUS INGREDIENT: none
FORM: liquid gel ODOR: Citrus COLOR: Green
APPEARANCE: viscous liquid
SPECIFIC GRAVITY (WATER = 1): 0.900
BOILING POINT: 176F
MELTING POINT: No data available
SOLUBILITY IN WATER (by weight %): soluble at 25ºC complete
VOLATILE (BY WEIGHT %): VOC-65%
EVAPORATION RATE: (BUTYL Acetate =1) :> 1
VAPOR PRESSURE (mm Hg at 20ºC): less than 40
VAPOR DENSITY (air = 1) : >1
pH (as is): 5.5 to 6.5
STABILITY: Product is stable under normal conditions
VISCOSITY SUS at 100°F: 100

FIRE AND EXPLOSION DATA - SECTION III
SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters must be equipped to prevent breathing of vapors or products of combustion. Wear an approved self-contained breathing apparatus and protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS: flammable
FLASHPOINT: Pensky-Martens closed cup: greater than 86F-30.2C
FLAMMABLE LIMITS %: Not applicable
EXTINGUISHING AGENTS: Dry chemical or water spray of water fog or CO or Foam or Sand/Earth

HEALTH HAZARD DATA - SECTION IV
PERMISSIBLE CONCENTRATION (Air): not applicable
CHRONIC EFFECTS OR OVEREXPOSURE: no data available
ACUTE TOXICOLOGICAL PROPERTIES: no data available
EMERGENCY FIRST AID PROCEDURES:
EYES: Immediately flush with large quantities of water for at least 15 minutes and call a physician
SKIN CONTACT: Not applicable
INHALATION: Not applicable
IF SWALLOWED: Call a physician

SPECIAL PROTECTION INFORMATION - SECTION V
VENTILATION TYPE REQUIRED (local, mechanical, special): Not applicable
RESPIRATORY PROTECTION (Specify type): Not applicable
PROTECTIVE GLOVES: Not applicable
OTHER PROTECTIVE EQUIPMENT: Not applicable

HANDLING OF SPILLS OR LEAKS - SECTION VI
PROCEDURES FOR CLEAN-UP: Absorb with an inert material such as sand, soil or vermiculite, sweep up and dispose of in accordance with federal, state, and local regulations.
WASTE DISPOSAL: Dispose of in accordance with all applicable federal, state and local regulations.

SPECIAL PRECAUTIONS - SECTION VII
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store between 40ºF and 120ºF

TRANSPORTATION DATA - SECTION VIII
D.O.T.: Regulated
REPORTABLE QUANTITY: Not applicable
FREIGHT CLASSIFICATION: Cleaning compound
SPECIAL TRANSPORTATION NOTES: None

FIRST AID PROCEDURE - SECTION IX
Eye Contact: May cause slight irritation and burning. Rinse with water for 15 minutes. If condition worsens or persists, contact a physician.
Skin Contact: No adverse reactions are expected.
Inhalation: This product should be used in a well-ventilated area. If person exhibits signs of sore throat, coughing, sneezing, headache, dizziness, drowsiness, uncoordination, slowed reaction time or unconsciousness, remove to fresh air. If condition persists or worsen seek immediate medical attention.
Ingestion: May cause abdominal pain and nausea.
Carcinogenicity
NTP: not listed as a carcinogen.
IARC Monographs: not listed as a carcinogen.
OSHA and ACGHI: not listed as a carcinogen.

PRECAUTIONS FOR SAFE HANDLING AND USE
Steps to Be Taken in Case Material is Released or Spilled: Avoid contact with flames or other ignition sources. Use inert absorbent material and dispose of properly. Use water to clean area and surfaces that were contacted with material. Surfaces and floors may be slippery if contaminated with product.
Waste Disposal Method: Handle as a flammable liquid.
Precautions to Be Taken in Handling and Storing: Store at room temperature away from open flames or other ignition sources. Keep away from children. Keep container tightly closed.
FDA Status: Human Over-the-counter Drug Product.

COMMENTS - SECTION IX
SIGNATURE: John L. Polite _____
TITLE: President
Sent to: _____ DATE: 01/03/2009 SUPERSEDES: 03/01/2001

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, expressed or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

FABER-CASTELL CORP -- HIGGINS WATERPROOF COLOR DRAWING INKS - ALL COLORS - - 7510-00N060551

========== Product Identification ==========

Product ID:HIGGINS WATERPROOF COLOR DRAWING INKS - ALL COLORS
MSDS Date:08/25/1986
FSC:7510
NIIN:00N060551
MSDS Number: BXVKN
=== Responsible Party ===
Company Name:FABER-CASTELL CORP
Address:551 SPRING PLACE RD
City:LEWISBURG
State:TN
ZIP:37091
Country:US
Info Phone Num:201-483-1986
Emergency Phone Num:615-359-1583
Preparer's Name:ANDREW TOROK
CAGE:07103
=== Contractor Identification ===
Company Name:FABER CASTELL CORP
Address:551 SPRING PLACE ROAD
Box:330
City:LEWISBURG
State:TN
ZIP:37091-3447
Country:US
Phone:615-359-1583
CAGE:32988
Company Name:FABER-CASTELL CORP
Address:551 SPRING PLACE RD
Box:330
City:LEWISBURG
State:TN
ZIP:37091
Country:US
Phone:201-483-4646
CAGE:07103

========== Composition/Information on Ingredients ==========

Ingred Name:NON-HAZARDOUS INGREDIENTS; (WATERBASED INKS -
NON-HAZARDOUS)
OSHA PEL:N/K
ACGIH TLV:N/K

========== Hazards Identification ==========

LD50 LC50 Mixture:LD50:>5 G/KG BODY WEIGHT.
Routes of Entry: Inhalation:NO Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:NONE.
Explanation of Carcinogenicity:NOT RELEVANT
Effects of Overexposure:NONE SPECIFIED BY MANUFACTURER.
Medical Cond Aggravated by Exposure:NOT KNOWN.

========== First Aid Measures ==========

First Aid:INHAL:REMOVE TO FRESH AIR. SUPPORT BREATHING (GIVE O*2/ARTF RESP) . EYES:FLUSH W/WATER FOR AT LEAST 15 MINUTES. SKIN:WASH W/SOAP & WATER. INGEST:IF VERY LARGE QUANTITIES INGESTED, SEE MD.

========== Fire Fighting Measures ==========

Extinguishing Media:MEDIA SUITABLE FOR SURROUNDING FIRE .
Fire Fighting Procedures:USE NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT . NON-FLAMMABLE.
Unusual Fire/Explosion Hazard:NONE.

========== Accidental Release Measures ==========

Spill Release Procedures:FLUSH W/WATER.
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

========== Handling and Storage ==========

Handling and Storage Precautions:KEEP FROM FREEZING.
Other Precautions:NONE.

========== Exposure Controls/Personal Protection ==========

Respiratory Protection:NIOSH/MSHA APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN . NOT APPLICABLE.
Protective Gloves:IMPERVIOUS GLOVES .
Eye Protection:ANSI APPROVED CHEM WORKERS GOGGS .
Other Protective Equipment:NONE SPECIFIED BY MANUFACTURER.
Work Hygienic Practices:WASH W/SOAP & WATER.
Supplemental Safety and Health
SPEC GRAV:1.02-1.03 (H*2O=1).

========== Physical/Chemical Properties ==========

Boiling Pt:B.P. Text:212F,100C
Spec Gravity:SUPP DATA
Solubility in Water:100%
Appearance and Odor:COLORED INKS; ODORLESS.

========== Stability and Reactivity Data ==========

Stability Indicator/Materials to Avoid:YES
NONE.
Stability Condition to Avoid:NONE.
Hazardous Decomposition Products:NONE.

========== Disposal Considerations ==========

Waste Disposal Methods:CONSULT FEDERAL, STATE & LOCAL REGULATIONS. NON-HAZARDOUS WASTE.

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MSDS Name: DEVCON® 5 Minute® Epoxy amber [1:1]
Manufacturer Name: ITW Devcon
Stock Number: 14200

Components:
5-MINUTE EPOXY RESIN
5-MINUTE EPOXY HARDENER
ITW Performance Polymers (Finished Goods) Product Code: 14200

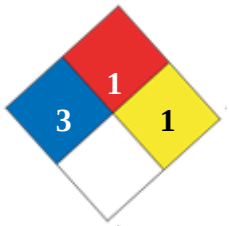
PRINT EMAIL GLOSSARY

View Section : 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION 14200

Product Name:	**5-MINUTE EPOXY HARDENER**
Stock No.:	14200
Manufacturer Name:	ITW Devcon
Address:	30 Endicott St.
	Danvers MA 01923
Product Description:	The following information applies to the hardener component of the two-part kit and to freshly mixed resin and hardener. After curing, this product is not hazardous.
Business Phone:	(978) 777-1100
Emergency Phone:	(800) 424-9300

NFPA



HMIS

HEALTH	3*
FIRE	1
REACTIVITY	1
PPE	X

*** Chronic Health Effects**

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SECTION 2 : COMPOSITION, INFORMATION ON INGREDIENTS 14200

Ingredient Name	CAS#	Ingredient Percent
Trade secret.	N/A	60-100 by Weight

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SECTION 3 : HAZARDS IDENTIFICATION 14200

Emergency Overview:	WARNING! Potential Sensitizer. Irritant.

Applies to hazardous ingredients :

Route of Exposure:	Eyes. Skin. Inhalation. Ingestion
Potential Health Effects:	
Eye Contact:	Can cause severe eye irritation and burns. Eye contact may cause permanent damage or blindness.
Skin Contact:	Causes severe skin irritation. May cause permanent skin damage. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.
Inhalation:	Vapor or mist may cause severe respiratory system irritation. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.
Ingestion:	Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.
Chronic Skin Contact:	Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.
Signs/Symptoms:	Overexposure may cause eye watering or discomfort, redness and swelling.
Aggravation of Pre-Existing Conditions:	Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.

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SECTION 4 : FIRST AID MEASURES 14200

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

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SECTION 5 : FIRE FIGHTING MEASURES 14200

Flash Point:	>200 °F (93.3 °C)
Flash Point Method:	Pensky-Martens Closed Cup
Upper Flammable or Explosive Limit:	Not determined.
Lower Flammable or Explosive Limit:	Not determined.
Auto Ignition Temperature:	Not determined.
Flammability Class:	Class IIIB.
Extinguishing Media:	Use carbon dioxide (CO2) or dry chemical when fighting fires involving this material.
Unsuitable Media:	Water or foam may cause frothing.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Protective Equipment:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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SECTION 6 : ACCIDENTAL RELEASE MEASURES 14200

Leak Response:	Avoid personal contact and breathing vapors or mists. Ventilate area. Use proper personal protective equipment as listed in section 8.
Personal Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Spill Cleanup Measures:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical

	waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Large Spill:	Pump or shovel to storage/salvage vessels.

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SECTION 7 : HANDLING and STORAGE 14200

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Do not store in reactive metal containers. Keep away from acids, oxidizers.
Hygiene Practices:	Wash thoroughly after handling.
Special Handling Procedures:	Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product.

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SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION 14200

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, general dilution ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact.
Hand Protection Description:	Wear appropriate protective gloves. Consult glove manufacturer's data for permeability data.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor/particulates combination cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station. Only established PEL and TLV values for the ingredients are listed below

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SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES 14200

Color:	Clear to slight yellow.
Odor:	Mercaptan.
Physical State:	Liquid.
pH:	9.5 @ 5 Percent Solution
Vapor Pressure:	<<1 mmHg @70 °F
Vapor Density:	Not determined.
Boiling Point:	Not determined.
Melting Point:	Not determined.
Solubility in Water:	Negligible.
Specific Gravity:	1.13
Evaporation Point:	Not determined.
Percent Volatile:	0
Volatile Organic Compound Content:	0 g/L
Molecular Formula:	Varies

Molecular Weight:	Varies
Percent Solids by Weight	100

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SECTION 10 : STABILITY and REACTIVITY 14200

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions.
Incompatibilities with Other Materials:	Oxidizers, acids, and chlorinated organic compounds. Reactive metals (e.g. sodium, calcium, zinc). Sodium/calcium hypochlorite. Nitrous acid/ oxide, nitrites. Peroxides. Materials reactive with hydroxyl compounds.
Hazardous Polymerization:	Not reported.

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SECTION 11 : TOXICOLOGICAL INFORMATION 14200

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SECTION 12 : ECOLOGICAL INFORMATION 14200

Ecotoxicity:	No ecotoxicity data was found for the product.
Environmental Fate:	No environmental information found for this product.

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SECTION 13 : DISPOSAL CONSIDERATIONS 14200

Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.
RCRA Hazard Class:	None

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SECTION 14 : TRANSPORT INFORMATION 14200

DOT Shipping Name:	Non-regulated
DOT UN Number:	N/A
DOT Hazard Class:	N/A
DOT Packing Group:	N/A
IATA Shipping Name:	Non-regulated
NAERG Number:	N/A
Technical Name	N/A

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SECTION 15 : REGULATORY INFORMATION 14200

Applies to all ingredients:

TSCA 8(b): Inventory Status:	All of the constituents of this product are either TSCA listed or exempt from listing.
Comments:	WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.
Canadian Regulations	WHMIS Hazard Class(es): D2B All components of this product are on the Canadian Domestic Substances List.

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SECTION 16 : ADDITIONAL INFORMATION 14200

HMIS:	
Health Hazard:	3*
Fire Hazard:	1

Reactivity:	1
Personal Protection:	x
NFPA:	
Health:	3
Fire Hazard:	1
Reactivity:	1
MSDS Revision Date:	10/10/2006
MSDS Author:	Actio Corporation

Disclaimer:

This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment.

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PRINT EMAIL GLOSSARY

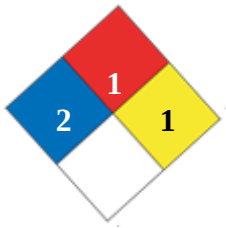
Devcon®

View Section : 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION 14200

Product Name:	**5-MINUTE EPOXY RESIN**
Stock No.:	14200
Manufacturer Name:	ITW Devcon
Address:	30 Endicott St. Danvers MA 01923
Product Description:	The following information applies to the hardener component of the two-part kit and to freshly mixed resin and hardener. After curing, this product is not hazardous.
Business Phone:	(978) 777-1100
Emergency Phone:	(800) 424-9300

NFPA



HMIS

HEALTH	2*
FIRE	1
REACTIVITY	1
PPE	X

*** Chronic Health Effects**

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SECTION 2 : COMPOSITION, INFORMATION ON INGREDIENTS 14200

Ingredient Name	CAS#	Ingredient Percent
Bisphenol A diglycidyl ether resin	25068-38-6	60-100 by Weight

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SECTION 3 : HAZARDS IDENTIFICATION 14200

Emergency Overview:	WARNING! Potential Sensitizer. Irritant.

Applies to hazardous ingredients :

Route of Exposure:	Eyes. Skin. Inhalation. Ingestion
Potential Health Effects:	
Eye Contact:	Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury.
Skin Contact:	Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.
Inhalation:	Respiratory tract irritant. High concentration may cause dizziness, headache, and anaesthetic effects. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.
Ingestion:	Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.
Chronic Skin Contact:	Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.
Signs/Symptoms:	Overexposure can cause headaches, dizziness, nausea, and vomiting.
Aggravation of Pre-Existing Conditions:	Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.

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SECTION 4 : FIRST AID MEASURES 14200

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

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SECTION 5 : FIRE FIGHTING MEASURES 14200

Flash Point:	>400 °F (204.4°C)
Flash Point Method:	Pensky-Martens Closed Cup
Upper Flammable or Explosive Limit:	Not determined.
Lower Flammable or Explosive Limit:	Not determined.
Auto Ignition Temperature:	Not determined.
Extinguishing Media:	Use carbon dioxide (CO2) or dry chemical when fighting fires involving this material.
Unsuitable Media:	Water or foam may cause frothing.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Protective Equipment:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire Hazards:	Sealed containers at elevated temperatures may rupture explosively and spread fire due to polymerization.. Heating above 300 deg F in the presence of air may cause slow oxidative decomposition and above 500 deg F may cause polymerization.

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SECTION 6 : ACCIDENTAL RELEASE MEASURES 14200

Leak Response:	Avoid personal contact and breathing vapors or mists. Ventilate area. Use proper

	personal protective equipment as listed in section 8.
Personal Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Spill Cleanup Measures:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Large Spill:	Pump or shovel to storage/salvage vessels.

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SECTION 7 : HANDLING and STORAGE 14200

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use.
Hygiene Practices:	Wash thoroughly after handling.
Special Handling Procedures:	Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product.

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SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION 14200

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, general dilution ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact.
Hand Protection Description:	Wear appropriate protective gloves. Consult glove manufacturer's data for permeability data.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor/particulates combination cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.
	Only established PEL and TLV values for the ingredients are listed below

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SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES 14200

Color:	Clear.
Odor:	Little.
Physical State:	Viscous liquid.
pH:	Neutral.
Vapor Pressure:	0.03 mmHg @171 °F
Vapor Density:	>1 (air = 1)
Boiling Point:	>500 °F (260 °C)
Melting Point:	Not determined.
Solubility in Water:	Negligible.
Specific Gravity:	1.17
Evaporation Point:	<<1 (butyl acetate = 1)
Percent Volatile:	0
Volatile Organic Compound	0 g/L

Content:	
Molecular Formula:	Varies
Molecular Weight:	Varies
Percent Solids by Weight	100

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SECTION 10 : STABILITY and REACTIVITY 14200

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions. Heating resin above 300 F in the presence of air may cause slow oxidative decomposition.
Incompatibilities with Other Materials:	Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (especially primary and secondary aliphatic amines).
Hazardous Polymerization:	Not reported.

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SECTION 11 : TOXICOLOGICAL INFORMATION 14200

Bisphenol A diglycidyl ether resin :

Skin Effects:	Skin - rat LD: >2 gm/kg - [Nutritional and Gross Metabolic - other changes] (RTECS)
Ingestion Effects:	Oral - rat LD: >5 gm/kg - [Nutritional and Gross Metabolic - other changes] (RTECS)

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SECTION 12 : ECOLOGICAL INFORMATION 14200

Ecotoxicity:	No ecotoxicity data was found for the product.
Environmental Fate:	No environmental information found for this product.

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SECTION 13 : DISPOSAL CONSIDERATIONS 14200

Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.
RCRA Hazard Class:	None

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SECTION 14 : TRANSPORT INFORMATION 14200

DOT Shipping Name:	Non-regulated
DOT UN Number:	N/A
DOT Hazard Class:	N/A
DOT Packing Group:	N/A
IATA Shipping Name:	Non-regulated
NAERG Number:	N/A
Technical Name	N/A

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SECTION 15 : REGULATORY INFORMATION 14200

Applies to All Ingredients :

TSCA 8(b): Inventory Status:	All of the constituents of this product are either TSCA listed or exempt from listing.

Bisphenol A diglycidyl ether resin :

TSCA 8(b): Inventory Status:	Listed
EC Number:	603-074-00-8
Comments:	WARNING: This product contains a chemical known to the State of California to

	cause cancer and birth defects or other reproductive harm.
Canadian Regulations	WHMIS Hazard Class(es): D2B All components of this product are on the Canadian Domestic Substances List.

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SECTION 16 : ADDITIONAL INFORMATION 14200

HMIS:	
Health Hazard:	2*
Fire Hazard:	1
Reactivity:	1
Personal Protection:	x
NFPA:	
Health:	2
Fire Hazard:	1
Reactivity:	1
MSDS Revision Date:	10/10/2006
MSDS Author:	Actio Corporation

Disclaimer:

This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment.

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ITW Permatex
Devcon Home Brand
10 Columbus Blvd.
Hartford, CT 06106 USA
Telephone: 1-87-Permatex
(877) 376-2839
Emergency: 800-255-3924 (ChemTel)
International Emergency: +01-813-248-0585

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: **DEVCON HOME FLOW-MIX 5-MINUTE EPOXY (HARDENER)**
Item No: **20445B**
Product Type: **Epoxy hardener**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component:	Weight%	ACGIH; TLV-TWA	OSHA PEL
MERCAPTAN AMINE BLEND TSRN 679485-6533P	100	Not listed	Not listed

3. HAZARDS IDENTIFICATION

Toxicity: May cause severe eye irritation. May cause nose, throat and respiratory irritation. Ingestion may irritate digestive tract and cause nausea, vomiting and diarrhea. May cause skin sensitization.

Primary Routes of Entry: Eye and skin contact, ingestion, inhalation

Signs and Symptoms of Exposure: May be injurious to eyes, skin, muscous membranes and lungs. May cause pain, redness or swelling of the eyes and excessive blinking and tear production. Repeated skin contact may cause allergic skin reactions.

Aggravated Medical Condition: Preexisting eye, skin and respiratory disorders may be aggravated by overexposure to this product.

4. FIRST AID MEASURES

Ingestion: If swallowed, do not induce vomiting - seek medical advice. Never give anything by mouth to an unconscious person.

Inhalation: Move to fresh air in case of accidental inhalation of vapours. Oxygen or artificial respiration if needed. Obtain medical attention.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point °F(C°): >200°F (>93°C)

Recommended Extinguishing Media: Carbon dioxide, Dry chemical, Foam

Special Fire-Fighting Procedures: Firefighters shoud wear self-contained breathing apparatus and protective clothing to prevent all skin and eye contact. Use water spray to cool exposed containers.

Hazardous Products of Combustion: Oxides of carbon, Oxides of nitrogen, Oxides of sulfur

Unusual Fire/Explosion Hazards: Irritating or toxic gases or fumes may be generated by thermal decomposition or combustion.

Lower Explosive Limit: n/d

Upper Explosive Limit: n/d

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal. Prevent from entering waterways or sewers.

7. HANDLING AND STORAGE

Storage: Store in a cool, dry area. Store away from heat.

Handling: Avoid contact with vapors from heated material. Avoid contact with skin and eyes. Wash thoroughly after handling. Discard contaminated leather gloves and shoes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses.
Skin: Neoprene or nitrile gloves recommended. Wash contaminated clothing before re-use.
Ventilation: Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
Respiratory Protection: An approved organic vapor respirator should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless to light yellow liquid
Odor: Mercaptan
Boiling Point: n/d
pH: Not applicable
Solubility in Water: Negligible
Specific Gravity: 1.13
VOC(Wt.%): 0
Vapor Pressure: Not Determined
Vapor Density (Air=1): n/d
Evaporation Rate: n/d

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Hazardous Polymerization: Will not occur
Incompatabilities: Strong oxidizers
Conditions to Avoid: Excessive heat
Hazardous Products of Combustion: Oxides of carbon, Oxides of nitrogen, Oxides of sulfur

11. TOXICOLOGICAL INFORMATION

Oral LD50 (rat) = >2000 mg/kg
Eye irritation: Draize = 4.8/8

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations
US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

U.S. Department of Transportation - DOT - 49 CFR (Ground)

DOT Shipping Name: Not regulated
Hazard Class: None
UN/ID Number: None

IATA (Air)

Proper Shipping Name: Aviation regulated liquid, n.o.s., (mercaptan amine blend), Limited Quantity
Class or Division: Class 9
UN/ID Number: UN 3334

IMDG (Vessel)

Proper Shipping Name: Not regulated
Hazard Class: None
UN Number: None

Marine Pollutant: None

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

None

California Proposition 65: No California Prop 65 chemicals are known to be present.

TSCA Inventory Status: All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 2, FLAMMABILITY 1 , REACTIVITY 0.
Estimated HMIS Classification: HEALTH 2, FLAMMABILITY 1, PHYSICAL HAZARD 0
(NFPA is a registered trademark of the National Fire Protection Association)
(HMIS is a registered trademark of the National Paint and Coatings Association)

Prepared By: Denise Boyd, Manager-Environmental, Health & Safety
Company: ITW Permatex 10 Columbus Blvd. Hartford, CT USA 06106
Telephone No.: 1-87-Permatex (877) 376-2839

Revision Date: April 04, 2014
Revision Number: 4

ITW Permatex
Devcon Home Brand
10 Columbus Blvd.
Hartford, CT 06106 USA
Telephone: 1-87-Permatex
(877) 376-2839
Emergency: 800-255-3924 (ChemTel)
International Emergency: +01-813-248-0585

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: **DEVCON HOME FLOW-MIX 5 MINUTE EPOXY (RESIN)**
Item No: **20445**
Product Type: **Epoxy resin**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component:	Weight%	ACGIH; TLV-TWA	OSHA PEL
EPOXY RESIN (EPICHLOROHYDRIN, BISPHENOL A) 25085-99-8	100	Not listed	Not listed

3. HAZARDS IDENTIFICATION

Toxicity: Causes moderate eye irritation. Causes moderate skin irritation. May cause skin sensitization.
Primary Routes of Entry: Eye and skin contact, ingestion, inhalation
Signs and Symptoms of Exposure: May cause pain, redness or swelling of the eyes and excessive blinking and tear production. Repeated skin contact may cause allergic skin reactions. Contact with product at elevated temperatures can result in thermal burns. Ingestion may cause nausea and vomiting. Excessive accidental exposure may cause headache, dizziness, nausea and mild respiratory irritation.

Component:	Weight%	NTP	ACGIH Carcinogens	IARC Carcinogen
EPOXY RESIN (EPICHLOROHYDRIN, BISPHENOL A) 25085-99-8	100			Bisphenol A; Group 3, Vol. 71, pg 1285; 1999

Aggravated Medical Condition: Preexisting eye, skin and respiratory disorders may be aggravated by overexposure to this product.

4. FIRST AID MEASURES

Ingestion: If swallowed, do not induce vomiting - seek medical advice. Never give anything by mouth to an unconscious person.
Inhalation: Move to fresh air in case of accidental inhalation of vapors. Obtain medical attention.
Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point °F(C°): >400°F (>204°C)
Recommended Extinguishing Media: Carbon Dioxide, Dry Chemicals, Foam.
Special Fire-Fighting Procedures: Material will not burn unless preheated. Firefighters should wear self-contained breathing apparatus. Use water spray to cool exposed containers.
Hazardous Products of Combustion: Oxides of carbon, Aldehydes, Acid vapors
Unusual Fire/Explosion Hazards: May decompose above 300 degrees F.; may polymerize above 500 degrees F. in which case closed containers may rupture or explode. Fumes and vapor from thermal and chemical decomposition vary in composition and toxicity. Do not breathe fumes.

Lower Explosive Limit: n/d
Upper Explosive Limit: n/d

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal. Prevent from entering waterways or sewers.

7. HANDLING AND STORAGE

Storage: Store in a cool, dry area. Store away from heat.
Handling: Use in a well ventilated area. Avoid contact with skin and eyes. Wash thoroughly after handling. Discard contaminated leather gloves and shoes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses
Skin: Neoprene or nitrile gloves recommended.
Ventilation: Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
Respiratory Protection: An approved organic vapor respirator should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear viscous liquid
Odor: Slight
Boiling Point: >500°F
pH: Neutral
Solubility in Water: Negligible
Specific Gravity: 1.16
VOC(Wt.%): 0
Vapor Pressure: 0.03 mmHg @ 171°F
Vapor Density (Air=1): >1
Evaporation Rate: <1 (butyl acetate = 1)

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Hazardous Polymerization: Will not occur
Incompatabilities: Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (especially primary and secondary aliphatic amines)
Conditions to Avoid: Excessive heat
Hazardous Products of Combustion: Oxides of carbon, Aldehydes, Acid vapors

11. TOXICOLOGICAL INFORMATION

Oral LD50 (rat) = >15,0000 mg/kg

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations
US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

U.S. Department of Transportation - DOT - 49 CFR (Ground)

DOT Shipping Name: Not regulated
Hazard Class: None
UN/ID Number: None

IATA (Air)

Proper Shipping Name: Not regulated
Class or Division: None
UN/ID Number: None

IMDG (Vessel)

Proper Shipping Name: Not regulated
Hazard Class: None
UN Number: None

Marine Pollutant: None

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

NONE

California Proposition 65: No California Prop 65 chemicals are known to be present.

TSCA Inventory Status: All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 2, FLAMMABILITY 1 , REACTIVITY 0.
Estimated HMIS Classification: HEALTH 2, FLAMMABILITY 1, PHYSICAL HAZARD 0
(NFPA is a registered trademark of the National Fire Protection Association)
(HMIS is a registered trademark of the National Paint and Coatings Association)

Prepared By: Denise Boyd, Manager-Environmental, Health & Safety
Company: ITW Permatex 10 Columbus Blvd. Hartford, CT USA 06106
Telephone No.: 1-87-Permatex (877) 376-2839

Revision Date: April 08, 2014
Revision Number: 6

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 296.00
Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Dextrose

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300 **Signal Word** **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Dextrose, anhydrous	492-62-6	$C_6H_{12}O_6$	180.16	
Synonyms: alpha-D-glucose; Glucose; Sugar				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, sugars, amines, amides, imines and imides.
Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless to white crystals. Odorless.
Soluble: Water. Slightly in alcohol.

Melting point: 153-156 ^{o}C
Specific gravity: 1.544
Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Avoid strong oxidizers.
Shelf life: Good, if kept dry.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

EINECS-listed (207-757-8).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: February 6, 2014

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Material Safety Data Sheet
D-Fructose

ACC# 06165

Section 1 - Chemical Product and Company Identification

MSDS Name: D-Fructose
Catalog Numbers: AC161350010, AC161350025, AC161355000, AC219570010, AC219572500, S72221C, S76787, S80020, S93276, L95-500, L96-12, L96-212, L96-500, L96100LB
Synonyms: Fruit sugar; D(-)-Fructose; Levulose; Fructose.
Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
57-48-7	D-Fructose	>98	200-333-3

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white crystalline powder.
Caution! May cause eye irritation. This is expected to be a low hazard for usual industrial handling.
Target Organs: None.

Potential Health Effects

Eye: May cause eye irritation.
Skin: Low hazard for usual industrial handling.
Ingestion: Low hazard for usual industrial handling.
Inhalation: Dust is irritating to the respiratory tract. Low hazard for usual industrial handling.
Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medi cal aid.
Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated

clothing and shoes. Get medical aid if irritation develops or persists.
Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid if irritation or symptoms occur.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Dust from this material can form explosive organic dust cloud.
Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.
Flash Point: Not applicable.
Autoignition Temperature: Not applicable.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 0; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid breathing dust.
Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
D-Fructose	none listed	none listed	none listed

OSHA Vacated PELs: D-Fructose: No OSHA Vacated PELs are listed for this chemical.
Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Protective garments not normally required.
Clothing: Protective garments not normally required.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder
Appearance: white
Odor: Not available.
pH: Not available.
Vapor Pressure: Not available.
Vapor Density: Not available.
Evaporation Rate: Not applicable.
Viscosity: Not available.
Boiling Point: Not available.
Freezing/Melting Point:103-105 deg C (dec)
Decomposition Temperature:103-105 deg C
Solubility: Freely Soluble.
Specific Gravity/Density: Not available.
Molecular Formula:C6H12O6
Molecular Weight:180.16

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid: Dust generation, moisture, excess heat.
Incompatibilities with Other Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 57-48-7: LS7120000
LD50/LC50:
Not available.

Carcinogenicity:
CAS# 57-48-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.
Teratogenicity: No information available.

Reproductive Effects: No information available.
Mutagenicity: No information available.
Neurotoxicity: No information available.
Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not Regulated	Not Regulated
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 57-48-7 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
Section 313 No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 57-48-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

Not available.

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 57-48-7: 0

Canada - DSL/NDSL

CAS# 57-48-7 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of Not controlled..

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 12/12/1997
Revision #7 Date: 6/23/2006

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

Glucose, Anhydrous

MSDS # 308.00

Section 1: Product and Company Identification

Glucose, Anhydrous

Synonyms/General Names: D-Glucose Anhydrous, dextrose
Product Use: For educational use only
Manufacturer: Columbus Chemical Industries, Inc., Columbus, WI 53925.

24 Hour Emergency Information Telephone Numbers

CHEMTREC (USA): 800-424-9300 **CANUTEC (Canada): 613-424-6666**

ScholAR Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

Section 2: Hazards Identification

White crystalline powder; no odor.

HMIS (0 to 4)

Health	0
Fire Hazard	0
Reactivity	0

This material is not considered hazardous. Not for human consumption
Target organs: None known.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Section 3: Composition / Information on Ingredients

Glucose, anhydrous (50-99-7), 100%

Section 4: First Aid Measures

Always seek professional medical attention after first aid measures are provided.

Eyes: Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.
Skin: Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.
Ingestion: Call Poison Control immediately. Rinse mouth with cold water. Give victim 1-2 cups of water or milk to drink. Induce vomiting immediately.
Inhalation: Remove to fresh air. If not breathing, give artificial respiration.

Section 5: Fire Fighting Measures



Nonflammable solid. When heated to decomposition, emits acrid fumes.
Protective equipment and precautions for firefighters: Use foam or dry chemical to extinguish fire. Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA). Cool container with water spray. Material is not sensitive to mechanical impact or static discharge.

Section 6: Accidental Release Measures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Sweep up spill and place in sealed bag or container for disposal. Wash spill area after pickup is complete. See Section 13 for disposal information.

Section 7: Handling and Storage Green

Handling: Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skins, eyes, or clothing. Wash hands thoroughly after handling.
Storage: Store in General Storage Area [Green Storage] with other items with no specific storage hazards. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials.

Section 8: Exposure Controls / Personal Protection

Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Use NIOSH-approved respirator with a dust cartridge. Exposure guidelines: Dextrose: OSHA PEL: Not Available, ACGIH: TLV: Not Available, STEL: Not Available.

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Section 9: Physical and Chemical Properties

Molecular formula	$C_6H_{12}O_6$.	**Appearance**	White crystalline powder.
Molecular weight	180.16.	**Odor**	None.
Specific Gravity	N/A.	**Odor Threshold**	N/A.
Vapor Density (air=1)	6.3.	**Solubility**	Soluble in water .
Melting Point	N/A.	**Evaporation rate**	N/A. *(Butyl acetate = 1).*
Boiling Point/Range	N/A.	**Partition Coefficient**	N/A. *(log P_{OW}).*
Vapor Pressure (20°C)	N/A.	**pH**	N/A.
Flash Point:	N/A.	**LEL**	N/A.
Autoignition Temp.:	N/A.	**UEL**	N/A.

N/A = Not available or applicable

Section 10: Stability and Reactivity

Avoid heat and moisture.
Stability: Stable under normal conditions of use and storage.
Incompatibility: Strong oxidizers.
Shelf life: Fair shelf life, store in a cool, dry environment

Section 11: Toxicology Information

Acute Symptoms/Signs of exposure: ***Eyes***: Redness, tearing, itching, burning, conjunctivitis. ***Skin***: Redness, itching. ***Ingestion***: Irritation and burning sensations of mouth and throat, nausea, vomiting and abdominal pain. ***Inhalation***: Irritation of mucous membranes, coughing, wheezing, shortness of breath,
Chronic Effects: No information found.
Sensitization: none expected
Dextrose: LD50 [oral, rat]; N/A; LC50 [rat]; N/A; LD50 Dermal [rabbit]; N/A
Material has not been found to be a carcinogen nor produce genetic, reproductive, or developmental effects.

Section 12: Ecological Information

Ecotoxicity (aquatic and terrestrial): Not considered an environmental hazard.

Section 13: Disposal Considerations

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Small amounts of this material may be suitable for sanitary sewer or trash disposal.

Section 14: Transport Information

DOT Shipping Name:	Not regulated by DOT.	**Canada TDG:**	Not regulated by TDG.
DOT Hazard Class:		**Hazard Class:**	
Identification Number:		**UN Number:**	

Section 15: Regulatory Information

EINECS: Listed (200-075-1) .
TSCA: All components are listed or are exempt.
WHMIS Canada: Not WHMIS Controlled.
California Proposition 65: Not listed.

The product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16: Other Information

Current Issue Date: September 19, 2009

Disclaimer: Scholar Chemistry and Columbus Chemical Industries, Inc., ("S&C") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because S&C has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. ***S&C makes no warranty, expressed or implied, including (without limitation) warranties with respect to the completeness or continuing accuracy of the information contained herein or with respect to fitness for any particular use.***

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MATERIAL SAFETY DATA SHEET
(Similar to OSHA FORM 174)

N.A. = Not Applicable
Not Est. = Not Established
Prop. = Proprietary

Section 1 - Manufacturer / Distributor Information

Product Name DIAMOND GLOSS Step 2 - Stone Rejuvenator **Product #** 2523

Supplier's Name National Chemical Laboratories of PA, Inc.

Supplier's Address 401 N. 10th Street - Philadelphia, PA 19123 **Emergency Phone No** 1 (800) 255-3924

HMIS Hazard Code **Health** 2 **Flammability** 0 **Phys Hazard** 1 **Chemical Name** N.A. Proprietary Blend

Chemical Family Blended Cleaner **Formula** N.A. Blended Product

DOT Shipping Name ORM-D **Hazard Class** N/A

PKG Group

DOT ID # N/A

Section 2 - Hazardous Ingredients

CHEMICAL NAME	CAS NUMBER	% Concentration Range	Exposure Limit ACGIH TLV/PEL
Phosphoric Acid*	7664-38-2	PROP.	1 mg/m3
Magnesium Silico Fluoride	16949-65-8	PROP.	2.5 mg/m3

*Components are reportable under SARA Title III.

Section 3 - Physical Data

Boiling Point (F) N/A **Specific Gravity** 1.160

Vapor Pressure N/A **Evaporation Rate** N/A

Vapor Density N/A **pH**

Solubility in Wate Complete **pH(1)**

Appearance Thin, violet liquid **pH(2)**

Odor Mild, sweet **VOC Content**

Section 4 - Fire and Explosion Data

Flammable Limits N/A **LEL** **UEL**

Fire Fighting Equipment Cool material with water spray

Extinguishing Media

Unusual Fire Explosion Hazards None

Hazardous Combustion Products

Section 5 - Health Hazard Data

Routes of Entry **Inhalation** ☑ **Skin** ☑ **Ingestion** ☑

Effects of Over exposure Corrosive to eyes and skin causing chemical burns, respiratory irritation and possible injury from breathing mist. May be fatal if large amounts are ingested.

Emergency and First Aid Procedures For Eyes: Flush eyes with water for at least fifteen minutes. If irritation persists seek medical attention. If ingested: Seek immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person. For Skin: Wipe off gently and immediately flood surface with water using soap freely. Then cover with moist baking soda or magnesia. If irritation persists seek medical attention. Inhalation: Move to fresh air, seek medical attention.

Conditions Aggravated by Exposure None determined **Threshold Limit Value** Not Est.

Listed Health Hazards (acute or chronic):: Corrosive to skin and eyes.
Carcinogenicity: NTP? IARC Monographs ? OSHA Regulated? NA

Statement regarding Green Seal, Inc. Certification

Section 6 - Reactivity Data

Stability Stable

Conditions to Avoid N/A

Incompatibility Can react with metals to liberate flammable hydrogen

Flash Point (F) None to boiling (TOC)

Hazardous Polymerization Will not occur.

Hazardous Decomposition Products

Section 7 - Spill and Leak Procedures

Spill Steps	Flush with plenty of water or neutralize with soda and slated lime.
Waste Disposal Method	Dispose of in accordance with government regulations.

Section 8 - Special Protection Information

Respiratory Protection	NIOSH approved respirator for exposure exceeding limits cited in Section 2.
Ventilation	Local exhaust adequate. Special: None needed. Mechanical (general) adequate.
Protective Gloves	Recommended
Eye Protection	Goggles or safety glasses with side shields.
Other Protective Equipment	Face shield and rubber apron may be worn.
Work /Hygenic Practices	Normal good housekeeping and manufacturing procedures.

Section 9 - Special Precautions

Precautions Handling Storage	Avoid contact with skin or eyes. When storing, make sure containers are not too full, under extremely hot conditions, allow room for expansion.
Other Precautions	None known. Keep out of reach of children. For Commercial and Industrial Use Only.
CA Proposition 65 Statement	

The information contained in this MSDS was obtained from current and reliable sources, however the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of this company, it is not responsible for loss, injury and expense arising out of the product's improper use. No warranty, expressed or inferred, regarding the product described in this MSDS shall be created or inferred by any statement in this MSDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use or disposal of this product which may be covered by this MSDS. The user is responsible for full compliance

Date Prepared 7/10/2006 **Prepared By** G.C.

MATERIAL SAFETY DATA SHEET

QUICK IDENTIFIER (IN PLANT COMMON NAME)

INFIELD CONDITIONER

WARNING! AVOID BREATHING EXCESSIVE DUST - Excessive exposure by breathing over an extended period of time may result in the development of pulmonary diseases including pneumoconiosis and silicosis. It contains a small amount of crystalline silica which has been determined by IARC and NTP to be a carcinogen. Use with adequate ventilation. Avoid contact with eyes.

HEALTH	2*
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	X

SECTION 1 - IDENTITY

Company: TEXAS INDUSTRIES, 1341 W. MOCKINGBIRD LANE, DALLAS, TEXAS 75247
Emergency Telephone Number: 972/647-6700
Person Responsible for Preparation: NANCY GARNETT
Date: FEBRUARY 1998
Common Name (used on label): DIAMOND PRO INFIELD CONDITIONER
Chemical Family: VITRIFIED SHALE OR CLAY
Chemical Name: SILICATES
Formula: DOES NOT APPLY
Trade Name & Synonyms: DIAMOND PRO, INFIELD CONDITIONER

SECTION 2 - HAZARDOUS INGREDIENTS

Hazardous Component	CAS #	% Typical	TLV (Units)	PEL (Units)
Quartz	14808-60-7	20-30	0.1 mg/m^{3*}	0.1 mg/m^{3*}
Cristobalite	14464-46-1	0-3	0.05 mg/m^{3*}	0.05 mg/m^{3*}

Diamond Pro Infield Conditioner is made from a mined shale or clay which is heated in a rotary kiln to drive off moisture. This heating process causes the shale or clay to expand. This decreases the density of the material compared to the mined materials. No chemicals are added to the expanded materials. The final chemical structure is primarily noncrystalline silicates.

* Only particle sizes of 10 micrometers or less are considered to be respirable (breathable) and of possible hazard if exposure occurs.

PEL: Permissible Exposure Limit established by the Occupational Safety and Health Administration (OSHA).
TLV: Threshold Limit Value established by the American Conference of Governmental Industrial Hygienists (ACGIH).

SECTION 3 - PHYSICAL DATA

Boiling Point
DOES NOT APPLY

Specific Gravity (H_2O = 1)
0.8 - 1.6

Vapor Pressure (mm = Hg)
DOES NOT APPLY

Percent Volatile by Volume
0%

Vapor Density (Air = 1)
DOES NOT APPLY

Evaporation Rate (n=Butyl Acetate)
DOES NOT APPLY

Percent Soluble in Water
NEGLIGIBLE(<0.1%)

Reactivity in Water
WILL NOT EVOLVE FLAMMABLE OR TOXIC GASES

Appearance and Odor
FINE TO COARSE GRANULAR SOLID. DARK RED TO PURPLE IN COLOR. NO ODOR.

SECTION 4 - FIRE AND EXPLOSION DATA

Flash Point
WILL NOT IGNITE

Flammable Limits in Air (% by Volume)
Lower: DOES NOT APPLY *Upper:* DOES NOT APPLY

Extinguishing Media
DOES NOT APPLY

Auto Ignition Temperature
DOES NOT APPLY

Unusual Fire and Explosion Hazards
NONE

Special Fire Fighting Procedures
NONE

SECTION 5 - HEALTH INFORMATION

Signs and Symptoms of Exposure - *Acute Overexposure* - This is exposure of large amounts in a short period of time: INHALATION OF DUST MAY RESULT IN BLOCKAGE OF NASAL AND RESPIRATORY PASSAGES. MAY CAUSE ABRASION OF THE CORNEA.

Signs and Symptoms of Exposure - *Chronic Overexposure* - This is exposure of small to moderate amounts over a long period of time: AS IS TRUE WITH ANY MINERAL PRODUCT, LONG TERM OVEREXPOSURE TO THIS DUST WITHOUT THE USE OF A DUST MASK MAY PRODUCE X-RAY EVIDENCE OF DUST IN THE LUNGS. LONG TERM EXPOSURE TO QUARTZ OR CRISTOBALITE MAY RESULT IN THE DEVELOPMENT OF PULMONARY DISEASES INCLUDING PNEUMOCONIOSIS, SILICOSIS, AND LUNG CANCER. DUST CAN CAUSE INFLAMMATION OF THE LINING TISSUE OF THE NOSE AND INFLAMMATION OF THE EYES.

Medical Conditions Generally Aggravated by Exposure: RESPIRATORY (LUNG) DISORDERS OR DISEASES MAY BE AGGRAVATED BY EXPOSURE TO ANY DUST INCLUDING DIAMOND PRO.

Chemical/Component Listed as Carcinogen: QUARTZ AND CRISTOBALITE
NTP: YES
IARC: YES
OSHA: NO

Other Exposure Limits
NONE

Emergency & First Aide Procedures for Indicated Routes of Entry:

INHALATION: REMOVE FROM EXPOSURE. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CONSULT A PHYSICIAN. EYES: WASH EYES WITH RUNNING WATER. DO NOT RUB. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

SECTION 6 - REACTIVITY DATA

Stability
STABLE

Conditions to Avoid
DOES NOT APPLY

Incompatibility (Materials to Avoid)
NONE DETERMINED

Hazardous Decomposition or Combustion Products
NONE DETERMINED

Hazardous Polymerization
WILL NOT OCCUR

SECTION 7 - SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Leaked or Spilled
CLEAN-UP OF SPILL MAY REQUIRE PERSONAL PROTECTIVE EQUIPMENT TO PREVENT DUST EXPOSURES. SEE SECTION 8.

Waste Disposal Method
IF THIS MATERIAL, AS PROVIDED BY THE MANUFACTURER, BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A HAZARDOUS WASTE AS DEFINED BY THE ENVIRONMENTAL PROTECTION AGENCY UNDER THE AUTHORITY OF THE RESOURCE CONSERVATION AND RECOVERY ACT (40 CFR 261). DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 8 - PERSONAL PROTECTION INFORMATION

Respiratory Protection
NIOSH/MSHA APPROVED DUST MASK OR RESPIRATOR FOR PROTECTION AGAINST SILICA AND NUISANCE DUST.

Ventilation
GENERAL OR LOCAL EXHAUST, SUCH AS A FAN, TO MAINTAIN EXPOSURE BELOW TLV/PEL.

Protective Gloves
TO PROTECT AGAINST ABRASION.

Eye Protection
SAFETY GLASSES, GOGGLES, OR FACE SHIELD, WHEN NECESSARY TO PREVENT EYE CONTACT.

Other Protective Clothing or Equipment
NONE

SECTION 9 - SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing
SHOULD BE STORED IN A MANNER TO PREVENT GENERATION OR ACCUMULATION OF DUST.

Other Precautions
NONE DETERMINED

The information contained within was obtained from authoritative sources and is believed to be accurate for the manner in which the product is intended to be used. Other uses could result in ramifications which are not included within this document.

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 299.00
Revision Date: March 5, 2015

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Diatomaceous Earth

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms





SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P260).

Hazard class: Specific target organ toxicity, repeated exposure (Category 2). May cause damage to organs through prolonged or repeated exposure (H373). Do not breathe dust or fumes (P260). Do not eat, drink or smoke when using this product (P270).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Diatomaceous earth	68855-54-9	SiO_2	60.08	
Synonyms: Celite; Infusorial earth				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.
Moisture sensitive material, store in a Flinn Chem-Saf™ bag. Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).
Exposure guidelines: PEL 80 mg/m^3/%SiO_2 (OSHA)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White to buff-colored solid (88% silica). Slightly spicy odor.
Soluble: Strong alkalies. No acids except hydrofluoric.

Specific gravity: 1.9-2.35

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with hydrofluoric acid.
Shelf life: Good, if kept dry.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Harmful dust, eye irritant.
Chronic effects: N.A.
Target organs: Lungs.

ORL-RAT LDL_0: >5000 mg/kg
IHL-RAT LCL_0: 2190 mg/m^3/4H
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 5, 2015

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Safety Data Sheet

Material Name: Diesel Fuel, All Types

SDS No. 9909
US GHS

Synonyms: Ultra Low Sulfur Diesel; Low Sulfur Diesel; No. 2 Diesel; Motor Vehicle Diesel Fuel; Non-Road Diesel Fuel; Locomotive/Marine Diesel Fuel

* * * Section 1 - Product and Company Identification * * *

Manufacturer Information

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

Phone: 732-750-6000 Corporate EHS
Emergency # 800-424-9300 CHEMTREC
www.hess.com (Environment, Health, Safety Internet Website)

* * * Section 2 - Hazards Identification * * *

GHS Classification:

Flammable Liquids - Category 3
Skin Corrosion/Irritation – Category 2
Germ Cell Mutagenicity – Category 2
Carcinogenicity - Category 2
Specific Target Organ Toxicity (Single Exposure) - Category 3 (respiratory irritation, narcosis)
Aspiration Hazard – Category 1
Hazardous to the Aquatic Environment, Acute Hazard – Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

DANGER

Hazard Statements

Flammable liquid and vapor.
Causes skin irritation.
Suspected of causing genetic defects.
Suspected of causing cancer.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May be fatal if swallowed and enters airways.
Harmful to aquatic life.

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep container tightly closed.
Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and forearms thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/mist/vapours/spray.

Response
In case of fire: Use water spray, fog or foam to extinguish.
IF ON SKIN (or hair): Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
If swallowed: Immediately call a poison center or doctor. Do NOT induce vomiting.
IF exposed or concerned: Get medical advice/attention.

Storage
Store in a well-ventilated place. Keep cool.
Keep container tightly closed.
Store locked up.

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
68476-34-6	Fuels, diesel, no. 2	100
91-20-3	Naphthalene	<0.1

A complex mixture of hydrocarbons with carbon numbers in the range C9 and higher.

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes
In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

First Aid: Skin
Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or with waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and the area of the body burned.

First Aid: Ingestion
DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

First Aid: Inhalation

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, and other gaseous agents.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

* * * Section 6 - Accidental Release Measures * * *

Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Caution, flammable vapors may accumulate in closed containers.

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Handle as a combustible liquid. Keep away from heat, sparks, excessive temperatures and open flame! No smoking or open flame in storage, use or handling areas. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks."

Incompatibilities

Keep away from strong oxidizers.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

Fuels, diesel, no. 2 (68476-34-6)

ACGIH: 100 mg/m3 TWA (inhalable fraction and vapor, as total hydrocarbons, listed under Diesel fuel)
Skin - potential significant contribution to overall exposure by the cutaneous route (listed under Diesel fuel)

Naphthalene (91-20-3)

ACGIH: 10 ppm TWA
15 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 10 ppm TWA; 50 mg/m3 TWA
NIOSH: 10 ppm TWA; 50 mg/m3 TWA
15 ppm STEL; 75 mg/m3 STEL

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Personal Protective Equipment: Hands

Gloves constructed of nitrile, neoprene, or PVC are recommended.

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Skin and Body

Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Clear, straw-yellow.	**Odor:**	Mild, petroleum distillate odor
Physical State:	Liquid	**pH:**	ND
Vapor Pressure:	0.009 psia @ 70 °F (21 °C)	**Vapor Density:**	>1.0
Boiling Point:	320 to 690 °F (160 to 366 °C)	**Melting Point:**	ND
Solubility (H2O):	Negligible	**Specific Gravity:**	0.83-0.876 @ 60°F (16°C)
Evaporation Rate:	Slow; varies with conditions	**VOC:**	ND
Percent Volatile:	100%	**Octanol/H2O Coeff.:**	ND
Flash Point:	>125 °F (>52 °C) minimum	**Flash Point Method:**	PMCC
Upper Flammability Limit (UFL):	7.5	**Lower Flammability Limit (LFL):**	0.6
Burning Rate:	ND	**Auto Ignition:**	494°F (257°C)

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

Incompatible Products

Keep away from strong oxidizers.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

A: General Product Information

Harmful if swallowed.

B: Component Analysis - LD50/LC50

Naphthalene (91-20-3)

Inhalation LC50 Rat >340 mg/m3 1 h; Oral LD50 Rat 490 mg/kg; Dermal LD50 Rat >2500 mg/kg; Dermal LD50 Rabbit >20 g/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Contact with eyes may cause mild irritation.

Potential Health Effects: Ingestion

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

Potential Health Effects: Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This material has been positive in a mutagenicity study.

Carcinogenicity

A: General Product Information

Suspected of causing cancer.

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

B: Component Carcinogenicity

Fuels, diesel, no. 2 (68476-34-6)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans (listed under Diesel fuel)

Naphthalene (91-20-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
NTP: Reasonably Anticipated To Be A Human Carcinogen (Possible Select Carcinogen)
IARC: Monograph 82 [2002] (Group 2B (possibly carcinogenic to humans))

Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

Specified Target Organ General Toxicity: Single Exposure

This product is not reported to have any specific target organ general toxicity single exposure effects.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ general toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Fuels, diesel, no. 2 (68476-34-6)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	35 mg/L [flow-through]	

Naphthalene (91-20-3)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	5.74-6.44 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	1.6 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	0.91-2.82 mg/L [static]	
96 Hr LC50 Pimephales promelas	1.99 mg/L [static]	

96 Hr LC50 Lepomis macrochirus	31.0265 mg/L [static]
72 Hr EC50 Skeletonema costatum	0.4 mg/L
48 Hr LC50 Daphnia magna	2.16 mg/L
48 Hr EC50 Daphnia magna	1.96 mg/L [Flow through]
48 Hr EC50 Daphnia magna	1.09 - 3.4 mg/L [Static]

Persistence/Degradability
No information available.

Bioaccumulation
No information available.

Mobility in Soil
No information available.

* * * Section 13 - Disposal Considerations * * *

Waste Disposal Instructions
See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging
Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 14 - Transportation Information * * *

DOT Information
Shipping Name: Diesel Fuel
NA #: 1993 **Hazard Class:** 3 **Packing Group:** III
Placard:



* * * Section 15 - Regulatory Information * * *

Regulatory Information

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Naphthalene (91-20-3)

CERCLA: 100 lb final RQ; 45.4 kg final RQ

SARA Section 311/312 – Hazard Classes

Acute Health	Chronic Health	Fire	Sudden Release of Pressure	Reactive
X	X	X	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product may contain listed chemicals below the de minimis levels which therefore are not subject to the supplier notification requirements of Section 313 of the Emergency Planning and Community Right- To-Know Act (EPCRA) of 1986 and of 40 CFR 372. If you may be required to report releases of chemicals listed in 40 CFR 372.28, you may contact Hess Corporate Safety if you require additional information regarding this product.

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Fuels, diesel, no. 2	68476-34-6	No	No	No	Yes	No	No
Naphthalene	91-20-3	Yes	Yes	Yes	Yes	Yes	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

Additional Regulatory Information

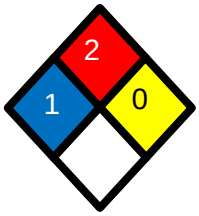
Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Fuels, diesel, no. 2	68476-34-6	Yes	DSL	EINECS
Naphthalene	91-20-3	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

NFPA® Hazard Rating

Health	1
Fire	2
Reactivity	0



HMIS® Hazard Rating

Health	1*	Slight
Fire	2	Moderate
Physical	0	Minimal
		*Chronic

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; AS = Standards Australia; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EU = European Union; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NOHSC = National Occupational Health & Safety Commission; NTP = National Toxicology Program; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average

Literature References

None

Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

End of Sheet

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 310.00
Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Diphenylamine

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302).

Hazard class: Acute toxicity, dermal and inhalation (Category 3). Toxic if inhaled or in contact with skin (H311). Avoid breathing dust or fume (P261). Do not eat, drink or smoke when using this product (P270).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Diphenylamine	122-39-4	$(C_6H_5)_2NH$	169.2	
Synonyms: Anilinobenzene; Phenylaniline				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If on skin: Wash with plenty of water (P302+P352). Remove immediately all contaminated clothing (P361). Wash contaminated clothing before reuse (P363).
If swallowed: Rinse mouth (P330).

SECTION 5 — FIRE FIGHTING MEASURES

Combustible solid.
Flash point: 153 °C Autoignition Temperature: 634 °C
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
H-2
F-1
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides.
Light sensitive. Store in a cool, dry place away from light. Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).
Exposure guidelines: TLV 10 mg/m^3 (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White to tan flakes. Strong floral odor.
Soluble: Most organic solvents. Insoluble in water.

Boiling point: 302 ^oC
Melting point: 53 ^oC
Specific gravity: 1.158

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizing agents and strong acids.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Mucous membrane irritation, cyanosis, respiratory depression, somnolence, methemoglobinemia.
Chronic effects: Possible mutagen, possible teratogen.
Target organs: Eyes, skin, blood, bladder, reproductive organs.

ORL-RAT LD_{50}: 1120 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #5 is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated, Hazard class: N/A, UN number: N/A

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (204-539-4).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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NFPA Rating

Health	Flammability	Reactivity	Special
1	**3**	**0**	**NA**

HMIS Rating

Health	Flammability	Reactivity	Personal Protection
3	**2**	**0**	**B**

Material Safety Data Sheet

This MSDS complies with OSHA's Hazard Comm. Standard 29 CFR 1910.1200 and OSHA Form 174

DOT Hazard Classification *
Consumer Commodity, ORM-D

Manufactured For:
Hillyard Industries, Inc.

Identity (Trade Name)
#181, Disinfectant-Deodorant

Address:
P.O. Box 909

MSDS Number *
181-95-1

St. Joseph, MO 64502

Date Prepared:
February 14, 1995

Telephone (Information)
(816) 233-1321 (Ext.2303)

Prepared By:
Regulatory Dept.

Telephone (Emergency)
CHEMTREC
(1-800-424-9300)

NOTE: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

SECTION II - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS - Chemical Name & Common Names	CAS Number	Regulatory Reference **	Approx. wt %	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Reference Source***
Ethyl alcohol	64-17-5	b,c,d,e,f,g,i,j	68.00	1000	1000	d
o-Phenylphenol	90-43-7	f,g,i	0.19	None	None	d
Other non-regulated ingredients:	Mixture	None	25 - 35	None	None	d

SECTION III Physical/Chemical Characteristics

Boiling Point	176° F	**Specific Gravity (H_2O = 1)** @70° F	0.83
Vapor Pressure (mm-Hg @ 70° F)	No Data	**Melting Point**	Not Applicable
Vapor Density (AIR= 1)	Less than one (1)	**Evaporation Rate (Ethyl Ether = 1)**	No Data
Solubility in Water	Complete	**pH**	8.5 ± 0.5

Appearance and Odor -
Clear light yellow liquid with a floral-alcohol scent.

SECTION IV - Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
73° F (TCC)	No Data	No Data	No Data

Extinguishing Media - Carbon dioxide, dry chemical, foam, fog, or water spray.

Special Fire Fighting Procedures - Keep containers cool and vapors down with water spray. Prevent runoff from entering sewers and public waterways. Wear SCBA in chemical fires.

Unusual Fire and Explosion Hazards - Flammable liquid.

* Optional ** Regulated by :

a.	CA	f.	MA	k.	Calif. Prop. 65	a.	NTP
b.	CT	g.	NJ	l.	Title III, Sec. 313	b.	IARC Monographs
c.	FL	h.	NY	m.	Other_____	c.	OSHA
d.	IL	i.	PA			d.	Not listed
e.	LA	j.	RI			e.	Animal data only

*** Chemical listed as Carcinogen or Potential Carcinogen

SECTION V - Reactivity Data

Stability	**Unstable**		**Conditions to Avoid** - None known
	Stable	X	

Incompatibility (Materials to Avoid) - Strong acids and oxidizers.

Hazardous Decomposition or Byproducts - Carbon dioxide, carbon monoxide

Hazardous	**May Occur**		**Conditions to Avoid** - None known
Polymerization	**Will Not Occur**	X	

SECTION VI - Health Hazard Data

Route(s) of Entry	**Eyes?**	**Inhalation?**	**Skin?**	**Ingestion?**
	Yes	Yes	Yes	No

Health Hazards (Acute =1 and Chronic =2) - Danger. Flammable. Corrosive. 1. Causes eye damage. Harmful or fatal if swallowed. Causes skin irritation. 2. None known to manufacturer.

Carcinogenicity:	**NTP?**	**IARC Monographs?**	**OSHA Regulated?**
None known	No	No	No

Signs and Symptoms of Exposure - Redness, tearing or burning in eyes. Redness, drying or cracking skin. Nausea or vomiting if ingested.

Medical Conditions Generally Aggravated by Exposure - Pre-existing skin conditions may be adversely affected.

Emergency and First Aid Procedures -

Eyes - Immediately flush with copious amounts of water, lifting eyelids to insure complete removal. Flush for 15 minutes minimum. Consult a physician. **Ingestion -** Immediately drink a large quantity of water. Contact a physician immediately. **Inhalation -** Get to fresh air. If breathing has stopped, qualified personnel should administer artificial respiration. **Skin -** Flush with water 15 minutes minimum. If irritation persists, consult a physician.

SECTION VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled - Wipe up small spills. For large spills - Isolate and ventilate area. eliminate all ignition sources. Wear protective equipment as required. Pick up with absorbent material. Put in suitable container for proper disposal.

Waste Disposal Method - Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not reuse empty container. rinse container thoroughly and discard in trash. Consult local, state, and federal regulations. Follow label directions for disposal of infectious wastes.

Precautions to be Taken in Handling and Storing - Do not get in eyes. Do not get on skin or on clothing. Do not use around ignition sources such as heat, sparks, open flame, etc. Do not swallow. Avoid inhaling mist.

Other Precautions - Follow label directions carefully. Keep out of reach of children. Keep container tightly sealed when not in use. Do not contaminate water, food, or feed by storage or disposal. Store containers indoors and in a dry area. Keep from freezing. Use from the original container only.

SECTION VIII - Control Measures

Respiratory Protection (Specify Type) - Not usually necessary. Use with adequate ventilation. Use NIOSH/MSHA approved respirator if PELs or TLVs are exceeded.

Ventilation	**Local Exhaust**	Not usually necessary	**Special**	None
	Mechanical (General)	Yes	**Other**	None

Protective Gloves - Yes (Rubber) **Eye Protection -** Goggles or faceshield.

Other Protective Clothing or Equipment - Not usually necessary.

Work/Hygienic Practices - Normal. Wash hands after use and before eating, drinking, smoking, using restrooms, etc.

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

67104-1060

Triquest, Inc. d.b.a. Do-A-Dot Art! ™

MATERIAL SAFETY DATA SHEET

Date: 12-17-2007 Ref: Z_112007M-3

SECTION I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY NAME & ADDRESS:	Triquest, Inc. d.b.a. Do-A-Dot Art! ™ 31192 La Baya Drive, # F, Westlake Village, Ca-91362
CONTACT PERSON:	Mr. Rob Pourtahmassebi & Mrs. Tina Pourtahmassebi
PHONE NUMBER:	818-597-9430
TRADE NAME:	Do-A-Dot ART!
PRODUCT NAME:	Secondary Inks: (Teal, Violet, Brown, Sunflower Yellow, Lime Green, Pink & Yellow)
CHEMICAL NAME:	Not Applicable
CHEMICAL FAMILY:	Aqueous solution
CHEMICAL FORMULA:	Mixture/solution

DOT HAZARD CLASSIFICATION: Not Available

Toxicologist: Dr. Gulzar R. Ahmad, Ph.D. DABT. CIH. ERT. CHMM.
Diplomate American Board of Toxicology
Diplomate American Board of Industrial Hygiene
EUROTOX Registered Toxicologist
Certified Safety Assessor of Cosmetics, Per EU Directive
Member National Art Materials Trade Assoc. (NAMTA)



Checked by: Dr. Dildar Ahmad M.D.

SECTION II- INGREDIENTS

Ingredients	PEL	TLV	% Weight
Water	Not Established	Not Established	95-99

Other ingredients are proprietary

SECTION III- PHYSICAL DATA

DESCRIPTION:	Colored Liquids (inks)
BOILING POINT:	100 C° at 760 mm Hg (approximately)
SPECIFIC GRAVITY (Water=1)	>1.0
VAPOR PRESSURE (mm Hg)	17.5 mm Hg at 20 C° (approximately)
% VOLATLITY BY VOULME:	95-99% (approximately)
VAPOR DENSITY (Air=1):	Not available
EVAPORATION RATE:	Almost same as water
SOLUBITY IN WATER:	Almost 100% soluble in water

SECTION IV-FIRE AND EXPOSURE HAZARD DATA

FLASH POINT:	Not Applicable
FLAMABLE LIMTS (Mixture):	Not Applicable
EXTINGUISHING MEDIUM:	Not Applicable (about 95-99% water)
SPECIAL FIRE FIGHTING PROCEDURES:	None
UNUSAL FIRE AND EXPLOSION HAZARDS: and	None under ordinary temperature conditions.

SECTION V- HEALTH HAZARD DATA

PRIMARY ROUT OF ENTRY: Ingestion

ACUTE EXPOSURE:

INGESTION:	Amount present in one container (about 2.5 Oz) is not expected to cause significant harmful effects. This product is intended to be used as art material and is not intended to be ingested.
EYE CONTACT:	May cause eye irritation, redness and/or soreness.
SKIN CONTACT:	Not expected (This product is designated as an art material and is not intended to be applied on to skin or to create temporary tattoos.)
INHALATION:	The product is not expected to generate airborne particles or fumes. Therefore, exposure through inhalation is not expected.

CHRONIC EXPOSURE: No chronic effects are expected

SECTION VI- FIRST AID MEASURES

EYE CONTACT:	Flush thoroughly with water for several minutes. If irritation, soreness or redness persists, seek medical attention.
SKIN CONTACT:	Wash skin by using soap and water. If skin irritation persists, seek medical attention.
INHALATION:	Not applicable. If inhalation exposure does occur, remove the person to fresh air.
INGESTION:	The product is considered non-toxic. However, if swallowed and symptoms develop, seek medical attention.

SECTION VII- REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: None Known

INCOMPATIBILITY: None known

HAZARDOOUS DECOMPOSITION PRODUCTS: None of any significance

HAZARDOUS POLYMERIZATION: Will not occur

SECTION VIII-SPILL AND LEAK PROCEDURE

SPILL AND LEAK PROCEDURE: Wipe and/or absorb into regular paper towels or commercial adsorbents and dispose of properly.

SECTION IX- PROTECTIVE EQUIPMENT TO BE USED

None required under normal use conditions.

SECTION X- SPECIAL PRECAUTIONS

None

DISCLAIMER

The information above is believed to be accurate and represents the best information currently available to Info. Tox. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Info Tox. International, Inc. be liable for any claims, losses, or damages of any party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising.

SAFETY DATA SHEET

1. Identification

Product identifier **DOUBLE DOWN**

Other means of identification

Product code HIL01040

Recommended use Carpet Cleaner

Recommended restrictions DO NOT USE ON ALUMINUM OR COPPER

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Manufacturer

Company name HILLYARD INDUSTRIES

Address 302 North Fourth St.
St. Joseph, MO 64501

Contact person Regulatory Affairs

Telephone number (816) 233-1321 (Ext. 8285)

Fax (816) 383-8485

E-mail regulatoryaffairs@hillyard.com

Emergency telephone # (800) 424-9300
(Only in the event of chemical emergency involving a spill, leak, fire, exposure, or accident involving chemicals.)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Serious eye damage/eye irritation Category 2

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement Causes serious eye irritation. May be harmful if swallowed.

Precautionary statement

Prevention Avoid contact with eyes Do not take internally. Wash thoroughly after handling. Wear eye/face protection.

Response If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage Store away from incompatible materials.

Disposal Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law in compliance with applicable federal, state and local requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Hydrogen Peroxide		7722-84-1	3 - < 5

Chemical name	Common name and synonyms	CAS number	%
Q3 Videt			1 - < 3
Sodium Carbonate, Anhydrous		497-19-8	1 - < 3
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion Rinse mouth. Drink plenty of water. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Avoid contact with eyes. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Hydrogen Peroxide (CAS 7722-84-1)	PEL	1.4 mg/m3
		1 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Hydrogen Peroxide (CAS 7722-84-1)	TWA	1 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Hydrogen Peroxide (CAS 7722-84-1)	TWA	1.4 mg/m3
		1 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Do not get in eyes. Chemical goggles are recommended.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other None normally required. If unable to avoid prolonged or repeated contact with skin, wear impervious clothing.

Respiratory protection Not normally required with adequate ventilation.

Thermal hazards None known.

General hygiene considerations Wash contaminated clothing before reuse. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Clear, colorless liquid

Physical state Liquid.

Form Liquid.

Color Colorless

Odor non-objectionable odor

Odor threshold Not available.

pH 9 - 10

Melting point/freezing point Not applicable / Not available

Initial boiling point and boiling range 203 °F (95 °C)

Flash point > 200.0 °F (> 93.3 °C) Tag Closed Cup

Evaporation rate < 1 Ethyl ether = 1

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 17.6 mm Hg

Vapor density 0.62 Air=1

Relative density	1.04 at 77°F
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	8.66 lb/gal
Percent volatile	94 - 95 %
VOC (Weight %)	0 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
DOUBLE DOWN		
Acute		
Inhalation		
LC50	Guinea pig	29.6296 mg/l, 2 Hours estimated
	Mouse	44.4444 mg/l, 2 Hours estimated
	Rat	170.3704 mg/l, 2 Hours estimated
Oral		
LD50	Rat	23655.5645 mg/kg estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Hydrogen Peroxide (CAS 7722-84-1) 3 Not classifiable as to carcinogenicity to humans.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product		Species	Test Results
DOUBLE DOWN			
Aquatic			
Crustacea	EC50	Daphnia	11585.1582 mg/l, 48 hours estimated
Fish	LC50	Fish	46097.5508 mg/l, 96 hours estimated

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Waste from normal product use may be sewered to a public owned treatment works (POTW) in compliance with applicable Federal, State, and local pretreatment requirements.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Triple rinse (or equivalent). Then offer clean, dry container for recycling or reconditioning.

14. Transport information

DOT

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Hydrogen Peroxide (CAS 7722-84-1) 1000 LBS

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Hydrogen Peroxide	7722-84-1	1000	1000 lbs		

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Hydrogen Peroxide (CAS 7722-84-1)

US. New Jersey Worker and Community Right-to-Know Act

Hydrogen Peroxide (CAS 7722-84-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Hydrogen Peroxide (CAS 7722-84-1)

US. Rhode Island RTK

Hydrogen Peroxide (CAS 7722-84-1)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 04-09-2015

Version # 01

HMIS® ratings Health: 2
Flammability: 0
Physical hazard: 0

Disclaimer No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products.

S A F E T Y D A T A S H E E T

DP 1030 **WHITE OR GRAY, FIBERED WATER BASED DUCT SEALANT**

========== SECTION I – PRODUCT AND COMPANY IDENTIFICATION ==========

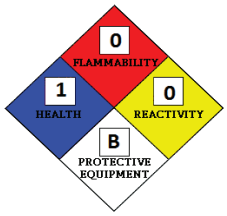
PRODUCT NAME: WHITE OR GRAY, FIBERED WATER BASED DUCT SEALANT
PRODUCT CODE: DP 1030

MANUFACTURERS' NAME: DESIGN POLYMERICS

ADDRESS: 3301 W. Segerstrom Ave.
Santa Ana, CA 92704

HMIS	
Health Hazard	1
Fire Hazard	0
Reactivity	0
Personal Protection	B

EMERGENCY PHONE: Chem-Tel: (800) 255-3924 (24 Hrs)
BUSINESS HOURS: 7:30am – 4:30pm PT
CONTRACT NUMBER: MIS0005056
REVISION DATE: January 24, 2014
INFORMATION PHONE: (714) 432-0600
REVISION #: 14.1
PREPARED BY: Technical Dept. Supersedes all previous
DOT HAZARD CLASS: Not Hazardous UN Number N/A
SHIPPING NAME: N/A Packing Group N/A



========== SECTION II - HAZARDOUS INGREDIENTS / SARA III INFORMATION ==========

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
None			

========== SECTION III – COMPOSITION/INFORMATION ON INGREDIENTS ==========

CAS #	Trade secret Y/N	Chemical Name	Comment
Proprietary Blend	YES		

========== SECTION IV – FIRST AID MEASURES ==========

INHALATION: Remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, administer artificial respiration. Contact physician or emergency medical facility immediately.

SKIN: Remove contaminated clothing and shoes. Wash exposed area thoroughly with soap and water for at least 15 minutes. Do not rub affected area. If irritation persists, get medical attention. Skin reaction may take 24 to 48 hours to develop. Wash contaminated clothing before reuse.
EYES: Immediately flush eyes with large amounts of water for at least 15 minutes while frequently lifting the upper and lower eyelids. If irritation persists, call a physician.

INGESTION: Do not induce vomiting. Contact physician or emergency medical facility immediately. Never give anything by mouth to an unconscious person.

========== SECTION V - FIRE-FIGHTING MEASURES ==========

FLASH POINT: Not Applicable METHOD USED: Not Applicable
FLAMMABLE LIMITS IN AIR BY VOLUME – LOWER: N/A UPPER: N/A

EXTINGUISHING MEDIA: The product will only burn after the water it contains is driven off. For dried film use water, foam, carbon dioxide or dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: When dried film burns, carbon dioxide (CO_2), carbon monoxide (CO), hydrogen chloride gas (HCl), and smoke are produced. Firefighters should wear self-contained breathing apparatus, especially in enclosed areas. Cool containers and minimize vapors with water spray.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers exposed to high temperatures may explode or burst due to build-up of steam pressure.

========== SECTION VI – ACCIDENTAL RELEASE MEASURES ==========

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Dike, contain, or absorb with inert absorbent material. Collect spilled material in a salvage container. Prevent spill from entering sewers, drains, streams, waterways, or other bodies of water.

WASTE DISPOSAL METHOD: Dispose of in accordance with all local, state and federal regulations.

========== SECTION VII – HANDLING AND STORAGE ==========

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: **DO NOT ALLOW TO FREEZE.** Store in a cool dry location away from heat. Keep containers tightly closed and store with adequate ventilation.

OTHER PRECAUTIONS: DO NOT TAKE INTERNALLY. Avoid inhalation of excess vapors, ingestion, and unnecessary, prolonged, or repeated contact with this and any other chemical. Change soiled work clothes frequently. Clean hands after handling. KEEP OUT OF REACH OF CHILDREN.

========== SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION ==========

RESPIRATORY PROTECTION: Not required under normal conditions. Provide sufficient ventilation to maintain constant fresh air in workspace. If TLV is exceeded, use NIOSH/MSHA approved organic vapor and mist, supplied air, or self-contained breathing apparatus. Avoid breathing sanding dust.

VENTILATION: Use adequate mechanical (general and/or local) ventilation to maintain exposure below TLV.

SKIN PROTECTION (PROTECTIVE GLOVES): Wear resistant gloves such as polyethylene.

EYE PROTECTION: Use chemical splash goggles or OSHA permitted safety glasses.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear impervious clothing. Eye wash station.

WORK / HYGENIC PRACTICES: Source of clean water should be available for flushing eyes and washing skin. Wash thoroughly after handling any chemicals, especially before eating, drinking, or smoking. Remove and launder contaminated clothing before reuse.

========== SECTION IX - PHYSICAL / CHEMICAL PROPERTIES ==========

PHYSICAL FORM: Fibrous Viscous liquid
ODOR: Mild, sweet
SOLUBILITY IN WATER: Miscible
BOILING POINT: 212ºF
FREEZING POINT: 32° F (0° C)
COATING V.O.C.: 0 g/l

COLOR: White or Gray
pH: 7.5-9.0
SPECIFIC GRAVITY (H_2O=1): 1.3-1.5
% VOLATILES BY WEIGHT: 30-40
VISCOSITY (cps): approx. 300,000-400,000

========== SECTION X – STABILITY AND REACTIVITY DATA ==========

STABILITY: Stable at ambient temperatures.

CONDITIONS TO AVOID: Coagulation may occur after freezing, thawing, or boiling.

INCOMPATIBILITY (MATERIALS TO AVOID): Metal salts, mineral acids (i.e. sulfuric, phosphoric, etc.) Strong oxidizing agents. Strong reducing agents.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: May form toxic materials on thermal decomposition including Carbon monoxide (CO), Carbon dioxide (CO_2), and various hydrocarbons. Under fire conditions, this product will release hydrogen chloride gas.

========== SECTION XI – TOXICOLOGICAL INFORMATION ==========

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Adverse health effects from vapors or spray mists in poorly ventilated areas may include irritation of the mucous membranes of the nose, throat, and respiratory tract and symptoms of headache and nausea.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: EYES: In direct contact, may cause irritation. SKIN: Prolonged and repeated contact with product may cause skin irritation.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Redness, drying of the skin, or other signs of irritation or contact dermatitis.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

HEALTH HAZARDS (ACUTE AND CHRONIC): ACUTE: May cause irritation to skin and eyes, gastrointestinal irritation, nausea, and vomiting. CHRONIC: Prolonged or repeated exposure above TLV may result in permanent brain and nervous system damage.

CARCINOGENICITY: NTP CARCINOGEN: No IARC MONOGRAPHS: No OSHA REGULATED: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: May be aggravating to some skin and respiratory conditions, and to pre-existing liver and/or kidney disorders.

========== SECTION XII – ECOLOGICAL INFORMATION ==========

Ecotoxicity: No ecotoxicity date was found for the product
Environmental Fate: No environmental information found for this product

========== SECTION XIII – DISPOSAL CONSIDERATIONS ==========

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines

========== SECTION XIV – TRANSPORT INFORMATION ==========

DOT Hazard Class	Not Hazardous	UN Number	N/A
Shipping Name	N/A	Packing Group	N/A

========== SECTION XV –REGULATORY INFORMATION ==========

EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW (SARA TITLE III):

Section 311/312 Categorizations (40 CFR 370): Immediate (Acute) Health Hazard.

Section 313 Information (40 CFR 372) – Toxic Chemicals List: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372:

Component	CAS#	% by Weight
None		

Toxic Substances Control Act (TSCA): All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

CALIFORNIA PROPOSITION 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): None listed.

========== SECTION XVI –OTHER INFORMATION ==========

MSDS Creation Date: January 29, 2014
MSDS Revision Date: January 29, 2014
MSDS Revision Notes: 16 section SDS
MSDS Author: Technical Department

Disclaimer: The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to Design Polymerics from its suppliers, and because Design Polymerics has no control over the conditions of handling and use, Design Polymerics makes no warranty, express or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The

information is supplied solely for your information and consideration, and Design Polymerics assumes no responsibility from use or reliance thereon. It is the responsibility of the user of Design Polymerics products to comply with all applicable Federal, State and Local Laws and Regulations.

S A F E T Y D A T A S H E E T

DP 5050 **WHITE, WATER BASED WEATHER BARRIER COATING**

========== SECTION I – PRODUCT AND COMPANY IDENTIFICATION ==========

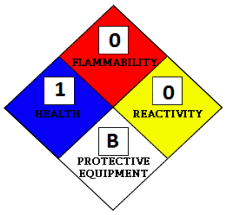
PRODUCT NAME: WHITE, WATER BASED WEATHER BARRIER COATING
PRODUCT CODE: DP 5060

MANUFACTURERS' NAME: DESIGN POLYMERICS

ADDRESS: 3301 W. Segerstrom Ave.
Santa Ana, CA 92704

HMIS	
Health Hazard	1
Fire Hazard	0
Reactivity	0
Personal Protection	B

EMERGENCY PHONE: Chem-Tel: (800) 255-3924 (24 Hrs)
BUSINESS HOURS: 7:30am – 4:30pm PT
CONTRACT NUMBER: MIS0005056
REVISION DATE: May 29, 2015
INFORMATION PHONE: (714) 432-0600
REVISION #: 6.0
PREPARED BY: Technical Dept. Supersedes all previous
DOT HAZARD CLASS: Not Hazardous UN Number N/A
SHIPPING NAME: N/A Packing Group N/A



========== SECTION II - HAZARDOUS INGREDIENTS / SARA III INFORMATION ==========

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
None			

========== SECTION III – COMPOSITION/INFORMATION ON INGREDIENTS ==========

CAS #	Trade secret Y/N	Chemical Name	Comment
Proprietary Blend	YES		

========== SECTION IV – FIRST AID MEASURES ==========

INHALATION: Remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, administer artificial respiration. Contact physician or emergency medical facility immediately.

SKIN: Remove contaminated clothing and shoes. Wash exposed area thoroughly with soap and water for at least 15 minutes. Do not rub affected area. If irritation persists, get medical attention. Skin reaction may take 24 to 48 hours to develop. Wash contaminated clothing before reuse.
EYES: Immediately flush eyes with large amounts of water for at least 15 minutes while frequently lifting the upper and lower eyelids. If irritation persists, call a physician.

INGESTION: Do not induce vomiting. Contact physician or emergency medical facility immediately. Never give anything by mouth to an unconscious person.

========== SECTION V - FIRE-FIGHTING MEASURES ==========

FLASH POINT: Not Applicable METHOD USED: Not Applicable
FLAMMABLE LIMITS IN AIR BY VOLUME – LOWER: N/A UPPER: N/A

EXTINGUISHING MEDIA: The product will only burn after the water it contains is driven off. For dried film use water, foam, carbon dioxide or dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: When dried film burns, carbon dioxide (CO_2), carbon monoxide (CO), hydrogen chloride gas (HCl), and smoke are produced. Firefighters should wear self-contained breathing apparatus, especially in enclosed areas. Cool containers and minimize vapors with water spray

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers exposed to high temperatures may explode or burst due to build-up of steam pressure.

========== SECTION VI – ACCIDENTAL RELEASE MEASURES ==========

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Dike, contain, or absorb with inert absorbent material. Collect spilled material in a salvage container. Prevent spill from entering sewers, drains, streams, waterways, or other bodies of water.

WASTE DISPOSAL METHOD: Dispose of in accordance with all local, state and federal regulations.

========== SECTION VII – HANDLING AND STORAGE ==========

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: **DO NOT ALLOW TO FREEZE.** Store in a cool dry location away from heat. Keep containers tightly closed and store with adequate ventilation.

OTHER PRECAUTIONS: DO NOT TAKE INTERNALLY. Avoid inhalation of excess vapors, ingestion, and unnecessary, prolonged, or repeated contact with this and any other chemical. Change soiled work clothes frequently. Clean hands after handling. KEEP OUT OF REACH OF CHILDREN.

========== SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION ==========

RESPIRATORY PROTECTION: Not required under normal conditions. Provide sufficient ventilation to maintain constant fresh air in workspace. If TLV is exceeded, use NIOSH/MSHA approved organic vapor and mist, supplied air, or self-contained breathing apparatus. Avoid breathing sanding dust.

VENTILATION: Use adequate mechanical (general and/or local) ventilation to maintain exposure below TLV.

SKIN PROTECTION (PROTECTIVE GLOVES): Wear resistant gloves such as polyethylene.

EYE PROTECTION: Use chemical splash goggles or OSHA permitted safety glasses.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear impervious clothing. Eye wash station.

WORK / HYGENIC PRACTICES: Source of clean water should be available for flushing eyes and washing skin. Wash thoroughly after handling any chemicals, especially before eating, drinking, or smoking. Remove and launder contaminated clothing before reuse.

========== SECTION IX - PHYSICAL / CHEMICAL PROPERTIES ==========

PHYSICAL FORM: fibrous mobile liquid
ODOR: Mild, sweet
SOLUBILITY IN WATER: Miscible
BOILING POINT: 212ºF
FREEZING POINT: 32° F (0° C)
COATING V.O.C.: 0 g/l

COLOR: white
pH: 8.0-9.5
SPECIFIC GRAVITY (H_2O=1): 1.4-1.5
% VOLATILES BY WEIGHT: 30-35
VISCOSITY (cps): approx. 45,000-75,000

========== SECTION X – STABILITY AND REACTIVITY DATA ==========

STABILITY: Stable at ambient temperatures.

CONDITIONS TO AVOID: Coagulation may occur after freezing, thawing, or boiling.

INCOMPATIBILITY (MATERIALS TO AVOID): Metal salts, mineral acids (i.e. sulfuric, phosphoric, etc.) Strong oxidizing agents. Strong reducing agents.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: May form toxic materials on thermal decomposition including Carbon monoxide (CO), Carbon dioxide (CO_2), and various hydrocarbons. Under fire conditions, this product will release hydrogen chloride gas.

========== SECTION XI – TOXICOLOGICAL INFORMATION ==========

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Adverse health effects from vapors or spray mists in poorly ventilated areas may include irritation of the mucous membranes of the nose, throat, and respiratory tract and symptoms of headache and nausea.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: EYES: In direct contact, may cause irritation. SKIN: Prolonged and repeated contact with product may cause skin irritation.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Redness, drying of the skin, or other signs of irritation or contact dermatitis.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

HEALTH HAZARDS (ACUTE AND CHRONIC): ACUTE: May cause irritation to skin and eyes, gastrointestinal irritation, nausea, and vomiting. CHRONIC: Prolonged or repeated exposure above TLV may result in permanent brain and nervous system damage.

CARCINOGENICITY: NTP CARCINOGEN: No IARC MONOGRAPHS: No OSHA REGULATED: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: May be aggravating to some skin and respiratory conditions, and to pre-existing liver and/or kidney disorders.

========== SECTION XII – ECOLOGICAL INFORMATION ==========

Ecotoxicity: No ecotoxicity date was found for the product
Environmental Fate: No environmental information found for this product

========== SECTION XIII – DISPOSAL CONSIDERATIONS ==========

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines

========== SECTION XIV – TRANSPORT INFORMATION ==========

DOT Hazard Class	Not Hazardous	UN Number	N/A
Shipping Name	N/A	Packing Group	N/A

========== SECTION XV –REGULATORY INFORMATION ==========

This product is considered non-hazardous under the OSHA Hazard Communication Standard 29 CFR 1910.1200.

EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW (SARA TITLE III):

Section 311/312 Categorizations (40 CFR 370): Immediate (Acute) Health Hazard.

Section 313 Information (40 CFR 372) – Toxic Chemicals List: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372:

Component	**CAS#**	**% by Weight**
None		

Toxic Substances Control Act (TSCA): All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

CERCLA INFORMATION (40cfr 302.4): Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

CALIFORNIA PROPOSITION 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): None listed.

========== SECTION XVI –OTHER INFORMATION ==========

MSDS Creation Date: May 29,2015
MSDS Revision Date: May 29, 2015
MSDS Revision Notes: 16 section SDS
MSDS Author: Technical Department

Disclaimer: The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to Design Polymerics from its suppliers, and because Design Polymerics has no control over the conditions of handling and use, Design Polymerics makes no warranty, express or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and Design Polymerics assumes no responsibility from use or reliance thereon. It is the responsibility of the user of Design Polymerics products to comply with all applicable Federal, State and Local Laws and Regulations.

21122 - all codes except -1003 -1009

SALIS INTERNATIONAL INC.
301 COMMERCIAL RD -SUITE G
GOLDEN, COLORADO 80401

TELEPHONE
303-384-3588

EMERGENCY CONTACT:
LOCAL POISON CONTROL CENTER.

MATERIAL SAFETY DATA SHEET

MSDS NO. BOMBAY COLOR 1 THRU 12
REV. 1 REVISION DATE: 01/05

SECTION 01 - IDENTIFICATION

CHEMICAL NAME: N/A TRADE NAME: BOMBAY INDIA INK

SYNONYMS: N/A CHEMICAL FAMILY: SUSPENSION

CAS REGISTRY NO. : N/A

FORMULA: COLOR INDEX NAME: N/A COLOR INDEX NO. : N/A

SECTION 02 - HAZARDOUS COMPONENTS

NAME:	%	TLV	TOXICOLOGICAL DATA
NONE UNDER 29 CFR 1910.1200	N/A	N/A	THIS PRODUCT HAS BEEN CERTIFIED AS NON-TOXIC BY A TOXICOLOGIST OF THE ARTS AND CRAFTS INSTITUTE AND COMPLY WITH THE ASTM STANDARD D-4236. AP APPROVED SEAL.

SECTION 03 - PHYSICAL & CHEMICAL CHARACTERISTICS

BOILING POINT: 212 DEG F
VAPOR PRESSURE: SAME AS WATER
VAPOR DENSITY (AIR=1) SAME AS WATER.
WATER SOLUBILITY: COMPLETE
SPECIFIC GRAV. (WATER=1)
PERCENTAGE VOLATILES BY VOLUME: 90%
EVAPORATION RATE: SAME AS WATER
PH 7 TO 8
APPEARANCE AND ODOR: BLACK LIQUID NO DISTINCT ODOR

SECTION 04 - PHYSICAL HAZARD DATA

FLASH POINT: N/A
FLAMMABLE LIMITS: N/A LOWER: N/A UPPER: N/A

EXTINGUISHING MEDIA : [X] WATER FOG [X] FOAM [X] CO2 [X] DRY CHEMICAL

SPECIAL FIRE FIGHTING PROCEDURES: N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

SECTION 05 - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: SEE SECTION 02

EFFECTS OF OVEREXPOSURE: NONE EXPECTED.

FIRST AID PROCEDURES

EYES: FLUSH WITH FLOWING WATER AT LEAST 15 MINUTES. IF IRRITATION DEVELOPES, CONSULT PHYSICIAN.	SKIN CONTACT: WASH WELL WITH SOAP AND WATER. IF IRRITATION DEVELOPES, CONSULT PHYSICIAN.
	INGESTION: INDUCE VOMITING, CONSULT PHYSICIAN.
	INHALATION: IF INHALED, MOVE TO FRESH AIR. AID IN BREATHING, IF NECESSARY, AND GET MEDICAL ATTENTION.

SECTION 06 - REACTIVITY DATA

STABILITY	STABLE	X	CONDITIONS TO AVOID: N/A
	UNSTABLE		

CHEMICAL INCOMPATIBILITY: NONE

HAZARDOUS DECOMPOSITION PRODUCTS: NONE

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID: N/A
	DOES NOT OCCUR	X	

CORROSIVE TO METAL: [X] NO [ ] YES, TYPE: OXIDIZER: [X] NO [ ] YES

SECTION 07 - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: N/A

VENTILATION: LOCAL EXHAUST: PREFERRED

MECHANICAL (GENERAL): N/A

EYE PROTECTION: N/A

PROTECTIVE CLOTHING: N/A

OTHER: N/A

SECTION 08 - ENVIRONMENTAL DATA

ENVIRONMENTAL TOXICITY DATA: N/A

SPILL AND LEAK PROCEDURES: THIS IS NOT A REGULATED PRODUCT. SPILLS SHOULD BE CONTAINED, ABSORBED, AND PLACED IN SUITABLE CONTAINERS FOR DISPOSAL.

HAZARDOUS SUBSTANCE "SUPERFUND": [X] NO [ ] YES, RQ NUMBER

WASTE DISPOSAL METHOD: N/A

HAZARDOUS WASTE: [X] NO [ ] YES, HAZARDOUS WASTE NUMBER

CONTAINER DISPOSAL: N/A

SECTION 09 - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: AVOID UNNECESSARY CONTACT.

OTHER PRECAUTIONS: N/A

*N/A = NOT APPLICABLE

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 314.00
Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Drierite®

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Sensitization, skin and respiratory (Category 1). May cause an allergic skin reaction or asthma symptoms or breathing difficulties if inhaled (H317+H334). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Calcium sulfate	7778-18-9	$CaSO_4$	136.14	90-100%
Cobalt dichloride	7646-79-9	$CoCl_2\,6H_20$	237.95	1-5%
Synonym: Calcium sulfate				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water (P302+P352). **If skin irritation or rash occurs:** Get medical advice or attention (P333 +P313). **If swallowed:** Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Deliquescent. Store in a cool, dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling.
Exposure guidelines: PEL 15 mg/m^3 (as total dust) (OSHA); TLV 10 mg/m^3 (inhalable fraction) (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White or blue indicating granules. Odorless.
Soluble: Slightly in water.

Specific gravity: 1.87
Use: Desiccant. Not meant to be used to make solutions of calcium sulfate.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Indefinite, if kept dry. Deliquescent.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-900-3).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014

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MATERIAL SAFETY DATA SHEET DROP DEAD II AEROSOL

DATE OF ISSUE: 02/12/2001
SUPERCEDES: 02/04/2000

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:
N/A

Trade Name & Synonyms:
DROP DEAD II AEROSOL

Chemical Family:
AQUEOUS PERMETHRIN SOLUTION

Formula Mixture:
X

Manufacturer's Name:
CHEMSEARCH DIV. OF NCH CORP.

Address:
BOX 152170
IRVING, TX 75015

Prepared By: C Williamson/Chemist
Product Code Number: 5414
Emergency Phone Number: 800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS:

Chemical Name (Ingredients): HYDROTREATED LIGHT PETROLEUM DISTILLATE
Hazard: IRRITANT
TLV: 5 MG/M3$ 1
PEL: 5 MG/M3$ 2
STEL: NOT EST.
CAS#: 64742-47-8

Chemical Name (Ingredients): PROPANE
Hazard: FLAM/ASPHX
TLV: 2500 PPM 1
PEL: 1000 PPM 2
STEL: NOT EST.
CAS#: 74-98-6

Chemical Name (Ingredients): ISOBUTANE
Hazard: FLAM/IRR
TLV: NOT EST. 1
PEL: NOT EST. 2
STEL: NOT EST.
CAS#: 75-28-5

Chemical Name (Ingredients): $ OIL MIST VALUES
Hazard:
TLV:
PEL:
STEL:
CAS#:

SECTION III - PHYSICAL DATA

Boiling Point (f): 212

Specific Gravity (H20=1):	0.97
Vapor Pressure (MM HG):	18
Color:	WHITE
Vapor Density (Air=1):	0.63
Odor:	MILD PETROLEUM
PH @ 100%:	6.0-8.0
Clarity:	OPAQUE
Volatile by Volume:	98.7
Evaporation Rate (BU A/C=1):	0.54
H20 Solubility:	APPRECIABLE
Viscosity:	SEMI-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point: >200 F / SETAFLASH
Flammable Limits: ISOBUTANE LEL: 1.8% UEL: 9%

Extinguishing Media:
Foam: X Alcohol Foam: X CO2: X
Dry Chemical: X Water Spray: X Other:

Special Fire Fighting Procedures:
FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. EXTINGUISHING MEDIA SHOULD BE CHOSEN BASED ON THE NATURE OF THE SURROUNDING FIRE.

Unusual Fire and Explosion Hazards:
FIRE FIGHTING SHOULD BE DONE FROM UPWIND TO MINIMIZE POSSIBILITY OF EXPOSURE TO PESTICIDE, SMOKE AND FUMES. EVACUATE PEOPLE DOWNWIND AS APPROPRIATE. AEROSOL CANS CAN EXPLODE WHEN HEATED. FLAME EXTENSION IS 0 INCHES, BURNBACK IS 0 INCHES.

Aerosol Level (NFPA 30B): 1
NFPA Hazard Rating:
(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)
Health: 1 Flamability: 1 Reactivity: 0 Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:
NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:
-Acute(Short Term Exposure)
SKIN CONTACT: PROLONGED CONTACT MAY CAUSE IRRITATION SEEN AS ITCHING AND REDNESS. EYE CONTACT: MAY CAUSE IRRITATION SEEN AS TEARING AND REDNESS. INHALATION: AT LOW LEVELS, NO HARMFUL EFFECTS ARE EXPECTED. AT HIGH VAPOR CONCENTRATIONS, INHALATION CAUSES HEADACHE, DIZZINESS, SNEEZING, DROWSINESS, WEAKNESS, COUGHING, NAUSEA, PERIPHERAL NUMBNESS, PULMONARY IRRITATION CARDIAC ARRHYTHMIA WITH POSSIBLE ANESTHETIC EFFECTS FROM CENTRAL NERVOUS SYSTEM DEPRESSION (INTOXICATION) AND POSSIBLE DEATH MAY OCCUR. INGESTION: MAY CAUSE IRRITATION WITH POSSIBLE NAUSEA, VOMITING AND DIARRHEA.

-Chronic (Long Term Exposure)
NO HUMAN CHRONIC EFFECTS KNOWN. TARGET ORGANS: NONE KNOWN. THERE IS NO PRIMARY ROUTE OF ENTRY INTO THE BODY. THE PRIMARY ROUTE OF EXPOSURE IS SKIN AND EYE CONTACT. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS.

Primary Routes of Entry: Inhalation: Ingestion: Absorption:

Emergency and First Aid Procedures:

-Inhalation:
REMOVE FROM THE AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

-Eye Contact:
RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Skin Contact:
WASH AFFECTED AREAS WITH PLENTY OF SOAP AND WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Ingestion:
GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.

-Notes to Physician:
THERE IS NO SPECIFIC ANTIDOTE. TREAT THE PATIENT SYMPTOMATICALLY.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:
IARC: No NTP: No OSHA: No ACGIH: No
OTHER: No

HYDROTREATED LIGHT PETROLEUM DISTILLATES (BASED ON SIMILAR COMPOUNDS)
ORL-RAT-LD50: >5000 MG/KG 3.
SKN-RBT-LD50: >2000 MG/KG 3.
PROPANE AND ISOBUTANE MIXTURE
NO APPARENT ILL EFFECTS IN BREATHING CONCENTRATIONS OF 5% FOR 2 HOURS. 4.
CAUSES DROWSINESS IN SHORT TIME IN CONCENTRATIONS OF 1%. 4.

SECTION VII - REACTIVITY DATA

Stability: Stable: X Unstable:

Contitions to Avoid: KEEP AWAY FROM EXCESSIVE HEAT, OPEN FLAME AND ANY SOURCE OF IGNITION. EXPOSURE TO TEMPERATURES ABOVE 130° F/64° C MAY CAUSE BURSTING.
Incompatibility (Materials to Avoid):
STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE. REDUCING AGENTS SUCH AS ACIDS AND BASES.

Hazardous Decomposition Products:
OXIDES OF CARBON.

Hazardous Polymerization:
May Occur: Will Not Occur: X

Contitions to Avoid: NONE KNOWN.

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:
DUE TO THE NATURE OF THE AEROSOL PACKAGING, A LARGE SPILL IS UNLIKELY. FOR A SMALL SPILL, ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. WEAR APPROPRIATE PROTECTIVE CLOTHING. PREVENT PRODUCT FROM CONTAMINATING SOIL OR FROM ENTERING SEWAGE AND DRAINAGE SYSTEMS AND BODIES OF WATER.

Waste Disposal Method(s):
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. IF RECYCLING IS NOT AVAILABLE, WRAP THE CONTAINER IN SEVERAL LAYERS OF NEWSPAPER AND DISPOSE OF IN TRASH. DO NOT INCINERATE OR PUNCTURE.

Neutralizing Agent:
NONE KNOWN.

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:
LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE MISTS OR VAPORS.

Respiratory Protection:
A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE ACGIH TLV OR OSHA PEL OR WHERE MISTING EXISTS.

Glove Protection:
NEOPRENE OR NITRILE RUBBER GLOVES IF REPEATED OR PROLONGED SKIN CONTACT IS LIKELY.

Eye Protection:
SAFETY GLASSES WITH SIDE SHIELDS IF THE METHOD OF USE PRESENTS THE LIKELIHOOD OF EYE CONTACT.

Other Protection:
NONE UNDER NORMAL CONDITIONS OF USE.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors: X Outdoors: Heated: Refrigerated:

Minimum Temperature: 35°F Maximum Temperature: 120°F

Precautions to be taken in Handling and Storing:
STORE IN A COOL, DRY AREA. DO NOT TRANSPORT OR STORE BELOW 32°F/0°C. DO NOT ALLOW PESTICIDE TO CONTAMINATE FOOD, FEED, OR NATURAL BODIES OF WATER. USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAME. CONTENTS UNDER PRESSURE.

Other Precautions:
KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS. DO NOT APPLY THIS PRODUCT TO ENERGIZED ELECTRICAL EQUIPMENT.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit

Those Ingredients listed abouve are subject to the reporting requirements of 313 of Title III and of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL

EXPOSURE INDICES, ACGIH, 2000.
2. OSHA PEL.
3. SAX'S DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, EIGHTH EDITION, RICHARD J. LEWIS, SR.
4. VENDOR'S MSDS.

ALL COMPONENTS IN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOC: PARTICULATES NOT OTHERWISE CLASSIFIED, SDT:STANDARD DRAIZE TEST, ORL: ORAL, HMN: HUMAN, IHL:INHALATION

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use,storage or disposal of the product.

SAFETY DATA SHEET

UNITED 8OZ WHITEBOARD SPRAY

Issued: 15/02/2007

Revision No: 1

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product name: UNITED 8OZ WHITEBOARD SPRAY

Product code: (00-040)

Use / description of product: No significant hazard. The regulatory information is dependent upon the concentration limit of the specific substance.

Company name: SYSTEMCARE

Unit 6/7 Maybrook Industrial Estate

Maybrook Road

Walsall Wood, Brownhills

West Midlands

WS8 7DG

UK

Tel: +44(0)1543 454872

Fax: +44(0)1543 454184

2. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous ingredients: TRISODIUM NITROLTRIACETATE <5%

[Xi] R36

- N,N-METHYLENE BIS MORPHOLINE <5%

[Xn] R22; [Xi] R36/38

Contains: No Hazardous Ingrediants

ALSO CONTAINS: DIPROPYLENE GLYCOL MONOMETHYL ETHER (5-10%)

3. HAZARDS IDENTIFICATION

Main hazards: No significant hazard.

4. FIRST AID MEASURES (SYMPTOMS)

Skin contact: No symptoms.

Eye contact: There may be irritation and redness.

Ingestion: No symptoms.

Inhalation: No symptoms.

4. FIRST AID MEASURES (ACTION)

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes.

Ingestion: Wash out mouth with water. Do not induce vomiting.

Inhalation: Consult a doctor.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Alcohol or polymer foam. Dry chemical powder. Water spray.

[cont...]

Exposure hazards: In combustion emits toxic fumes.

Protection of fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Refer to section 8 of SDS for personal protection details. Turn leaking containers leak-side up to prevent the escape of liquid.

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

7. HANDLING AND STORAGE

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Workplace exposure limits

WEL (8 hr exposure limit): 0.26ppm

WEL (15 min exposure limit): 0.53ppm

Respiratory protection: Respiratory protection not required.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

State: Liquid

Colour: Colourless

Odour: Pleasant

Oxidising: Non-oxidising (by EC criteria)

Solubility in water: Soluble

Boiling point/range°C: 100

Flash point°C: N/A

Relative density: 0.98

pH: 7

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Routes of exposure: Refer to section 4 of SDS for routes of exposure and corresponding symptoms.

12. ECOLOGICAL INFORMATION

Mobility: Soluble in water.

Persistence and degradability: Biodegradable.

[cont...]

Bioaccumulative potential: No bioaccumulation potential.

Other adverse effects: Negligible ecotoxicity.

13. DISPOSAL CONSIDERATIONS

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

14. TRANSPORT INFORMATION

ADR / RID

UN no: -

Shipping name: "NOT SUBJECT TO ADR"

IMDG / IMO

UN no: -

IATA / ICAO

UN no: -

15. REGULATORY INFORMATION

Hazard symbols: No significant hazard.

Safety phrases: S2: Keep out of the reach of children.

S46: If swallowed, seek medical advice immediately and show this container or label.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Risk phrases used in s.2: R36: Irritating to eyes.

R22: Harmful if swallowed.

R36/38: Irritating to eyes and skin.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: DRYLOK EXTREME – ALL COLORS
PRODUCT CODE: 670

HMIS CODES: H F R P
1 0 0

SECTION I – MANUFACTURER IDENTIFICATON

MANUFACTURE'S NAME: **UNITED GILSONITE LABORATORIES**
ADDRESS: **1396 JEFFERSON AVENUE**
SCRANTON, PA 18509

EMERGENCY PHONE: **(800) 424-9300**
INFORMATION PHONE: **(570) 344-1202**
NAME OF PREPARER: **R. BARAKO**

DATE ISSUED: JANUARY 2009
SUPERCEDES: DECEMBER 2006

SECTION II – HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS OSHA PEL	ACGIH TLV	OTHER	VAPOR PRESSURE mmHg@TEMP	WEIGHT PERCENT
WATER	7732-18-5	NOT ESTAB	NOT ESTAB	NOT ESTAB	1.0 (68F)	30
*DIETHYLENE GLYCOL MONO-METHYL ETHER	111-77-3	NOT ESTAB	NOT ESTAB	NOT ESTAB	0.1 (68F)	<5
DIBENZOATE ESTER MIXTURE	MIXTURE	NOT ESTAB	NOT ESTAB	NOT ESTAB	<1 (68F)	<5
STYRENE ACRYLIC RESIN	NOT ESTAB	NOT ESTAB	NOT ESTAB	NOT ESTAB	N/A	14
TITANIUM DIOXIDE	13463-67-7	15 MG/M^3	10 MG/M^3	NOT ESTAB	N/A	10
NEPHELINE SYENITE	37244-96-5	5 MG/M^3 (1)	NOT ESTAB	NOT ESTAB	N/A	12
WOLLASTONITE	13983-17-0	15 MG/M^3	10 MG/M^3	NOT ESTAB	N/A	16
ALUMINO SILICATE	68131-74-8	NOT ESTAB	NOT ESTAB	NOT ESTAB	N/A	10
ENCAPSULATED COPOLYMER	25214-39-5	NOT ESTAB	NOT ESTAB	NOT ESTAB	N/A	<5

(1) Time Weighted Average

- Indicates toxic chemical(s) subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372

SECTION III – PHYSICAL/CHEMCIAL CHARACTERISTICS

BOILING RANGE: 212 F
VAPOR DENSITY: HEAVIER THAN AIR
COATING VOC: LESS THAN 100 G/L
SOLUBILITY IN WATER: SOLUBLE
APPEARANCE AND ODOR: WHITE OR COLORS, PRODUCT SPECIFIC. TYPICAL AMINE ODOR

SPECIFIC GRAVITY (H20 =1) 1.26
EVAPORATION RATE: SLOWER THAN ETHER

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT: N/A **METHOD USED:** N/A
FLAMMABLE LIMITS IN AIR BY VOLUME: **LOWER:** 1.7% **UPPER:** 22.0%
EXTINGUISHING MEDIA: NONE KNOWN
SPECIAL FIRE FIGHTING PROCEDURES: CONTAINERS MAY SWELL AND BURST DURING A FIRE DUE TO INTERNAL PRESSURE CAUSED BY HEAT. THIS MAY CAUSE A SLIPPERY CONDITION ON FLOORS

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

SECTION V – REACTIVITY DATA

STABILITY: PRODUCT IS STABLE

CONDITIONS TO AVOID: TEMPERATURES BELOW 32 (F) FOR STORAGE. TEMPERATURES BELOW 50 (F) FOR APPLICATION

INCOMPATIBILITY (MATERIALS TO AVOID): N/A

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: N/A

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI – HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: VAPOR HARMFUL. MAY AFFECT THE BRAIN OR NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: CAUSES EYE, NOSE AND THROAT IRRITATION. DIRECT CONTACT MAY CAUSE BURNING, TEARING, REDNESS AND SWELLING.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAN CAUSE SLIGHT IRRITATION

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: HARMFUL IF SWALLOWED. MAY PRODUCE SIGNS OF INTOXICATION CHARACTERIZED BY INCOORDINATION, DIZZINESS, HEADACHE, NAUSEA, MENTAL CONFUSION, SLURRED SPEECH DEPENDING ON THE QUANTITY OF MATERIAL INGESTED

HEALTH HAZARDS (ACUTE AND CHRONIC): REPORTS HAVE ASOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND CENTRAL NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

CARCINOGENICITY: NTP? NO **IARC MONOGRAPHS?** NO **OSHA REGULATED?** NO
TITANIUM DIOXIDE HAS BEEN CHARACTERIZED BY IARC AS POSSIBLY CARCINOGENIC TO HUMANS (GROUP 2B) THROUGH INHALATION (NOT INGESTION). THIS CLASSIFICATION IS BASED UPON ANIMAL INHALATION STUDIES. EPIDEMIOLOGY STUDIES DO NOT SUGGEST AN INCREASED RISK OF CANCER IN HUMANS FROM OCCUPATIONAL EXPOSURE TO TITANIUM DIOXIDE.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: INHALATION OF THE DUST FROM SANDING THE DRY FILM CAN AGGRAVATE RESPIRATORY CONDITIONS. DO NOT BREATHE VAPORS OR SPRAY MIST.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. CONSULT A PHYSICIAN IF IRRITATION PERSISTS
SKIN: WASH AFFECTED AREA WITH SOAP AND WATER. CONSULT A PHYSICIAN IF IRRITATION PERSISTS
INGESTION: GIVE ONE OR TWO GLASSES OF WATER. IF INDIVIDUAL IS DROWSY OR UNCONSCIOUS DO NOT GIVE ANYTHING BY MOUTH. CONSULT A PHYSICIAN, MEDICAL FACILITY OR POISON CONTROL CENTER FOR ADVISE ABOUT WHETHER TO INDUCE VOMITING
INHALATION: REMOVE VICTIM TO FRESH AIR

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: DIKE AREA AROUND SPILL. APPLY ABSORBENT MATERIAL, THEN SWEEP UP AND PLACE IN PROPER CONTAINERS

WASTE DISPOSAL METHOD: DISPOSE OF IN APPROVED SITES ACCORDING TO LOCAL, STATE AND FEDERAL REGULATIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID BREATHING DUST. KEEP FROM FREEZING. STORE MATERIAL IN AREAS WHERE TEMPERATURES RANGE FROM 50 (F) TO 90 (F)

OTHER PRECAUTIONS: N/A

SECTIONS VIII – CONTROL MEASURES

RESPIRATORY PROTECTION: IF YOU EXPERIENCE EYE WATERING, HEADACHE OR DIZZINESS OR IF AIR MONITORING DEMONSTRATES VAPOR/MIST LEVELS ARE ABOVE APPLICABLE LIMITS, WEAR AN APPROPRIATE, PROPERLY FITTED RESPIRATOR (NIOSH APPROVED) DURING AND AFTER APPLICATION. FOLLOW REPIRATOR MANUFACTURER'S DIRECTIONS FOR USE.

VENTILATION: USE ADEQUATE VENTILATION IN VOLUME AND PATTERN TO MAINTAIN EXPOSURE LEVELS BELOW THAT LISTED IN SECTION II

PROTECTIVE GLOVES: USE NEOPRENE RUBBER GLOVES TO PREVENT SKIN CONTACT

EYE PROTECTION: USE CHEMICAL SPLASH GOGGLES WITH SIDE SHIELDS

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A

WORK / HYGIENIC PRACTICES: DO NOT GET IN EYES, ON SKIN OR CLOTHING. WASH HANDS BEFORE EATING, SMOKING OR USING WASH ROOM. WASH CONTAMINATED CLOTHING BEFORE REUSE

SECTION IX – DISCLAIMER

This information is furnished without warranty, representation, inducement or license of any kind, except that it is accurate to the best of UGL's knowledge, or obtained from sources believed by UGL to be accurate, and UGL does not assume any legal responsibility for use or reliance upon same. Before using any product, read the label.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: DRYLOK LATEX BASE MASONRY WATERPROOFER – ALL COLORS
PRODUCT CODE: 651, 652, 655, 657

HMIS CODES: H F R P
1 0 0

SECTION I – MANUFACTURER IDENTIFICATON

MANUFACTURE'S NAME: **UNITED GILSONITE LABORATORIES**
ADDRESS: **1396 JEFFERSON AVENUE**
SCRANTON, PA 18509

EMERGENCY PHONE: **(800) 424-9300**
INFORMATION PHONE: **(570) 344-1202**
NAME OF PREPARER: **R. BARAKO**

DATE REVISED: JUNE 2006
SUPERSEDES: JANUARY 2006

SECTION II – HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS OSHA PEL	ACGIH TLV	OTHER	VAPOR PRESSURE mmHg@TEMP	WEIGHT PERCENT
WATER	7732-18-5	NOT ESTAB	NOT ESTAB	NOT ESTAB	1.0 (68F)	25
*DIETHYLENE GLYCOL MONO-METHYL ETHER	111-77-3	NOT ESTAB	NOT ESTAB	NOT ESTAB	0.1 (68F)	<5
DIBENZOATE ESTER MIXTURE	MIXTURE	NOT ESTAB	NOT ESTAB	NOT ESTAB	<1 (68F)	<5
STYRENE ACRYLIC RESIN	25036-16-2	NOT ESTAB	NOT ESTAB	NOT ESTAB	N/A	10
TITANIUM DIOXIDE	13463-67-7	15 MG/M^3	10 MG/M^3	NOT ESTAB	N/A	<5
LIMESTONE	1317-65-3	15 MG/M^3	10 MG/M^3	NOT ESTAB	N/A	20
CRYSTALLINE SILICA	14808-60-7	.1 MG/M^3 (1)	.1 MG/M^3 (1)	NOT ESTAB	N/A	25
MICA	12001-26-2	20 MPPCF	3 MG/M^3	NOT ESTAB	N/A	5
WOLLASTONITE	13983-17-0	NOT ESTAB	10 MG/M^3	NOT ESTAB	N/A	<5
FULLERS EARTH	8031-18-3	5 MG/M^3	10 MG/M^3	NOT ESTAB	N/A	<5

(1) Time Weighted Average

- Indicates toxic chemical(s) subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372

SECTION III – PHYSICAL/CHEMCIAL CHARACTERISTICS

BOILING RANGE: 212 F
VAPOR DENSITY: HEAVIER THAN AIR
COATING VOC: 1.30 LB/GAL (156 G/L)
SOLUBILITY IN WATER: SOLUBLE
APPEARANCE AND ODOR: WHITE OR COLORS, PRODUCT SPECIFIC. TYPICAL AMINE ODOR

SPECIFIC GRAVITY (H20 =1) 1.5
EVAPORATION RATE: SLOWER THAN ETHER

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT: N/A **METHOD USED:** N/A
FLAMMABLE LIMITS IN AIR BY VOLUME: **LOWER:** 1.7% **UPPER:** 22.0%
EXTINGUISHING MEDIA: NONE KNOWN
SPECIAL FIRE FIGHTING PROCEDURES: CONTAINERS MAY SWELL AND BURST DURING A FIRE DUE TO INTERNAL PRESSURE CAUSED BY HEAT. THIS MAY CAUSE A SLIPPERY CONDITION ON FLOORS

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

SECTION V – REACTIVITY DATA

STABILITY: PRODUCT IS STABLE

CONDITIONS TO AVOID: TEMPERATURES BELOW 32 (F) FOR STORAGE. TEMPERATURES BELOW 50 (F) FOR APPLICATION

INCOMPATIBILITY (MATERIALS TO AVOID): N/A

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: N/A

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI – HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: IN IT'S WET STATE, THIS PRODUCT SHOULD NOT POSE ANY THREAT TO HEALTH DUE TO OVEREXPOSURE

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: DIRECT CONTACT MAY CAUSE BURNING, TEARING, REDNESS AND SWELLING

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: CAN CAUSE SLIGHT IRRITATION

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: MAY PRODUCE SIGNS OF INTOXICATION CHARACTERIZED BY INCOORDINATION, DIZZINESS, HEADACHE, NAUSEA, MENTAL CONFUSION, SLURRED SPEECH DEPENDING ON THE QUANTITY OF MATERIAL INGESTED

HEALTH HAZARDS (ACUTE AND CHRONIC): NONE KNOWN

CARCINOGENICITY: NTP? YES **IARC MONOGRAPHS?** YES **OSHA REGULATED?** NO
IARC CONCLUDES THAT THERE IS SUFFICIENT EVIDENCE IN HUMANS AND EXPERIMENTAL ANIMALS FOR THE CARCINOGENICITY OF CRYSTALLINE SILICA IN THE FORMS OF QUARTZ OR CRISTOBALITE. IARC (GROUP 1) SEE SECTION II. TITANIUM DIOXIDE HAS BEEN CHARACTERIZED BY IARC AS POSSIBLY CARCINOGENIC TO HUMANS (GROUP 2B) THROUGH INHALATION (NOT INGESTION). THIS CLASSIFICATION IS BASED UPON ANIMAL INHALATION STUDIES. EPIDEMIOLOGY STUDIES DO NOT SUGGEST AN INCREASED RISK OF CANCER IN HUMANS FROM OCCUPATIONAL EXPOSURE TO TITANIUM DIOXIDE.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: INHALATION OF THE DUST FROM SANDING THE DRY FILM CAN AGGRAVATE RESPIRATORY CONDITIONS

EMERGENCY AND FIRST AID PROCEDURES:

EYES: FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. CONSULT A PHYSICIAN IF IRRITATION PERSISTS
SKIN: WASH AFFECTED AREA WITH SOAP AND WATER. CONSULT A PHYSICIAN IF IRRITATION PERSISTS
INGESTION: GIVE ONE OR TWO GLASSES OF WATER. IF INDIVIDUAL IS DROWSY OR UNCONSCIOUS DO NOT GIVE ANYTHING BY MOUTH. CONSULT A PHYSICIAN, MEDICAL FACILITY OR POISON CONTROL CENTER FOR ADVISE ABOUT WHETHER TO INDUCE VOMITING
INHALATION: REMOVE VICTIM TO FRESH AIR

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: DIKE AREA AROUND SPILL. APPLY ABSORBENT MATERIAL, THEN SWEEP UP AND PLACE IN PROPER CONTAINERS

WASTE DISPOSAL METHOD: DISPOSE OF IN APPROVED SITES ACCORDING TO LOCAL, STATE AND FEDERAL REGULATIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID BREATHING DUST. KEEP FROM FREEZING. STORE MATERIAL IN AREAS WHERE TEMPERATURES RANGE FROM 50 (F) TO 90 (F)

OTHER PRECAUTIONS: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, REPRODUCTIVE OR DEVELOPMENTAL TOXICITY

SECTIONS VIII – CONTROL MEASURES

RESPIRATORY PROTECTION: WHEN SANDING DRY FILM, USE NIOSH APPROVED RESPIRATOR WITH SOLID PARTICULATE CARTRIDGES

VENTILATION: USE ADEQUATE VENTILATION IN VOLUME AND PATTERN TO MAINTAIN EXPOSURE LEVELS BELOW THAT LISTED IN SECTION II

PROTECTIVE GLOVES: USE NEOPRENE RUBBER GLOVES TO PREVENT SKIN CONTACT

EYE PROTECTION: USE CHEMICAL SPLASH GOGGLES WITH SIDE SHIELDS

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A

WORK / HYGIENIC PRACTICES: WASH HANDS BEFORE EATING, SMOKING OR USING WASH ROOM. WASH CONTAMINATED CLOTHING BEFORE REUSE

SECTION IX – DISCLAIMER

This information is furnished without warranty, representation, inducement or license of any kind, except that it is accurate to the best of UGL's knowledge, or obtained from sources believed by UGL to be accurate, and UGL does not assume any legal responsibility for use or reliance upon same. Before using any product, read the label.

Material Safety Data Sheet

Big D Dumpster D plus C

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Big D Dumpster D plus C
Product Identifier	Product 177 & 178
MSDS No.	0176
Other Means of Identification	Dumpster Deodorant
Product Family	Dry Deodorants
Manufacturer	Big D Industries, Inc., 5620 SW 29th St, Oklahoma City, OK, 73179, 405 682 2541, BigDInd.com
Emergency Contact Information	Big D Industries, 800 535 5053, 24hr (Infotrac)
Use	Dry Deodorants

2. HAZARDS IDENTIFICATION

Potential Health Effects

Route of Exposure	Inhalation; skin contact; eye contact; ingestion.
Inhalation	Can cause severe irritation of the nose and throat.
Skin Contact	SKIN IRRITANT.
Eye Contact	May cause mild irritation.
Ingestion	If large amounts are ingested: symptoms may include nausea, vomiting, stomach cramps and diarrhea.
Effects of Long-Term (Chronic) Exposure	Can cause permanent damage to the respiratory system.
Carcinogenicity	CARCINOGEN. (Silica, cristobalite). (Silica, quartz)
Teratogenicity / Embryotoxicity	No information was located.
Reproductive Toxicity	No information was located.
Mutagenicity	No information was located.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Registry No.	Concentration %	Other Identifiers
Montmorillonite ((Al1.33-1.67Mg0.33-0.67)(Ca0-1Na0-1)0.33Si4(OH)2O10.xH2O), calcined	70892-59-0	85-90	
Silica, quartz	14808-60-7	5-10	
Fragrance	No CAS	<5.0	Citronella
Silica, cristobalite	14464-46-1	<3.0	

4. FIRST AID MEASURES

First Aid Procedures

Inhalation	Move victim to fresh air. Call a Poison Centre or doctor if the victim feels unwell.
Skin Contact	Wash gently and thoroughly with lukewarm, gently flowing water and non-abrasive soap for 5 minutes. Call a Poison Centre or doctor if the victim feels unwell.
Eye Contact	Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open.
Ingestion	NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. DO NOT INDUCE VOMITING. Immediately call a Poison Centre or doctor.

5. FIRE FIGHTING MEASURES

Flammable Properties	Does not burn.
Suitable Extinguishing Media	Not combustible. Use extinguishing agent suitable for surrounding fire.
Unsuitable Extinguishing Media	None known.
Specific Hazards Arising from the Chemical	This product presents no unusual hazards in a fire situation. Not known to generate any hazardous decomposition products in a fire.
Protective Equipment and Precautions for Firefighters	No special precautions are necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	No special precautions are necessary.
Environmental Precautions	Do not allow into any sewer, on the ground or into any waterway.
Methods for Containment and Clean-up	Avoid generating dust.

7. HANDLING AND STORAGE

Handling	No special handling precautions are necessary.
Storage	Separate from incompatible materials (see Section 10: Stability and Reactivity).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

	ACGIH TLV®		OSHA PEL		AIHA WEEL	
Chemical Name	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Silica, cristobalite	0.05 mg/m3		5 mg/m3			
Silica, quartz	0.05 mg/m3		5 mg/m3			

Engineering Controls: Use a local exhaust ventilation and enclosure, if necessary, to control amount in the air.

Personal Protective Equipment (PPE)

Eye/Face Protection	Not required but it is good practice to wear safety glasses or chemical safety goggles.
Skin Protection	Not required, if used as directed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Tan - grey.
Odour	Fragrant (Fragrance)
Solubility in Water	Insoluble (less than 1 mg/L).
pH	Not available
Vapour Pressure	Not applicable
Flash Point	> 200 ºF (estimated) (Montmorillonite ((Al1.33-1.67Mg0.33-0.67)(Ca0-1Na0-1)0.33Si4(OH)2O10.xH2O), calcined)

10. STABILITY AND REACTIVITY

Chemical Stability	Normally stable.
Conditions to Avoid	Incompatible materials.
Incompatible Materials	Unsaturated hydrocarbons (e.g. turpentine), strong acids (e.g. hydrochloric acid).
Hazardous Decomposition Products	None known.
Possibility of Hazardous Reactions	None known.

11. TOXICOLOGICAL INFORMATION

LC50: No information was located.

LD50 (oral): No information was located.

LD50 (dermal): No information was located.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Silica, cristobalite			Known carcinogen	
Silica, quartz			Known carcinogen	

12. ECOLOGICAL INFORMATION

General Comments Environmental information was not located.

13. DISPOSAL CONSIDERATIONS

The required hazard evaluation of the waste and compliance with the applicable hazardous waste laws are the responsibility of the user.

14. TRANSPORT INFORMATION

Shipping Information

Not regulated under Canadian TDG Regulations. Not regulated under US DOT Regulations.

Other Transport Information

Special Shipping Information Not applicable

15. REGULATORY INFORMATION

Canada

WHMIS Classification



Class D2A

D2A - Very Toxic

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

USA

US OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

Additional USA Regulatory Lists

California Proposition 65. (Silica, cristobalite). (Silica, quartz) SARA Title III - Section 311/312. (Silica, cristobalite). (Silica, quartz)

16. OTHER INFORMATION

NFPA Rating	Health - 1 Flammability - 0 Instability - 0
MSDS Prepared By	Wayne Hegstrom
Phone No.	405 682 2541
Revision Indicators	The following MSDS content was changed on June 12, 2013: Section 11 - Toxicological Information; Carcinogenicity. The following MSDS content was changed on June 12, 2013: Section 11 - Toxicological Information; Carcinogenicity.
Key to Abbreviations	ACGIH® = American Conference of Governmental Industrial Hygienists NFPA = National Fire Prevention Association NTP = National Toxicology Program OSHA = US Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

1. COMPANY AND PRODUCT IDENTIFICATION

DUNCAN ENTERPRISES
5673 East Shields Avenue
Fresno, CA 93727
559-291-4444
559-291-9444 (Fax)

EMERGENCY TELEPHONE NUMBERS

Health Emergency:	559-291-4444	7:00 am – 3:30 pm Pacific Standard Time
Spill and Off-Hour Health Emergencies:	800-424-9300	U.S. and Canada
	703-527-3887	Outside U.S. and Canada (Collect)

Product Name: **DUNCAN ENVISION™ GLAZES**
Product Type: Nontoxic Ceramic Glaze

2. COMPOSITION / INFORMATION ON INGREDIENTS

The ingredients in this formulation are a trade secret. All ingredients in the formula are non-hazardous, unless specified in Sections 3 and 15.

3. HAZARDS IDENTIFICATION

HMIS Hazard Ratings for Product

Health:	1	0 = Minimal
Flammability:	0	1 = Slight
Reactivity:	0	2 = Moderate
Personal Protection:	See Section 8	3 = Serious
		4 = Severe
		* = Chronic Effects

4. FIRST AID MEASURES

Eye Contact: Flush eyes with large amounts of water until irritation subsides. Consult a physician if irritation persists.
Skin Contact: Wash affected skin areas thoroughly with soap and water. Consult a physician if irritation persists.
Inhalation: Move subject to fresh air.
Ingestion: If swallowed, give two glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Autoignition Temperature:	Nonflammable
Flash Point:	Not Applicable
Upper Explosive Limit (%):	Not Applicable
Lower Explosive Limit (%):	Not Applicable
Extinguisher Media:	Product is nonflammable – Use extinguishing media appropriate for surrounding fire
Special Firefighting Procedures:	Not Applicable
Fire & Explosion Hazards:	Not Applicable
NFPA Flammability Hazard Class:	0 = Insignificant

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Spills should be taken up with suitable absorbent material and placed in containers. Spill areas can be washed with water; collect wash water for approved disposal. Do not flush to storm sewer or waterway.

For safety and environmental precautions, please review entire Material Safety Data Sheet for necessary information.

7. HANDLING AND STORAGE

Storage Temperature: 40° - 100°F
Handling / Storage: Protect from freezing; keep container sealed when not in use
Ventilation Requirements: General

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Conditions Under Which Personal Protective Equipment Required

Eye Protection Requirements:	Wear safety glasses with side shields
Glove Requirements:	Gloves are not normally required for foreseeable conditions of use
Clothing Requirements:	Protective clothing is normally not necessary for foreseeable conditions of use
Change / Removal of Clothing:	None required
Wash Requirements:	Good hygiene practices should be followed
Respirator Requirements:	NIOSH approved respirator for sprays and mists recommended if using a sprayer
Ventilation Requirements:	General; local exhaust ventilation recommended when spraying

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance / Physical Description:	Colored liquid. Odorless
pH:	7 - 10
Boiling Point:	212°F
Freezing Point:	32°F
Melting Point:	1800°F
Solubility in Water:	Miscible
Specific Gravity (Water = 1):	1.3 – 1.8
Bulk Density:	10.8 – 15.0 lb / gal
Evaporation Rate (Water = 1):	1
Vapor Pressure:	17.5 mm Hg @ 20°C (68°F)
Autoignition Temperature:	Not Applicable
Flash Point:	Not Applicable
Oxidizing Properties:	Not Applicable

10. STABILITY AND REACTIVITY

Stability:	Stable
Incompatible Materials:	None known
NFPA Reactivity Hazard Class:	0 = Insignificant
Hazardous Decomposition Products:	Avoid fumes when firing
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	None Known

11. TOXICOLOGICAL INFORMATION

Short – Term Effects of Exposure

Routes of Entry: **Inhalation:** No **Skin Contact:** No **Ingestion:** Yes

Acute Effects – Eye: Abrasive, can scratch eyes
Acute Effects – Skin Contact: No hazard in normal industrial use.*
Acute Effects – Inhalation: No hazard in normal industrial use.
Acute Effects – Ingestion: No hazard in normal industrial use.
*** Intentional skin contact with this product for the purpose of creating hand or foot imprints poses no known health risks.**

Long – Term Effects of Exposure

Effect of Chronic Exposure: This product should be considered non – hazardous and has no known chronic effects.
Target Organs: Not applicable
Carcinogenicity: **IARC Monographs:** No **NTP:** No **OSHA Regulated:** No

12. ECOLOGICAL INFORMATION

No Applicable Data

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods: Waste disposal should be in accordance with existing Federal, State, and Local environmental regulations.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Information

DOT Shipping Name: Glazes or Stains, Ceramic or Pottery, Artists or Hobbyists Liquid
DOT Hazard Class: 88690 Sub. 1
DOT Reportable Quantity: None

15. REGULATORY INFORMATION

TSCA: All components are on the TSCA Inventory
FDA: 21CFR175.105
SARA/Title III: This product contains no substances at or above the reported threshold under Section 313, based on available data.



Products bearing the Nontoxic Product Seal are certified in a program of toxicological evaluation by a nationally recognized toxicologist to contain no materials in sufficient quantities to be toxic or injurious to humans or to cause acute or chronic health problems. These products are certified to be labeled in accordance with the voluntary chronic hazard labeling standard ASTM D-4236. In addition, there is no physical hazard as defined within 29 CFR Part 1910.1200(c).

16. OTHER INFORMATION

Table of Abbreviations

ACGIH American Conference of Governmental Industrial Hygienists
ANSI American National Standards Institute

16. OTHER INFORMATION (Continued)

Table of Abbreviations (Continued)

ASTM	American Society for Testing Materials
°C	Degrees Centigrade
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CPR	Controlled Products Regulations
DOT	Department of Transportation
EPA	Environmental Protection Agency
°F	Degrees Fahrenheit
FDA	Food & Drug Administration
Hg	Mercury
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
LD	Lethal Dose
mg / kg	Milligram per kilogram
mm	Millimeter
MSDS	Material Safety Data Sheet
MSHA	Mine Safety and Health Administration
N / A	Not Applicable
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
ppm	Parts per million
SARA	Superfund Amendment and Reauthorization Act
STEL	Short-Term Exposure Limit
TSCA	Toxic Substances Control Act
TWA	Time - Weighted Average
U.N.	United Nations
WHMIS	Workplace Hazardous Materials Information System
>	Greater Than
<	Less Than

Creation Date: 07/00
Revision Date: 10/13/05
Technical Contact: Candi Prado
Senior R&D Specialist
Duncan Enterprises
5673 East Shields Avenue
Fresno, CA 93727
559-291-4444
559-291-9444 (Fax)

Disclaimer

The information given and the recommendations made herein apply to our product(s) alone and not combined with any other product(s). Such are based on our research and on data from other reliable sources and are believed to be accurate. No guarantee of accuracy is made. It is the purchaser's responsibility before using any product to verify this data under their own operating conditions and to determine whether the product is suitable for their purposes.

MATERIAL SAFETY DATA SHEET

1. COMPANY AND PRODUCT IDENTIFICATION

DUNCAN ENTERPRISES
5673 East Shields Avenue
Fresno, CA 93727
559-291-4444
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EMERGENCY TELEPHONE NUMBERS

Health Emergency:	559-291-4444	7:00 am – 3:30 pm Pacific Standard Time
Spill and Off-Hour Health Emergencies:	800-424-9300	U.S. and Canada
	703-527-3887	Outside U.S. and Canada (Collect)

Product Name: **DUNCAN PURE BRILLIANCE CLEAR GLAZE & CLEAR DIPPING GLAZE**
Product Type: Nontoxic Clear Ceramic Glazes

2. COMPOSITION / INFORMATION ON INGREDIENTS

The ingredients in this formulation are a trade secret. All ingredients in the formula are non-hazardous, unless specified in Sections 3 and 15.

3. HAZARDS IDENTIFICATION

HMIS Hazard Ratings for Product

Health:	1	0 = Minimal
Flammability:	0	1 = Slight
Reactivity:	0	2 = Moderate
Personal Protection:	See Section 8	3 = Serious
		4 = Severe
		* = Chronic Effects

4. FIRST AID MEASURES

Eye Contact: Flush eyes with large amounts of water until irritation subsides. Consult a physician if irritation persists.
Skin Contact: Wash affected skin areas thoroughly with soap and water. Consult a physician if irritation persists.
Inhalation: Move subject to fresh air.
Ingestion: If swallowed, give two glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Autoignition Temperature:	Nonflammable
Flash Point:	Not Applicable
Upper Explosive Limit (%):	Not Applicable
Lower Explosive Limit (%):	Not Applicable
Extinguisher Media:	Product is nonflammable – Use extinguishing media appropriate for surrounding fire
Special Firefighting Procedures:	Not Applicable
Fire & Explosion Hazards:	Not Applicable
NFPA Flammability Hazard Class:	0 = Insignificant

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Spills should be taken up with suitable absorbent material and placed in containers. Spill areas can be washed with water; collect wash water for approved disposal. Do not flush to storm sewer or waterway.

For safety and environmental precautions, please review entire Material Safety Data Sheet for necessary information.

7. HANDLING AND STORAGE

Storage Temperature: 40° - 100°F
Handling / Storage: Protect from freezing; keep container sealed when not in use
Ventilation Requirements: General

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Conditions Under Which Personal Protective Equipment Required
Eye Protection Requirements: Wear safety glasses with side shields
Glove Requirements: Gloves are not normally required for foreseeable conditions of use
Clothing Requirements: Protective clothing is normally not necessary for foreseeable conditions of use
Change / Removal of Clothing: None required
Wash Requirements: Good hygiene practices should be followed
Respirator Requirements: NIOSH approved respirator for sprays and mists recommended if using a sprayer
Ventilation Requirements: General; local exhaust ventilation recommended when spraying

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance / Physical Description: Colored liquid. Odorless
pH: 7 - 10
Boiling Point: 212°F
Freezing Point: 32°F
Melting Point: 1800°F
Solubility in Water: Miscible
Specific Gravity (Water = 1): 1.3 – 1.5
Bulk Density: 10.8 – 12.50 lb / gal
Evaporation Rate (Water = 1): 1
Vapor Pressure: 17.5 mm Hg @ 20°C (68°F)
Autoignition Temperature: Not Applicable
Flash Point: Not Applicable
Oxidizing Properties: Not Applicable

10. STABILITY AND REACTIVITY

Stability:	Stable
Incompatible Materials:	None known
NFPA Reactivity Hazard Class:	0 = Insignificant
Hazardous Decomposition Products:	Avoid fumes when firing
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	None Known

11. TOXICOLOGICAL INFORMATION

Short – Term Effects of Exposure

Routes of Entry: **Inhalation:** No **Skin Contact:** No **Ingestion:** Yes

Acute Effects – Eye:	Abrasive, can scratch eyes
Acute Effects – Skin Contact:	No hazard in normal industrial use.*
Acute Effects – Inhalation:	No hazard in normal industrial use.
Acute Effects – Ingestion:	No hazard in normal industrial use.

*** Intentional skin contact with this product for the purpose of creating hand or foot imprints poses no known health risks.**

Long – Term Effects of Exposure

Effect of Chronic Exposure:	This product should be considered non – hazardous and has no known chronic effects.
Target Organs:	Not applicable
Carcinogenicity:	**IARC Monographs:** No **NTP:** No **OSHA Regulated:** No

12. ECOLOGICAL INFORMATION

No Applicable Data

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods:	Waste disposal should be in accordance with existing Federal, State, and Local environmental regulations.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Information

DOT Shipping Name:	Glazes or Stains, Ceramic or Pottery, Artists or Hobbyists Liquid
DOT Hazard Class:	88690 Sub. 1
DOT Reportable Quantity:	None

15. REGULATORY INFORMATION

TSCA: All components are on the TSCA Inventory
FDA: 21CFR175.105
SARA/Title III: This product contains no substances at or above the reported threshold under Section 313, based on available data.



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16. OTHER INFORMATION

Table of Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
ANSI	American National Standards Institute
ASTM	American Society for Testing Materials
°C	Degrees Centigrade
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
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CPR	Controlled Products Regulations
DOT	Department of Transportation
EPA	Environmental Protection Agency
°F	Degrees Fahrenheit
FDA	Food & Drug Administration
Hg	Mercury
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
LD	Lethal Dose
mg / kg	Milligram per kilogram
mm	Millimeter
MSDS	Material Safety Data Sheet
MSHA	Mine Safety and Health Administration
N / A	Not Applicable
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
ppm	Parts per million
SARA	Superfund Amendment and Reauthorization Act

16. OTHER INFORMATION (Continued)

Table of Abbreviations (Continued)

STEL	Short-Term Exposure Limit
TSCA	Toxic Substances Control Act
TWA	Time - Weighted Average
U.N.	United Nations
WHMIS	Workplace Hazardous Materials Information System
>	Greater Than
<	Less Than

Creation Date: 08/28/08
Revision Date: N/A
Technical Contact: Frank Peters
Senior R&D Chemist
Duncan Enterprises
5673 East Shields Avenue
Fresno, CA 93727
559-291-4444
559-291-9444 (Fax)

Disclaimer

The information given and the recommendations made herein apply to our product(s) alone and not combined with any other product(s). Such are based on our research and on data from other reliable sources and are believed to be accurate. No guarantee of accuracy is made. It is the purchaser's responsibility before using any product to verify this data under their own operating conditions and to determine whether the product is suitable for their purposes.

SAFETY DATA SHEET

Date: 05/21/15

SECTION 1 - IDENTIFICATION

GHS Product Identifier: DUOSEAL PUMP OIL

Synonyms: 1407K DUOSEAL Vacuum Pump Oil
Highly-Refined Petroleum Lubricant Oil

Supplier's Details: Welch Vacuum, Gardner Denver Thomas, Inc.
5621 West Howard Street
Niles, IL 60714
Phone: (847) 676-8800
gdwelchvacuum@gardnerdenver.com

Telephone Number: Technical Contact: (847) 676-8800

SECTION 2 – HAZARDS IDENTIFICATION

OSHA/HCS status: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the Substance or mixture: Not classified.

GHS label elements

Signal word: No signal word.

Hazard statements: No known significant effects or critical hazards.

Precautionary statements

General: Avoid contact with eyes, skin and clothing. MAY BE HARMFUL IF SWALLOWED. IF IN EYES: Rinse cautiously with water for several minutes. Do NOT induce vomiting. After handling, always wash hands thoroughly with soap and water. If you feel unwell, seek medical attention and show the label when possible. Keep out of reach of children.

Prevention: Not applicable.

Response: Not applicable.

Storage: Store in a dry place and/or in closed container. Store in accordance with all local, regional, national and international regulations.

Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified: None known.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture: Substance

Other means of Identification: Lubricating oil

CAS number/other identifiers
CAS number: Not available

Ingredient name	%	CAS number
Distillates (petroleum), hydro treated heavy paraffinic	100	64742-54-7

* = Various ** = Mixture *** = Proprietary
Any concentration shown as a range is to protect confidentiality or is due to process variation.
Occupational exposure limits, if available, are listed in Section 8.

SECTION 4 - FIRST AID MEASURES

Description of necessary first aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute
Potential acute health effects

Eye contact: No known significant effects or critical hazards.
Inhalation: No known significant effects or critical hazards.
Skin contact: No known significant effects or critical hazards.
Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms
Eye contact: No specific data.
Inhalation: No specific data.
Skin contact: No specific data.
Ingestion: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments: Treat symptomatically and supportively.

SECTION 4 - FIRST AID MEASURES CONTINUED

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

SECTION 5 - FIRE FIGHTING MEASURES

Specific hazards arising from the chemical: In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable extinguishing Media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing Media: None known.

Hazardous thermal decomposition products: No specific data.

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency Personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

SECTION 6 - ACCIDENTAL RELEASE MEASURES CONTINUED

Methods and materials for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, Including any incompatibilities: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Bulk Storage Conditions: Maintain all storage tanks in accordance with applicable regulations. Use necessary controls to monitor tank inventories. Inspect all storage tanks on a periodic basis. Test tanks and associated piping for tightness. Maintain the automatic leak detection devices to assure proper working condition.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Distillates (petroleum), hydro treated heavy paraffinic	**ACGIH TLV (United States, 6/2013).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **ACGIH (United States).** TWA: 5 mg/m³ 8 hours. STEL: 10 mg/m³ 15 minutes. **OSHA (United States).** TWA: 5 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours.

Appropriate engineering controls: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure Controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, vapor controls, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Splash goggles. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection: Chemical-resistant gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION CONTINUED

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Use a properly fitted, air-purifying or supplied-air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid.
Color:	Light amber
Odor:	Mild petroleum odor
Ph:	Not available.
Boiling point:	Not available.
Flash point:	Open cup: 244°C (471.2°F) [Cleveland.]
Lower and upper explosive (flammable) limits:	Not available
Vapor pressure:	<0.0013 kPa (<0.01 mm Hg) [room temperature]
Vapor density:	Not available.
Relative density:	0.88
Density lbs/gal:	7.2 lbs/gal
Gravity, °API:	32.3
Viscosity:	Kinematic (40°C (104°F)): 0.68 cm_2/s (68 cSt)
Viscosity SUS:	340 SUS @100 F

SECTION 10 – STABILITY AND REACTIVITY

Reactivity: Not expected to be Explosive, Self-Reactive, Self-Heating, or an Organic Peroxide under US GHS Definition(s).

Chemical stability: The product is stable.

Possibility of hazardous Reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: No specific data.

Incompatible materials: No specific data.

Hazardous decomposition Products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 – TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), Hydro treated heavy paraffinic	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary: **Distillates (petroleum), hydrotreated heavy paraffinic**: Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects.

Irritation/Corrosion

Skin: No additional information.
Eyes: No additional information.
Respiratory: No additional information.

Sensitization

Skin: No additional information.
Respiratory: No additional information.

Mutagenicity
Conclusion/Summary: No additional information.

Carcinogenicity
Conclusion/Summary: No additional information.

Reproductive toxicity
Conclusion/Summary: No additional information.

Teratogenicity
Conclusion/Summary: No additional information.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)
Not available.

Aspiration hazard
Not available.

SECTION 11 – TOXICOLOGICAL INFORMATION CONTINUED

Information on the likely routes of exposure: Not available.

Potential acute health effects

Eye contact: No known significant effects or critical hazards.
Inhalation: No known significant effects or critical hazards.
Skin contact: No known significant effects or critical hazards.
Ingestion: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data.
Inhalation: No specific data.
Skin contact: No specific data.
Ingestion: No specific data.

Potential chronic health effects

General: No known significant effects or critical hazards.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity
Conclusion/Summary: Not available

Persistence and degradability
Conclusion/Summary: Not available

Bio accumulative potential
Not available

Mobility in soil
Soil/water partition coefficient (K_{OC}): Not available

Other adverse effects: No known significant effects or critical hazards.

SECTION 13 – DISPOSAL CONSIDERATIONS

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14 – TRANSPORT INFORMATION

	DOT Classification	IMDG	IATA
UN number	Not regulated	Not regulated	Not regulated
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No	No	No
Additional information	-	-	-

Special precautions for user: **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not available.

SECTION 15 – REGULATORY INFORMATION

U.S. Federal regulations: **United States inventory (TSCA 8b)**: All components are listed or exempted.
This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

SARA 302/304

Composition/information on ingredients

SARA 304 RQ: Not applicable.

SECTION 15 – REGULATORY INFORMATION CONTINUED

SARA 311/312

Classification: Not applicable.
Composition/information on ingredients

State regulations
Massachusetts: None of the components are listed.
New York: None of the components are listed.
New Jersey: None of the components are listed.
Pennsylvania: None of the components are listed.

International regulations

International lists:
Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Canada inventory: All components are listed or exempted.
EU Inventory: All components are listed or exempted.
WHMIS (Canada): Not controlled under WHMIS (Canada).

SECTION 16 – OTHER INFORMATION

National Fire Protection Association (U.S.A.)



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SECTION 16 – OTHER INFORMATION CONTINUED

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of issue/Date of Revision: 12/8/2014.

Key to abbreviations:

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships,1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

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MATERIAL SAFETY DATA SHEET

MSDS DATE: 06/21/2009

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Durham's Rock Hard Water Putty
SYNONYMS: None
PRODUCT CODES: None

MANUFACTURER: Donald Durham Company, Inc.
DIVISION:
ADDRESS: P.O. Box 804, Des Moines, Iowa 50304-0004

EMERGENCY PHONE: 515-243-0491

PREPARED BY: N/A

SECTION 1 NOTES: None

SECTION 2: HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS:	OSHA PEL	ACGIH TLV	OTHER RECOMMENDED LIMITS	%(OPTIONAL)
Nuisance dust	15 mg/m^3 total or 5 mg/m^3 respirable dust			>99%
Silicates (<1% crystalline silica)	20 mppcf	2 mg/cubic meter		

(CAS #'s 14807-96-6; 9004-53-9; 26499-65-0)

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Mechanical eye and skin irritation possible, but not likely. Prolonged exposures to excessive quantities of dust can result in lung damage.

ROUTES OF ENTRY: Inhalation.

POTENTIAL HEALTH EFFECTS

EYES: Mechanical irritation

SKIN: Mechanical irritation

INGESTION: No

INHALATION: Yes

ACUTE HEALTH HAZARDS: Inhalation of high concentrations may cause mechanical irritation and discomfort.

CHRONIC HEALTH HAZARDS: Repeated over-exposures can cause chronic respiratory system effects.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Excessive exposure to any dust may aggravate pre-existing respiratory conditions.

CARCINOGENICITY

OSHA: No **ACGIH:** No **NTP:** Crystalline Silica-Yes **IARC:** Crystalline Silica-Group 1 **OTHER:** No

This product contains crystalline silica at a non-detectable level of less than 1%, and no measurable levels of crystalline silica have been detected by personal air sampling conducted during use of product in accordance with manufacturer's instructions.

SECTION 3 NOTES: None

SECTION 4: FIRST AID MEASURES

EYES: Flush with plenty of flowing water. Get medical attention if irritation persists.

SKIN: Wash off with water.

INGESTION: Unlikely to cause effects.

INHALATION: Remove to fresh air.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: None known.

SECTION 4 NOTES: None

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: Not flammable
(% BY VOLUME) **LOWER:** No flammable

FLASH POINT:
F: None
C: None

METHOD USED: N/A

AUTOIGNITION TEMPERATURE:
F: None
C: None

NFPA HAZARD CLASSIFICATION
HEALTH: N/A **FLAMMABILITY:** N/A **REACTIVITY:** N/A
OTHER: N/A

EXTINGUISHING MEDIA: None needed

SPECIAL FIRE FIGHTING PROCEDURES: None needed

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

HAZARDOUS DECOMPOSITION PRODUCTS: None

SECTION 5 NOTES: NFPA 001

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Not a RCRA waste. Use dust-suppression methods to clean up waste. Dispose according to state and local regulations.

SECTION 6 NOTES: None

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: None special precautions.

OTHER PRECAUTIONS: None

SECTION 7 NOTES: None

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: See below.

VENTILATION : Local exhaust dust collection

RESPIRATORY PROTECTION: NIOSH-certified respiratory protection for dusts

EYE PROTECTION: Yes

SKIN PROTECTION: Yes

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: No

WORK HYGIENIC PRACTICES: Avoid generation of dust.

EXPOSURE GUIDELINES: OSHA PEL's for total and respirable dust exposures.

SECTION 8 NOTES: None

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Cream-colored powder

ODOR: Little odor

PHYSICAL STATE: Powder

pH AS SUPPLIED: N/A
pH (Other): N/a
BOILING POINT:
F: None
C: None
MELTING POINT:
F: None
C: NOne
FREEZING POINT:
F: None
C: None
VAPOR PRESSURE (mmHg):
@
F: None
C: None
VAPOR DENSITY (AIR = 1):
@
F: None
C: None
SPECIFIC GRAVITY (H2O = 1):
@
F: N/A
C: N/A

EVAPORATION RATE: N/A

BASIS (=1): N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (con't)

SOLUBILITY IN WATER: Not freely soluble.

PERCENT SOLIDS BY WEIGHT: 100%

PERCENT VOLATILE:
BY WT/ BY VOL @
F: None
C: None
VOLATILE ORGANIC COMPOUNDS (VOC):

WITH WATER: N/A **LBS/GAL**
WITHOUT WATER: N/A **LBS/GAL**

MOLECULAR WEIGHT: Not known

VISCOSITY: N/A

F: N/A
C: N/A

SECTION 9 NOTES: None

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID (STABILITY): None known

INCOMPATIBILITY (MATERIAL TO AVOID): None known

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: None Known

HAZARDOUS POLYMERIZATION: None

CONDITIONS TO AVOID (POLYMERIZATION): None known

SECTION 10 NOTES: None

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: Same as for nuisance dusts

SECTION 11 NOTES: None

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: None known

SECTION 12 NOTES: None

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Comply with state and local regulations.

RCRA HAZARD CLASS: Not a RCRA waste.

SECTION 13: DISPOSAL CONSIDERATIONS (con't)

SECTION 13 NOTES: None

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
PROPER SHIPPING NAME: Not applicable
HAZARD CLASS: Not applicable
ID NUMBER: Not applicable

PACKING GROUP: Not applicable
LABEL STATEMENT: Not applicable

WATER TRANSPORTATION

PROPER SHIPPING NAME: Not applicable
HAZARD CLASS: Not applicable
ID NUMBER: Not applicable
PACKING GROUP: Not applicable
LABEL STATEMENTS: Not applicable

AIR TRANSPORTATION
PROPER SHIPPING NAME: Not applicable
HAZARD CLASS: Not applicable
ID NUMBER: Not applicable
PACKING GROUP: Not applicable
LABEL STATEMENTS: Not applicable

OTHER AGENCIES: None known

SECTION 14 NOTES: None

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS
TSCA (TOXIC SUBSTANCE CONTROL ACT): Not applicable

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Not applicable

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): Not applicable

311/312 HAZARD CATEGORIES: Not applicable

313 REPORTABLE INGREDIENTS: Not applicable

STATE REGULATIONS: Not applicable

INTERNATIONAL REGULATIONS: None known

SECTION 15 NOTES: None

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: Conforms to ASTM D-4236

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EMERGENCY PHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET Page 01 of 05

Duro(R) All-Purpose Spray Adhesive
81088

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Item No.: 81088
Part No.: MS-H
Product Type: Aerosol Spray Adhesive

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients	CAS No.	%
DIMETHYL ETHER	115-10-6	50-55
n-HEXANE*	110-54-3	20-30-
ACETONE	67-64-1	15-20
Resins	Proprietary	5-10

* This component is listed as a SARA Section 313 Toxic Chemical.

Ingredients which have exposure limits

Exposure Limits (TWA) Ingredients	ACGIH (TLV)	OSHA (PEL)	OTHER
n-HEXANE	50 ppm TWA	50 ppm TWA 180mg/M3	None
ACETONE	500 ppm TWA 1188 mg/m3	750 ppm TWA 1800 mg/m3	None

Exposure Limits (STEL) Ingredients	ACGIH (TLV)	OSHA (PEL)
ACETONE	750 ppm 1782 mg/m3	1000 ppm 2400 mg/m3

3. HAZARDS IDENTIFICATION

Toxicity: Contact may cause skin and eye irritation. Ingestion or inhalation may cause irritation or symptoms of intoxication.
Primary Routes of Entry: Inhalation, Skin
Signs and Symptoms of Exposure: Eye or skin irritation. Respiratory or gastrointestinal irritation. Intoxication.
Existing Conditions Aggravated by Exposure: None known

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Item No.: 81088

3. HAZARDS IDENTIFICATION (continued)

Ingredients	Literature Referenced Target Organ and Other Health Effects	Carcinogen NTP	IARC	OSHA
DIMETHYL ETHER	CNS IRR	NO	NO	NO
n-HEXANE	DEV IRR NER REP	NO	NO	NO
ACETONE	AC4 BLO CNS IRR	NO	NO	NO
Resins	No Data	NO	NO	NO

Abbreviations

AC4 ACGIH-Unclassifiable as human carc. BLO Blood
CNS Central nervous system DEV Developmental
IRR Irritant NER Nervous System
REP Reproductive

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting unless directed by a physician. Get medical attention immediately.
Inhalation: Remove to fresh air. Give artificial respiration if breathing has stopped. Give oxygen if breathing is difficult. Call a physician.
Skin Contact: Wash with soap and water. Get medical attention if irritation persists.
Eye Contact: Flush at least 15 minutes with water. Obtain medical attention.

5. FIRE FIGHTING MEASURES

Flash Point: Not available
Recommended Extinguishing Agents: Carbon dioxide, foam, dry chemical
Special Firefighting Procedures: Keep containers cool using water spray. Use proper equipment to protect from bursting containers.
Hazardous Products formed by Fire or Thermal Decomp Oxides of carbon, hydrocarbons.
Unusual Fire or Explosion Hazards: Contents under pressure. Do not expose to temperatures exceeding 120°F as containers may vent, rupture or burst or liquid will be released.

Explosive Limits: not established
(% by volume in air)Lower Not available
(% by volume in air)Upper Not available

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Item No.: 81088

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak: Remove sources of ignition. Maintain adequate ventilation. Soak up spilled liquid with absorbent material. Place in a closed conrtainer.

7. HANDLING AND STORAGE

Safe Storage:	Do not store above 120°F
(Contact Loctite Customer	Service 1-800-243-4874 for shelf life information)
Handling:	Avoid prolonged skin contact. Keep away from eyes. Avoid inhalation of vapors. Do not puncture or incinerate containers. Keep out of reach of children.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes:	Wear safety glasses or goggles.
Skin:	Wear rubber gloves.
Ventilation:	Sufficient to maintain vapor concentraion below TLV.
Respiratory	NIOSH/MSHA approved respirator if ventilation is inadequate and TLV is exceeded.
	See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear/white liquid spray.
Odor:	Solvent
Boiling Point:	Not available
pH:	Does not apply
Solubility in Water:	Insoluble
Specific Gravity	0.72
Volatile Organic Compound (EPA Method 24)	75%; 540 grams per liter
Vapor Pressure:	65 psi
Vapor Density:	Not available
Evaporation Rate (Ether = 1)	Slower

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous Polymerization:	Will not occur
Incompatibility:	Strong oxidizers
Conditions to Avoid:	Not available
Hazardous Decomposition Products (non-thermal):	None

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Item No.: 81088

11. TOXICOLOGICAL INFORMATION

See Section 3.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal:	Dispose of in accordance with local, state, and federal regulations Do not puncture or incinerate containers. Give empty or full containers to a disposal service licensed and equipped to safely handle pressurized cans.
EPA Hazardous Waste Number	D001 - Hazardous waste per 40CFR 261.21

14. TRANSPORTATION INFORMATION

DOT (49 CFR 172)	
Domestic Ground Transport	
Proper Shipping Name:	Consumer Commodity
Hazard Class or Division:	ORM-D
Identification Number:	None
Marine Pollutant:	None
IATA	
Proper Shipping Name:	Aerosols, flammable, n.o.s.
Class or Division:	Division 2.1
UN or ID Number:	UN 1950

15. REGULATORY INFORMATION

CA Proposition 65:	No California Proposition 65 chemicals are known to be present.

16. OTHER INFORMATION

Estimated NFPA(R) Code:	
Health Hazard:	2
Fire Hazard:	3
Reactivity Hazard:	0
Specific Hazard:	Does not apply
Estimated HMIS(R) Code:	
Health Hazard:	2*
Flammability Hazard:	3

Item No.: 81088

16. OTHER INFORMATION (continued)

Reactivity Hazards:	0
Personal Protection:	See Section 8.

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HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By: Stephen Repetto
Title: Research Chemist- Safety,Health&Regulatory Affairs
Company: Loctite Corporation
1001 Trout Brook Crossing, Rocky Hill CT 06067
(24hr.) Phone: (860) 571-5100
Revision Date: August 20, 1998 Revision: 0004

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MATERIAL SAFETY DATA SHEET

125-0914
03 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES	
		Health	2*
125-0914	29-SEP-07	Flammability	0
		Reactivity	0

PRODUCT NAME
ULTRA DELUXE® Interior Acrylic Latex High Gloss Enamel, 914 White

MANUFACTURER'S NAME
DURON
10406 Tucker St.
Beltsville, MD 20705-2297

TELEPHONE NUMBERS and WEBSITES
Product Information
(800) 723-8766 www.duron.com
Regulatory Information
(800) 306-8961 www.paintdocs.com
Medical Emergency
(216) 566-2917
Transportation Emergency for Chemical Emergency ONLY (spill, leak,
(800) 424-9300 fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT		UNITS	VAPOR PRESSURE
2	107-21-1	Ethylene Glycol			
		ACGIH TLV	100	mg/m3 CEILI (aerosol)	0.12 mm
		OSHA PEL	50	ppm CEILING	
21	13463-67-7	Titanium Dioxide			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.
In a confined area vapors in high concentration may cause headache, nausea or dizziness.
Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver and urinary systems.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

Continued on page 2

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
May cause allergic skin reaction in susceptible persons or skin sensitization.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES:	Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN:	Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before re-use.
INHALATION:	If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION:	Do not induce vomiting. Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
Not Applicable	N.A.	N.A.

FLAMMABILITY CLASSIFICATION
Not Applicable
EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam
UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.
SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY
Not Applicable
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Continued on page 3

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.36 lb/gal	1241 g/l
SPECIFIC GRAVITY	1.25	
BOILING POINT	212 - 500 F	100 - 260 C
MELTING POINT	Not Available	
VOLATILE VOLUME	65 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

1.06 lb/gal	127 g/l	Less Water and Federally Exempt Solvents
0.41 lb/gal	50 g/l	Emitted VOC

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

Continued on page 4

HAZARDOUS POLYMERIZATION
Will not occur

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."
Ethylene Glycol is considered an animal teratogen. It has been shown to cause birth defects in rats and mice at high doses when given in drinking water or by gavage. There is no evidence to indicate it causes birth defects in humans.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
107-21-1	Ethylene Glycol				
		LC50	RAT	4HR	Not Available
		LD50	RAT		4700 mg/kg
13463-67-7	Titanium Dioxide				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)
Not Regulated for Transportation.

Canada (TDG)
Not Regulated for Transportation.

IMO
Not Regulated for Transportation.

Continued on page 5

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
107-21-1	Ethylene Glycol	2	

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

DU0024102
26 00

DATE OF PREPARATION
Aug 7, 2013

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
DU0024102
PRODUCT NAME
PRO KOTE SUPREME® Semi-Gloss Interior Latex, White Base
MANUFACTURER'S NAME
Duron Paint & Wallcovering
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 474-3794 www.duron.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
20	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT
Not Applicable

FLAMMABILITY CLASSIFICATION
Not Applicable

LEL	UEL	EXTINGUISHING MEDIA
Not Applicable	Not Applicable	Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.11 lb/gal	1211 g/l
SPECIFIC GRAVITY	1.22	
BOILING POINT	212 - 213 °F	100 - 100 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	70%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.32 lb/gal	38 g/l	Less Water and Federally Exempt Solvents
0.10 lb/gal	12 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."
TOXICOLOGY DATA

CAS No.	Ingredient Name			
13463-67-7	**Titanium Dioxide**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.
US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.
IATA/ICAO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Safety Data Sheet
Spartan Chemical Company, Inc.

Revision Date: 28-Jul-2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name: **DUST MOP DUST CLOTH TREATMENT**
Product Number: 3013 , 3213
Recommended Use: Dust cloth treatment
Uses Advised Against: For Industrial and Institutional Use Only

Manufacturer/Supplier:
Spartan Chemical Company, Inc.
1110 Spartan Drive
Maumee, Ohio 43537 USA
800-537-8990 (Business hours)
www.spartanchemical.com

24 Hour Emergency Phone Numbers:
Medical Emergency/Information: 888-314-6171
Transportation/Spill/Leak: CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION

GHS Classification
Serious Eye Damage/Eye Irritation: Category 2A

GHS Label Elements
Signal Word: **Warning**
Symbols:



Hazard Statements: Causes serious eye irritation
Precautionary Statements:
Prevention: Wash hands and any exposed skin thoroughly after handling.
Wear eye / face protection

Response:
-Eyes IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
-Specific Treatment: See Safety Data Sheet Section 4: "FIRST AID MEASURES" for additional information.

Storage: Not Applicable
Disposal: Not Applicable

Hazards Not Otherwise Classified: Not Applicable

Other Information:
- May be harmful if swallowed.
- May cause skin irritation.
- Inhalation of vapors or mist may cause respiratory irritation.
- Keep out of reach of children.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
water	7732-18-5	60-100
petroleum distillate	64742-46-7	1-5
ethylene glycol	107-21-1	1-5
alcohol ethoxylate	68131-39-5	1-5

Specific chemical identity and/or exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

-Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

-Skin Contact: Wash with soap and water. If skin irritation occurs: Get medical attention.

-Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison control center or physician if you feel unwell.

-Ingestion: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if you feel unwell.

Note to Physicians: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Product does not support combustion, Use extinguishing agent suitable for type of surrounding fire

Specific Hazards Arising from the Chemical: Dried product is capable of burning. Combustion products are toxic.

Hazardous Combustion Products: May include Carbon monoxide Carbon dioxide and other toxic gases or vapors.

Protective Equipment and Precautions for Firefighters: Wear MSHA/NIOSH approved self-contained breathing apparatus (SCBA) and full protective gear. Cool fire-exposed containers with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Environmental Precautions: Do not rinse spill onto the ground, into storm sewers or bodies of water.

Methods for Clean-Up: Prevent further leakage or spillage if safe to do so. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

7. HANDLING AND STORAGE

Advice on Safe Handling: Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

Storage Conditions: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH
ethylene glycol 107-21-1	Ceiling: 100 mg/m³ aerosol only	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m³	-

Engineering Controls: Provide good general ventilation.
If work practices generate dust, fumes, gas, vapors or mists which expose workers to chemicals above the occupational exposure limits, local exhaust ventilation or other engineering controls should be considered.

Personal Protective Equipment

Eye/Face Protection: Wear splash goggles.

Skin and Body Protection: Wear rubber or other chemical-resistant gloves.

Respiratory Protection: Not required with expected use.
If occupational exposure limits are exceeded or respiratory irritation occurs, use of a NIOSH/MSHA approved respirator suitable for the use-conditions and chemicals in Section 3 should be considered.

General Hygiene Considerations: Wash hands and any exposed skin thoroughly after handling.
See 29 CFR 1910.132-138 for further guidance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical State:	Liquid
Color:	White emulsion
Odor:	Fresh
pH:	8.5-9.5
Melting Point / Freezing Point:	No information available.
Boiling Point / Boiling Range:	100 °C / 212 °F
Flash Point:	> 100 °C / > 212 °F ASTM D56
Evaporation Rate:	< 1 (Butyl acetate = 1)
Flammability (solid, gas)	No information available.
Upper Flammability Limit:	No information available.
Lower Flammability Limit:	No information available.
Vapor Pressure:	No information available.
Vapor Density:	No information available.
Specific Gravity:	1.00
Solubility(ies):	Miscible in water
Partition Coefficient:	No information available.
Autoignition Temperature:	No information available.
Decomposition Temperature:	No information available.
Viscosity:	No information available.

10. STABILITY AND REACTIVITY

Reactivity: This material is considered to be non-reactive under normal conditions of use.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Not expected to occur with normal handling and storage.

Conditions to Avoid: Extremes of temperature and direct sunlight.

Incompatible Materials: Strong oxidizing agents. Strong acids.

Hazardous Decomposition Products: May include carbon monoxide, carbon dioxide (CO2) and other toxic gases or vapors.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eyes, Skin, Ingestion, Inhalation.

Symptoms of Exposure:

-Eye Contact: Pain, redness, swelling of the conjunctiva and blurred vision.

-Skin Contact: Drying of the skin.

-Inhalation: Nasal discomfort and coughing.

-Ingestion: Pain, nausea, vomiting and diarrhea.

Immediate, Delayed, Chronic Effects

Product Information: Data not available or insufficient for classification.

Target Organ Effects: Central nervous system. -Eyes. Respiratory System. -Skin.

Numerical Measures of Toxicity

The following acute toxicity estimates (ATE) are calculated based on the GHS document.

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ATEmix (oral): 13529 mg/kg
ATEmix (dermal): 35962 mg/kg

Component Acute Toxicity Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
water 7732-18-5	> 90 mL/kg (Rat)	Not Available	Not Available
petroleum distillate 64742-46-7	= 7400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 4.6 mg/L (Rat) 4 h
ethylene glycol 107-21-1	= 4000 mg/kg (Rat)	= 9530 µL/kg (Rabbit)	Not Available
alcohol ethoxylate 68131-39-5	= 2 g/kg (Rat)	Not Available	Not Available

Carcinogenicity: No components present at 0.1% or greater are listed as to being carcinogens by ACGIH, IARC, NTP or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/Aquatic Plants	Fish	Toxicity to Microorganisms	Crustacea
petroleum distillate 64742-46-7	Not Available	35: 96 h Pimephales promelas mg/L LC50 flow-through 10000: 96 h Pimephales promelas mg/L LC50 static	Not Available	Not Available
ethylene glycol 107-21-1	6500 - 13000: 96 h Pseudokirchneriella subcapitata mg/L EC50	41000: 96 h Oncorhynchus mykiss mg/L LC50 14 - 18: 96 h Oncorhynchus mykiss mL/L LC50 static 27540: 96 h Lepomis macrochirus mg/L LC50 static 40761: 96 h Oncorhynchus mykiss mg/L LC50 static 40000 - 60000: 96 h Pimephales promelas mg/L LC50 static 16000: 96 h Poecilia reticulata mg/L LC50 static	Not Available	46300: 48 h Daphnia magna mg/L EC50

Persistence and Degradability: No information available.
Bioaccumulation: No information available.

Other Adverse Effects: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal of Wastes: Dispose of in accordance with federal, state and local regulations.
Contaminated Packaging: Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT: Not Regulated
Proper Shipping Name: Non Hazardous Product
Special Provisions: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Check with a trained hazardous materials transportation expert for information specific to your situation.

IMDG: Not Regulated
Proper Shipping Name: Non Hazardous Product

15. REGULATORY INFORMATION

TSCA Status: (Toxic Substance Control Act Section 8(b) Inventory)
All chemical substances in this product are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

SARA 313
This product contains the following listed substances:
ethylene glycol
CAS No 107-21-1

SARA 311/312 Hazard Categories

Acute Health Hazard:	Yes
Chronic Health Hazard:	No
Fire Hazard:	No
Sudden release of pressure hazard:	No
Reactive Hazard:	No

California Proposition 65
This product is not subject to warning requirements under California Proposition 65.

16. OTHER INFORMATION

NFPA	**Health Hazards:** 1	**Flammability:** 0	**Instability:** 0	**Special:** N/A
HMIS	**Health Hazards:** 1	**Flammability:** 0	**Physical Hazards:** 0	

Revision Date: 28-Jul-2015
Reasons for Revision: Section 14 and 15

Disclaimer:
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

AQT
Prepared by: Regulatory Affairs Dept.

MATERIAL SAFETY DATA SHEET
(Prepared According to 29 CFR 1910.1200)

N/A=Not Applicable
Effective Date: 5/99 Revision: n/a

SECTION 1-PRODUCT IDENTIFICATION AND SUPPLIER INFORMATION

Product Name: Waterbase Dust Mop Treatment
Generic Name: Waterbased Mop Treatment
Chemical Family: Glycol/Detergent Blend
Formula: Proprietary

Supplier's Name: Indco Inc.
Supplier's Address: North Railroad & Essex St., Gloucester City, NJ 08030
Supplier's Phone #: (800) 992-6180

SECTION 2-INGREDIENT INFORMATION

CHEMICAL NAME	CAS NO.	WT. %	PEL	TWA-TLV	STEL-TLV
Water	7732-18-5	to 100			
Ethylene Glycol	107-21-1	20 to 25	N/A	C50 ppm	N/A
Nonionic Surfactant	9016-45-9	0 to 5			
n-Amyl Acetate	628-63-7	0 to 5	100 ppm	100 ppm	N/A

SECTION 3-PHYSICAL DATA

Boiling Point (°F): 225 F. Initial
Specific Gravity: 1.027
Vapor Pressure: <20mm Hg @ 68 F.
Vapor Density (Air=1): >1
% Volatile: 70+
pH: 7.5-8.0
Solubility in Water: 100%
Evaporation Rate (Water=1): <1
Physical Description: Thin clear liquid with pleasant odor.

SECTION 4-FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): N/A
Upper Explosion Limit: N/A
Lower Explosion Limit: N/A
Extinguishing Media: N/A
Special Firefighting Procedures: Non Flammable
Unusual Fire and Explosion Hazards: N/A

SECTION 5-REACTIVITY DATA

Stability: Stable
Hazards Decomposition Products: Carbon Monoxide possible if burned.
Hazardous Polymerization: None
Incompatibility (Materials to Avoid): Strong oxidizers, acids or alkalis.

SECTION 6-STORAGE AND HANDLING INFORMATION

Keep out of reach of children. For use by trained personnel only. Keep container closed during storage. For institutional and industrial use only. Avoid contact with eyes, skin and clothing. Avoid breathing of vapors. Use in well-ventilated area.

SECTION 7-HEALTH HAZARDS AND FIRST AID

Effects of Overexposure:
Skin: Repeated exposure to large amounts may result in absorption through the skin, which may cause damage to kidneys and depression of the CNS.
Eyes: May be slightly irritating to the eyes.
Inhalation: May be irritating to mucous membranes of the nose, throat, and lungs. Excessive amounts may cause damage to kidneys or CNS depression.
Ingestion: May cause nausea and vomiting. Large doses can cause CNS depression and kidney damage.

First Aid Procedures:
Skin: Remove contaminated clothing. Wash with soap and water. Seek medical attention if irritation persists.
Eyes: Flush with large quantities of water, holding eyelids open. Seek medical attention.
Inhalation: Get to fresh air. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist.
Ingestion: Dilute with 2 glasses of water and induce vomiting. Seek medical attention immediately.

SECTION 8-SPECIAL PROTECTION INFORMATION

Respiratory Protection: Use in well-ventilated areas.
Ventilation Requirements: Provide local exhaust to keep TLV of Section 2 ingredients below acceptable limit.
Protective Gloves: Chemical resistant rubber or neoprene.
Eye Protection: Safety glasses recommended.
Other Protective Equipment: Eye wash should be provided nearby.

SECTION 9-SPILL OR LEAK PROCEDURES

Steps to be taken in Case Material is Released or Spilled: Floors will become slippery. Avoid walking in product. Keep unessential personnel away. Mop up or otherwise absorb and hold disposal. Avoid discharge to sewer or open waterways.
Waste Disposal Method: Any method in accordance with local, state and federal laws. Best method is to recycle or reuse for intended purpose. Consult local authorities for disposal in public sewer. Do not dispose of into storm drain, stream, river or to ground. Rinse container thoroughly before discarding in trash.

SECTION 10-REGULATORY INFORMATION

SARA Title III - Section 311/312 -Hazard Categories:
No - Fire Hazard
No - Sudden Release of Pressure Hazard
No - Reactivity Hazard
Yes - Immediate (acute) Health Hazard
No - Delayed (chronic) Health Hazard

Shipping Information:
FOR CONTAINERS > 1 Gallon : Cleaning Compound
FOR 1 GALLON CONTAINERS : Cleaning Compound
FOR CONTAINERS < 1 GALLON : Cleaning Compound

HMIS Hazardous Materials Identification System

Health	2
Flammability	0
Reactivity	0
Personal Protection	A

FOR EMERGENCY MEDICAL OR TRANSPORT INFORMATION: CHEM-TEL, Inc. @ 800-255-3924 **(24 hours, 7 days per week)**

This product contains the following toxic chemical(s) subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

CAS#	Chemical Name	Percent by Weight
107-21-1	Ethylene Glycol	25.0

This product contains the following chemical(s) which have been established to be either a carcinogen or suspected carcinogen.

CAS#	Chemical Name	Percent by Weight
	None	

SECTION 11-OTHER INFORMATION

This company cannot anticipate all conditions of handling and use of this product. Therefore, this company accepts no responsibility for results obtained by the application of this information, or the safety and suitability of our products either alone or in combination with other products. It is the responsibility of the user to provide a safe workplace, using the health and safety information contained herein as a guide. This company will accept no liability for damages or loss incurred from the improper handling and use of this product

SAFETY DATA SHEET

1. Identification

Product number 1000008142

Product identifier **DUST UP FLOOR DRESSING & DUSP MOP TREATMENT**

Company information Claire Manufacturing Co.
1005 S. Westgate Drive
Addison, IL 60101 United States

Company phone General Assistance 1-630-543-7600

Emergency telephone US 1-866-836-8855

Emergency telephone outside US 1-952-852-4646

Version # 01

Recommended use Not available.

Recommended restrictions None known.

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
Health hazards	Aspiration hazard	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement Extremely flammable aerosol. May be fatal if swallowed and enters airways.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.

Response If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting.

Storage Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Distillates (Petroleum), Hydrotreated Light		64742-47-8	60 - 80
Propane		74-98-6	10 - 20
White Mineral Oil		8042-47-5	10 - 20
Other components below reportable levels			2.5 - 10

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation If symptoms develop move victim to fresh air. Get medical attention if symptoms persist.

Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Dry chemicals. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable aerosol.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Use water spray to reduce vapors or divert vapor cloud drift. Isolate area until gas has dispersed. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS. Never return spills in original containers for re-use.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not re-use empty containers. Avoid prolonged or repeated contact with skin. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Level 3 Aerosol.

Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in a well-ventilated place. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Explosion-proof general and local exhaust ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection Face shield is recommended. Wear safety glasses with side shields (or goggles).

Hand protection Wear appropriate chemical resistant gloves.

Skin protection

Other Wear suitable protective clothing.

Respiratory protection If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Gas.

Form Aerosol.

Color Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range 107.26 °F (41.81 °C) estimated

Flash point -156.0 °F (-104.4 °C) Propellant estimated

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 0.7 % estimated

Flammability limit - upper (%) 8.5 % estimated

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure	35 - 50 psig @20C estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	439.95 °F (226.64 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Specific gravity	0.748 estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Fluorine. Chlorine. Nitrates.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. Smallest quantities reaching the lungs through swallowing or subsequent vomiting may result in lung edema or pneumonia.
Inhalation	Not available.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	If aspirated into lungs during swallowing or vomiting, may cause chemical pneumonia, pulmonary injury or death. Aspiration may cause pulmonary edema and pneumonitis. Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	May be fatal if swallowed and enters airways. Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Components	Species	Test Results
Distillates (Petroleum), Hydrotreated Light (CAS 64742-47-8)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
		> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Rat	> 7.5 mg/l, 6 Hours
		> 4.6 mg/l, 4 Hours
Oral		
LD50	Rat	> 5000 mg/kg
Propane (CAS 74-98-6)		
Acute		
Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes

Components	Species	Test Results
		52 %, 120 Minutes
	Rat	1355 mg/l
		658 mg/l/4h
White Mineral Oil (CAS 8042-47-5)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Rat	2.18 mg/l, 4 Hours
Oral		
LD50	Rat	5000.0001 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Prolonged or repeated contact may cause drying, cracking, or irritation.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Distillates (Petroleum), Hydrotreated Light (CAS 64742-47-8)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.9 mg/l, 96 hours
White Mineral Oil (CAS 8042-47-5)			
Aquatic			
Fish	LC50	Fish	10000.0001, 96 Hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Propane	2.36

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	N82
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity. Until 12/31/2020, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking and both may be displayed concurrently.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Forbidden.
Cargo aircraft only	Forbidden.
Packaging Exceptions	LTD QTY

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Packaging Exceptions	LTD QTY

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

DOT



IATA; IMDG



15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Propane (CAS 74-98-6)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Propane (CAS 74-98-6)

US. New Jersey Worker and Community Right-to-Know Act

Propane (CAS 74-98-6)

US. Pennsylvania Worker and Community Right-to-Know Law

Propane (CAS 74-98-6)

US. Rhode Island RTK

Propane (CAS 74-98-6)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-28-2015

Version # 01

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

MATERIAL SAFETY DATA SHEET

Trade Name: Corporate Express Air Duster
MSDS NO. 9963501
Revision Date:
Date Printed 03/29/2006

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Corporate Express Air Duster
Chemical Family: Refrigerant Gas
Synonyms: None
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient/CAS No.	wt. %	OSHA PEL TWA	OSHA PEL Ceiling Limits	ACGIH TLV TWA	ACGIH TLW STEL
HFC-152a 75-37-6	99-100				

Contains no other ingredients in concentrations >.1% that are now known to be hazardous as defined by OSHA.

3. HAZARDS IDENTIFICATION

Emergency Overview: Flammable material. Colorless Liquid. Volatile liquid with ethereal and faint sweetish odor. Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphixiation in confined spaces. At higher temperatures, (>250C), decomposition prodcuts may include Hydrofluoric Acid (HF) and carbonyl halides.

HMIS Classification: Health: 1 Flammability: 2 Reactivity: 0
NFPA Rating: HEALTH 2, FLAMMABILITY 2 , REACTIVITY 0

4. FIRST AID MEASURES

Eye Contact: Liquid contact can cause severe irritation and frostbite. Mist may irritate.
Ingestion: Ingestion is unlikely. Should it occur, discomfort in the gastrointestinal tract from rapid evaporation of teh material and consequent evolution of gas would result. Some effects of inhalation and skin exposure would be expected.
Inhalation: If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult. At high levels, cardiac arrhythmia may occur.
Skin Contact: For exposure to liquid, immediately warm frostbite area with warm water (not to exceed 105'f). In case of massive exposure, remove clothing while showering with warm water. Get medical attention. Irritation may result from a defatting action on tissue

5. FIRE FIGHTING MEASURES

Flammable Properties
Flash Point °F(°C): <-58F (Liquid)
Flash Point Method: Not Applicable
Flammable Limits in Air - Lower (%): 3.7
Flammable Limits in Air - Upper (%): 18.0
Autoignition Temperature °F(°C): 455 C
Extinguishing Media: Use extinguishing media appropriate for surrounding fire. Use water spray to keep containers cool that are exposed to heat or flames.

Protection Of Fire-Fighters:
Special Fire-Fighting Procedures: Wear approved positive-pressure self-contained breathing apparatus and protective clothing. Warning!! Contents under pressure. Container may rupture under fire conditions. Decomposition may occur.
Hazardous Combustion Products: Exposure to fires could cause containers to rupture or explode. Formation of dangerous gas/vapors in case of decomposition. Contact with certain reactive metals may result in formation of explosive or exothermic reactions under specific conditions (e.g. very high temperatures and/or appropriate pressures).
Aerosol Comments: Not Applicable

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective clothing and equipment to prevent skin and eye contact. Avoid breathing vapor. When airborne exposure limits are exceeded use NIOSH approved respiratory protection equipment appropriate to the material and/or its components.
Spill Procedures: Wear protective equipment specified. Avoid all sources of ignition; heat, sparks and open flames. Use Halogen leak detector or other suitable means to locate leaks or check atmosphere. Keep upwind. Evacuate enclosed spaces and disperse gas with floor-level forced-air ventilation. Exhaust vapors outdoors. Do not smoke or operate internal combustoin engines. Evacuate unprotected personnel

MATERIAL SAFETY DATA SHEET

Trade Name: Corporate Express Air Duster
MSDS NO. 9963501
Revision Date:
Date Printed 03/29/2006

Increase area ventilation. Do not puncture or incinerate container. Contents under pressure.

Environmental Precautions: Do not allow entry to the atmosphere. Recover, reclaim or recycle when practical.

7. HANDLING AND STORAGE

Handling and Storage: Avoid breathing vapors, if exposed to high vapor concentration, leave area at once. Avoid contact with skin and eyes. Use only in a well ventilated area. Do not reuse this container. CAUTION: COMPRESSED GAS. Keep away from heat and open flame. Do not puncutre, incinerate or store above 120 F. Do not store in passenger compartment of automobile. Use ground strap.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Showers. Eyewash stations.
Eyes: Chemical goggles; also wear a face shield if splashing hazard exists.
Skin Protection: Avoid skin contact. Wear protective clothing and gloves.
Respiratory Protection: Use in a well ventilated area. An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless liquified gas.
Odor: MILD ETHER LIKE
pH Value: Neutral
Vapor Pressure: 87.2 psia @ 70F
Vapor Density (Air=1): 2.29
Boiling Point (°F): -24.05 C
Melting/Freezing Point: -117 C
Solubility in Water: UNKNOWN
Bulk Density at 20°C: Not Determined
Molecular Weight: 66.05
Specific Gravity (H20=1): 0.909 @ 21.1 C
Viscosity: Not determined.
Evaporation Rate: >1
VOC Content(%): Not Determined
Decomposition Temperature: >370 C

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures. Explosions may result if in flammable range.
Conditions to Avoid: Keep away from heat,sparks and flame. Do not expose to heat or store at temperatures above 120 F.
Materials to Avoid: Avoid finely powdered metals such as aluminum, magnesium or zinc. Strong oxidizers. Avoid contact with alkali or alkaline earth metals.
Hazardous Decomposition Products: Thermal decompositoin products include hydrogen fluoride, hydrogen chloride, carbon monoxide, carbon dioxide and chlorine.
Hazardous Polymerization: WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Ingredient/CAS No.	wt. %	Route	Species	Dose
HFC-152a 75-37-6	99-100	Inhalation	Rats	Not known.

Carcinogenicity:

Ingredient/CAS No.	wt. %	IARC	NTP	OSHA
HFC-152a 75-37-6	99-100	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: 48 hour EC50 - Daphnia magna: 980 mg/L, 96 hour LC50 - Rainbow trout: 450 mg/L

13. DISPOSAL CONSIDERATION

MATERIAL SAFETY DATA SHEET

Trade Name: Corporate Express Air Duster
MSDS NO. 9963501
Revision Date:
Date Printed 03/29/2006

Waste Classification: Discarded product may be classififed as ignitable waste (D001) per US EPA

Waste Management: Not determined.

Disposal should be made in accordance with federal, state and local regulations. Recover, reclaim or recycle when practical.

14. TRANSPORTATION INFORMATION

U.S. DOT:
Proper Shipping Name: ORM-D Consumer Commodity
Hazard Class: ORM-D
UN/NA Number: Not Applicable
DOT Packing Group: NA

IMDG:
Proper Shipping Name: Aerosols
Hazard Class: 2.1 (Limited Quantity)
Hazard Subclass: Not determined.
UN No.: UN3159
Packing Group: NA
Marine Pollutant: No

15. REGULATORY INFORMATION

US Federal Regulations:

Ingredient/CAS No.	wt. %	SARA 313	SARA 302	RQ	TPQ
HFC-152a 75-37-6	99-100				

SARA 311/312 Hazard Catagories: Acute, Chronic, Pressure

State Regulations:

Ingredient/CAS No.	wt. %	California Prop. 65 Cancer list	California Prop. 65 Developmental Toxicity	California Prop. 65 Reproductive Female	California Prop. 65 Reproductive Male
HFC-152a 75-37-6	99-100	Not Listed	Not Listed	Not Listed	Not Listed

U.S. TSCA: The components of this product are listed on the TSCA Inventory.

16. OTHER INFORMATION

General Notes: Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system.
Disclaimer:
The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

Material Safety Data Sheet

"Dymel" 152a – CAS#75-37-6

("DYMEL" is a registered trademark of DuPont)

1. Chemical Product and Company Identification

Product Trade Name: "Dymel" 152a
Chemical Family: Ethane, 1,1-Difluoro
FSP Model No: DPS, DPSX, DPSR, DPSRX DPSXL, DPSXLX DSXLP\, DPSJB, DPSJC, DPSJBX, DPSMB, DPSMW,DPSJMB, DPSJMB2, DPSXL12, DSXLPW, DCPJB, FGS, FGSR, CDS, CDSR

Chemical Manufacturer: Dupont
Address: 1007 Market Street
Wilmington, DE 19898 USA
Phone: 1-800-441-7515
Product Manufacturer: Falcon Safety Products, Inc.
Address: 25 Chubb Way
Branchburg, NJ 08876
Phone: 1-908-707-4900

Emergency Telephone USA: CHEMTREC (800) 424-9300

2. Composition/Information on Ingredients

Chemical Name	Wt.%Range	TLV Units
1,1-Difluoroethane CAS #75-37-6	100%	

3. Hazard Identification

Potential Health Effects:

Inhalation of high concentrations of vapor is harmful and may cause heart irregularities, unconsciousness, or death. Intentional misuse or deliberate inhalation may cause death without warning. Vapor reduces oxygen available for breathing and is heavier than air. Liquid contact can cause frostbite.

Human Health Effects:

Contact with the liquid may cause frostbite. Overexposure by inhalation may include nonspecific discomfort, such as nausea, headache, or weakness; or temporary nervous system depression with anesthetic effects such as dizziness, headache, confusion, incoordination and loss of consciousness. Higher exposures (>20%) may cause temporary lung irritation effects with cough, discomfort, difficulty breathing, or shortness of breath; or temporary alteration of the heart's electrical activity with irregular pulse, palpitations, or inadequate circulation, abnormal kidney function as detected by laboratory tests. Overexposure may be fatal due to displacement of oxygen.

Medical Conditions Aggravated by Exposure:

Individual with preexisting diseases of the central nervous or cardiovascular system may have increased susceptibility to the toxicity of excessive exposures.

4. First Aid Measures

Inhalation: If high concentrations are inhaled, immediately remove to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

Skin Contact: Promptly flush skin with water until all chemical is removed. If there is evidence of frostbite, bathe (do not rub) with lukewarm (not hot) water. If water is not available, cover with a clean, soft cloth or similar covering. Get medical attention if symptoms persist.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes (in case of frostbit water should be lukewarm, not hot) lifting eyelids occasionally to facilitate irrigation. Get medical attention if symptoms persist.

Ingestion: Ingestion is not considered a potential route of exposure.

Notes to Physicians:

Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution only in situations of emergency life support.

5. Firefighting Measures

Flash Point: <-50°C (<-58°F.
Autoignition Temperature: 454°C (849°F)
Flammable Limits in Air: LEL/UEL: 3.9-16.9 (% by volume)
Fire and Explosion Hazards: Aerosol cans may erupt with force at temperatures above 49° C (120° F)
Extinguishing Media: Water Spray, Water fog, Dry Chemical, Carbon dioxide. "Alcohol" foam.
Special Firefighting Procedures:
Cool cans with water spray. Keep can cool with water spray Self-contained breathing apparatus (SCBA) is required if containers rupture and contents are released under fire conditions.
National Fire Protection Association (NFPA 30B)
Level 1 Aerosols (lowest flammability rating)
Consumer Products Safety Commission
(CPSC 1500.3(c)(6).16CFR) - Not flammable

6. Accidental Release Measures

Spill or Leak: Although the chances of a large spill or leak is unlikely in aerosol containers, in the event of such an occurrence, evacuate area. Protected personnel should remove ignition sources and shut off fire sources. Provide ventilation.

7. Handling and Storage

Avoid breathing vapors or mist. Keep containers closed. Use only with adequate ventilation. Avoid repeated or prolonged contact with eyes, skin or clothing. Wash thoroughly after handling. Do not store in direct sunlight. Store in cool dry place, away from heat, sparks or flames which may generate toxic decomposition products. Vapors are heavy and may concentrate in low poorly ventilated areas.

8. Exposure Controls/Personal Protection

Respiratory Protection: Use only with adequate ventilation. Keep container closed. Use approved NIOSH self-contained or supplied air respirators for emergencies and in situations where air may be displaced by vapors.

Eye Protection: Use chemical protective safety glasses.

Protective Clothing: Where there is potential for skin contact, use appropriate impervious gloves, apron, pants and jacket.

Exposure Guidelines: Applicable Exposure Limits.

Difluoroethane:

PEL (OSHA)	None Established
TLV (ACGIH)	None Established
AEL (DuPont)	1000 ppm, 8 Hr. TWA
WEEL (AIHA)	1000 ppm, 8 Hr. TWA

NFPA, NPCA-HIMIS RATING:

Health
Flammability
Reactivity

Personal Protection rating to be supplied by user depending on use conditions.

9. Physical and Chemical Properties

Physical Form: Liquefied Gas
Odor: Slight Ethereal
Boiling Point: -25°C (-13°F)
pH: Not Applicable
Solubility in Water: 0.28 WT% @ 25°C (77°F) and 87 psia.
Specific Gravity: 0.909
% Volatile by Weight: 100
Vapor Pressure: 87 psia at 25°C (77°F)
Density: .90 g/cc at 25°C (77°F) - Liquid
Vapor Density (air=1): 2.4 (Air = 1.0) at 25°C (77°F)

10. Reactivity

Chemical Stability: Material is stable. However, avoid open flames and high temperatures.
Hazardous Polymerization: Will not occur.
Incompatibilities: Incompatible with alkali or alkaline earth metal.
Decomposition Products: Decomposition products are hazardous. This material can be decomposed by **high temperatures** forming hydrofluoric acid and possibly carbonyl fluoride

11. Toxicological Information

Carcinogenicity: The compound is untested for skin or eye irritation, and for animal sensitization. Effects in animals from single, high exposure by inhalation include labored breathing, lung irritation, lethargy, incoordination, and loss of consciousness. Cardiac sensitization occurred in dogs exposed to a concentration of 150,000 ppm in air and given an intravenous epinephrine challenge. Effects of repeated exposure include increased urinary fluorides, reduced kidney weight, and reversible kidney changes. The effects of a single, high oral dose include weight loss and lethargy. Tests in animals demonstrate no carcinogenic activity or developmental effects. Tests in animals for reproductive effects have not been performed. This compound does not produce genetic damage in bacterial cell cultures but has not been tested in animals.

12. Ecological Information

Aquatic Toxicity:
Not Available

13. Disposal Considerations

Waste Disposal: Reclaim by distillation, incinerate, or remove to a permitted waste facility. Comply with Federal, State, and local regulations.

This material may be a RCRA Hazardous waste upon disposal due to the ignitability characteristic.

14. Transportation Information

Transport for Aerosol Packaging:
Ground Transport: Consumer Commodity ORM-D Authorization: per DOT-E-11516.
Air Transport: (Difluoroethane), UN1030, Class 2.1 NOTE: Exemption copy required with shipping papers. Hazard Label: Flammable Gas
NOTE: *Falcon Safety Products has been granted a DOT exemption that allows this product to be shipped similar to a Consumer Commodity (ORM-D). A copy of the DOT exemption can be obtained by calling Falcon Safety Products, Inc at 908-707-4900.*

15. Regulatory Information

Section 313 Supplier Information:
This material contains the following toxic chemicals subject to the emergency reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40 CFR 372:

CAS#	Chemical Name	% by Weight
-	none	-

This information must be included in all MSDSs that are copied and distributed for this material.
California V.O.C. Data: This product contains 0 grams total VOC per liter.

Title III Hazard Communications Sections 311, 312

Acute	Yes
Chronic	No
Fire	Yes
Reactivity	No
Pressure	Yes

16. Other Information

NFPA, NPCA-HMIS

NPCA-HMIS Rating

Health :	1
Flammability :	4
Reactivity :	1

Personal Protection rating to be supplied by user depending on use

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	Dermot McLeer	Technical Manager	10/06/04
Signature	Printed Name	Title	Revision Date

Material Safety Data Sheet

DUST-OFF® CLEANING WIPES

1. Chemical Product and Company Identification

Product Trade Name: DUST-OFF® Anti-Static Monitor Wipes
Chemical Family: Mixture

DUST-OFF® CLEANING WIPES
FSP Model No: DSCT, DCW

Chemical Manufacturer: Nice-Pak
(NP ISO 9001CERTIFIED)
Address: Two Nice Pak Park
Orangeburg, NY 10762-1376
USA
Phone: 1-845-365-1700

Product Manufacturer: Falcon Safety Products, Inc.
Address: 25 Imclone Drive
Branchburg, NJ 08876
Phone: 1-908-707-4900

Emergency Telephone USA: CHEMTREC (800) 424-9300

2. Composition/Information on Ingredients

Material	%	Units	TLV	PEL	CAS #
Isopropyl Alcohol	1	400PPM	N/A	N/A	67-63-0

3. Hazard Identification

Skin: Prolonged exposure may cause irritation
Eyes : Splash may cause irritation
Inhalation: Minimum effect
Ingestion: Not normal route of entry

4. First Aid Measures

Skin contact: Flush with cool water
Ingestion: Not normal route of entry
Eye contact: Rinse with cool water
Target Organs: N/A
Inhalation: Remove to fresh air

5. Firefighting Measures

Flash Point: >77°C (>170°F)
Flammable Limits in Air: LEL/UEL: .NA/NA
Extinguishing Media: Carbon dioxide for small fires, Alcohol foam for large fires
Special Fire Fighting Procedures: None Known.
Fire and Explosion Hazards: None Known.

6. Accidental Release Measures

Spill Control: Remove sources of ignition, collect large spills with absorption materials.
Waste Disposal: Per Local State and Federal Regulations
Handling and Storage: Keep away from heat sources

7. Exposure Controls/Personal Protection

Respiration:	Use respirator if permissible exposure level is exceeded
Ventilation:	Local exhaust
Protective gloves:	N/A
Eye protection:	Wear safety goggles if there is a potential for splashing
Hygienic practices:	Observe good housekeeping practices
Other:	Keep container closed

8. Physical and Chemical Properties

Boiling Point	N/A
Vapor Density	N/A
Vapor Pressure	N/A
pH	N/A
Solubility in Water	Complete
Specific Gravity (H^2O=1)	1.001
Appearance and Color	Towelette Saturated with Clear Liquid
% Volatile by Volume	N/A
Odor	Slight Solvent
Evaporation Rate	N/A

9. Reactivity

Chemical Stability:	Material in stable
Conditions to Avoid:	None
Incompatibility:	N/A
Decomposition:	None
Polymerization:	Polymerization will not occur

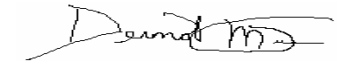
10. Transportation Information

Proper Shipping Name:	Non-Hazardous Material
DOT Shipping Classification:	Domestic Ground Transportation. DOT Not Regulated
DOT Shipping Name:	N/A
Technical Shipping Name:	N/A
DOT ID No:	N/A
DOT Label Requirement:	N/A
UN/NA Number Regulations:	N/A
Reportable Quantity:	N/A

11. Other Information

Falcon Safety Products, Inc. expressly disclaim all express or implied warranties for merchantability and fitness for a particular purpose, with respect to the product or information provided herein.

All information appearing herein is based upon data obtained from the manufacturer. While the information is believed to be accurate, Falcon Safety Products, Inc. makes no representation as to its accuracy of sufficiency. Conditions of use are beyond Falcon Safety Products, Inc. control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risk of their use, handling and disposal of the product, or from the publication, or use of, or reliance upon, information contained herein. This information relates only to the product designated here and does not relate to its use in combination with any other material or in any other process. This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

	Dermot McLeer	Technical Manager	05/12/2005
Signature	Printed Name	Title	Revision Date

Steel Blue Layout Fluid DX-100

DYKEM -- DX-100 DYKEM STEEL BLUE - LAYOUT DYE,BLUE
MATERIAL SAFETY DATA SHEET
NSN: 6850012765396
Manufacturer's CAGE: 98148
Part No. Indicator: A
Part Number/Trade Name: DX-100 DYKEM STEEL BLUE

General Information

Item Name: LAYOUT DYE,BLUE
Company's Name: DYKEM COMPANY
Company's Street: 8501 DELPORT DRIVE
Company's City: ST LOUIS
Company's State: MO
Company's Zip Code: 63114
Company's Emerg Ph #: 314-423-0100
Company's Info Ph #: 314-423-0100
Record No. For Safety Entry: 004
Tot Safety Entries This Stk#: 006
Status: SE
Date MSDS Prepared: 05OCT89
Safety Data Review Date: 23OCT89
Supply Item Manager: CX
MSDS Serial Number: BHGCF
Specification Number: MIL-L-83795
Spec Type, Grade, Class: NONE
Hazard Characteristic Code: F3
Unit Of Issue: GL
Unit Of Issue Container Qty: 1 GAL
Type Of Container: MIL-L-83795

Ingredients/Identity Information

Proprietary: NO
Ingredient: N-BUTYL ACETATE (SARA III)
Ingredient Sequence Number: 01
Percent: 30-40
NIOSH (RTECS) Number: AF7350000
CAS Number: 123-86-4
OSHA PEL: 150 PPM/200 STEL
ACGIH TLV: 150 PPM/200STEL;9192

Proprietary: NO
Ingredient: ETHYL ALCOHOL (ETHANOL)
Ingredient Sequence Number: 02
Percent: 50-60
NIOSH (RTECS) Number: KQ6300000
CAS Number: 64-17-5

OSHA PEL: 1000 PPM
ACGIH TLV: 1000 PPM; 9192

Proprietary: NO
Ingredient: N-BUTYL ALCOHOL (SARA III)
Ingredient Sequence Number: 03
Percent: 3-6
NIOSH (RTECS) Number: EO1400000
CAS Number: 71-36-3
OSHA PEL: 100 PPM
ACGIH TLV: S, C 50 PPM; 9293

Proprietary: NO
Ingredient: METHYL VIOLET
Ingredient Sequence Number: 04
Percent: 6-12
NIOSH (RTECS) Number: GC8425000
CAS Number: 8004-87-3
OSHA PEL: NOT ESTABLISHED
ACGIH TLV: NOT ESTABLISHED

Proprietary: NO
Ingredient: CELLULOSE NITRATE (PROPORTIONAL 70/30 WITH ISOPROPANOL)
Ingredient Sequence Number: 05
Percent: 2.1-4.2
NIOSH (RTECS) Number: QW0970000
CAS Number: 9004-70-0
OSHA PEL: NOT ESTABLISHED
ACGIH TLV: NOT ESTABLISHED

Proprietary: NO
Ingredient: ISOPROPYL ALCOHOL (SARA III)
Ingredient Sequence Number: 06
Percent: 0.9-1.8
NIOSH (RTECS) Number: NT8050000
CAS Number: 67-63-0
OSHA PEL: 400 PPM/500 STEL
ACGIH TLV: 400 PPM/500STEL;9192
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Physical/Chemical Characteristics

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Appearance And Odor: INTENSE BLUE COLOR,SWEET SOLVENT ODOR.
Boiling Point: 160F/71C
Vapor Pressure (MM Hg/70 F): 36 MM
Vapor Density (Air=1): >1
Specific Gravity: 0.86
Evaporation Rate And Ref: >1 BUAC
Solubility In Water: APPRECIABLE

Fire and Explosion Hazard Data

Flash Point: 57F/14C
Flash Point Method: TCC
Lower Explosive Limit: 1.4
Upper Explosive Limit: 11.2
Extinguishing Media: CARBON DRIVE,DRY CHE ICAL,FOAM,WATER FOG
Special Fire Fighting Proc: WEAR SELF CONTAINED BREATHING APPARATUS. WATER MAY BE USED TO COOL FIRE EXPOSED CONTAINERS.
Unusual Fire And Expl Hazrds: VAPORS ARE HEAVIER THAN AIR AND FLASHBACK ALLONG VAPOR TRAIL MAY OCCUR

Reactivity Data

Stability: YES
Cond To Avoid (Stability): HEAT,IGNITION SOURCES
Materials To Avoid: STRONG OXIDIZING AGENTS
Hazardous Decomp Products: CARBON MONOXIDE,CARBON DIOXIDE.
Hazardous Poly Occur: NO

Health Hazard Data

Route Of Entry - Inhalation: YES
Route Of Entry - Skin: YES
Route Of Entry - Ingestion: YES
Health Haz Acute And Chronic: PRODUCT IS IRRITATING TO BODY TISSUES. PROLONGED/REPEATED SKIN CONTACT MAY CAUSE DERMATITIS. INHALATION MAY PRODUCE CENTRAL NERVOUS SYSTEM EFFECTS. NO INFORMATION WAS READILY AVAILABLE ON CHRONIC EFFECTS.
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Signs/Symptoms Of Overexp: EYE:IRRITATION,BURNING. SKIN:DRYING, DERMATITIS WITH PROLONGED/REPEATED CONTACT. INHALED:RESPIRATORY IRRITATION, DIZZINESS,HEADACHE,NAUSEA. INGESTED:G/I IRRITATION,NAUSEA.
Med Cond Aggravated By Exp: NONE REPORTED
Emergency/First Aid Proc: EYE:FLUSH WITH WATER 15 MIN. SKIN:REMOVE CONTAMINATED CLOTHING. WASH AREA WITH SOAP AND WATER. LAUNDER CLOTHING BEFORE REUSE. INHALED:REMOVE FROM EXPOSURE. GIVE ARTIFICAL RESPIRATION OR OXYGEN IF NEEDED. INGESTED:DO NOT INDUCE VOMITING. GIVE WATER OR MILK. (NOTHING BY MOUTH IF UNCONSCIOUS) GET IMMEDIATE MEDICAL CARE. IF SYMPTOMS PERSIST OR ARE SEVERE,GET MEDICAL CARE.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: WIPE UP,WITH PAPER,CLOTH. STORE IN CLOSED CONTAINER. USE APPR0PRIATE PRECAUTIONS TO PROTECT PERSONNEL AND PREVENT

IGNITION.
Neutralizing Agent: NONE- USE ALCOHOL AS SOLVENT FOR CLEANING.
Waste Disposal Method: DISPOSE I/A/W FEDERAL,STATE,LOCAL,REGULATIONS. MFR SUGGESTS INCINERATION.
Precautions-Handling/Storing: STORE IN A COOL,DRY,WELL VENTILATED AREA. KEEP AWAY FROM HEAT,SPARKS,OTHER IGNITION SOURCES.

Control Measures

Respiratory Protection: NONE EXPECTED TO BE NECESSARY. USE NIOSH/MSHA RESPIRATOR IF SYMPTOMS OCCUR OR PEL/TLV ARE EXCEED.
Ventilation: NORMAL ROOM VENTILATION LOCAL EXHAUST MAY BE REQUIRED UNDER SOME CONDITIONS.
Protective Gloves: NONE SHOULD BE NEEDED
Eye Protection: SAFETY GLASSES.
Other Protective Equipment: AS NECESSARY TO PREVENT PROLONGED/REPEATED CONTACT.
Work Hygienic Practices: USE GOOD INDUSTRIAL HYGIENE PRACTICE. AVOID UNNECESSARY CONTACT.
Suppl. Safety & Health Data: MFR DATES MSDS ON DAY MAILED,NOT DAY REVISED.

Transportation Data

Trans Data Review Date: 89296
DOT PSN Code: LFD
DOT Proper Shipping Name: PAINT
DOT Class: 3
DOT ID Number: UN1263
DOT Pack Group: II
DOT Label: FLAMMABLE LIQUID
IMO PSN Code: LCP
IMO Proper Shipping Name: PAINT OR PAINT RELATED MATERIAL
IMO Regulations Page Number: 3268
IMO UN Number: 1263
IMO UN Class: 3.2
IMO Subsidiary Risk Label: -
IATA PSN Code: SXI
IATA UN ID Number: 1263
IATA Proper Shipping Name: PAINT
IATA UN Class: 3
IATA Label: FLAMMABLE LIQUID
AFI PSN Code: SXI
AFI Prop. Shipping Name: PAINT OR PAINT RELATED MATERIAL
AFI Class: 3
AFI ID Number: UN1263
AFI Pack Group: II
AFI Label: FLAMMABLE LIQUID
AFI Basic Pac Ref: 7-8

N.O.S. Shipping Name: ETHYL ALCOHOL
Additional Trans Data: MFR SPECIFIED PROPER SHIPPING NAME.ON MSDS.

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Disposal Data

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Label Data

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Label Required: YES
Label Status: F
Special Hazard Precautions: MAY BE POISONOUS IF INHALED OR ABSORBED THROUGH SKIN. VAPORS MAY CAUSE DIZZINESS OR SUFFOCATION. CONTACT MAY IRRITATE OR BURN SKIN AND EYES. FIRE MAY PRODUCE IRRITATING OR POISONOUS GASES. RUNOFF FROM FIRE CONTROL OR DILUTION WATER MAY CAUSE POLLUTION.
Label Name: DYKEM COMPANY
Label Street: 8501 DELPORT DRIVE
Label City: ST. LOUIS
Label State: MO
Label Zip Code: 63114-5905
Label Emergency Number: 314-423-0100

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URL for this msds http://siri.org. If you wish to change, add to, or delete information in this archive please sent updates to dan@siri.org.

Material Safety Data Sheet: DYNA-MINT

Supercedes Date 07/04/2011 **Issuing Date 26/03/214**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name DYNA-MINT
Recommended use Fragrance
Information on Manufacturer
CHEMSEARCH DIV. OF NCH CORP.0401718972
5-9, RALPH STREET, ALEXANDRIA, NSW-2015
PH-02-96690260 FAX-02-96931562.

Product Code
Chemical nature Aqueous surfactant solution and Fragrance blend
Emergency Telephone Number

2. HAZARDS IDENTIFICATION

Emergency Overview
WARNING
Causes skin irritation
Causes severe eye irritation
May be harmful if inhaled
Harmful if swallowed

Colour Colorless **Physical State** Liquid **Odour** Mint-like

Potential Health Effects

Principle Route of Exposure Skin contact, Eye contact, Inhalation.
Primary Routes of Entry Inhalation, Skin Absorption.
Acute Effects

Eyes Severe irritation.
Skin Causes skin irritation. May be absorbed through the skin in harmful amounts. Poisoning by resorption through skin possible. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Breathing difficulties.
Inhalation May cause irritation of respiratory tract. Inhalation may cause central nervous system effects. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Breathing difficulties.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system depression. Causes headache, drowsiness or other effects to the central nervous system.
Chronic Toxicity Suspect reproductive hazard - contains material which may injure unborn child. Liver and kidney injuries may occur.
Target Organ Effects Reproductive System, Liver, Kidney, Bladder, Central nervous system.
Aggravated Medical Conditions Respiratory disorders, Skin disorders, Liver disorders, Kidney disorders, Neurological disorders.
Potential Environmental Effects See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
2,6,8-Trimethyl-4-nonyloxy polyethylene oxyethanol	60828-78-6
Propylene glycol	57-55-6
Methyl Salicylate	119-36-8

4. FIRST AID MEASURES

General advice Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.
Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.
Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.
Inhalation If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point Does not flash > 94 °C **Method** Not applicable
Auto ignitionTemperature Noinformation available.

Flammability Limits in Air % Not applicable. **Upper** No data available **Lower**No data available

Suitable Extinguishing Media

Water spray.Foam.Alcohol-resistant foam.Carbon dioxide (CO2).Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Material can create slippery conditions.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, NOHSC (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Cover powder spill with plastic sheet or tarp to minimize spreading
Methods for Cleaning Up	Pick up and arrange disposal without creating dust.
Neutralizing Agent	Not applicable.

7. HANDLING AND STORAGE

Handling	Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.					
Storage	Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not freeze.					
Storage Temperature	**Minimum**	2 °C		**Maximum**	49 °C	
Storage Conditions	**Indoor**	X	**Outdoor**	**Heated**		**Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
2,6,8-Trimethyl-4-nonyloxy polyethylene oxyethanol	No data available	No data available	No data available
Propylene glycol	No data available	No data available	No data available
Methyl Salicylate	No data available	No data available	No data available

Engineering Measures	Ensure adequate ventilation, especially in confined areas.
Personal Protective Equipment	
Eye/Face Protection	Tightly fitting safety goggles.
Skin Protection	Wear suitable protective clothing, Impervious gloves.
Respiratory Protection	In case of insufficient ventilation wear suitable respiratory equipment.
General Hygiene Considerations	Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Slight Viscous
Colour	Colourles	**Odour**	Mint-like
Appearance	Transparent - Hazy	**pH**	6.1
Specific Gravity	1.04	**Evaporation Rate**	0.3 (Butyl acetate=1)
Percent Volatile (Volume)	75.1	**VOC Content (%)**	25.7
VOC Photoreactive (Y/N)	Yes	**VOC Max Use Dilution (g/L)**	134
VOC Max Use Dilution (wt%)	12.9	**VOC Content (g/L)**	268
Vapor Pressure	15.07 mmHg @ 21°C	**Vapor Density**	0.6 (Air = 1.0)
Solubility	Completely soluble	**Boiling Point/Range**	100 °C

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	None known
Incompatible Products	Strong oxidizing agents, Acids.
Hazardous Decomposition Products	Carbon oxides, Sulfur oxides.
Possibility of Hazardous Reactions	None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

Component Information

Acute Toxici

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
2,6,8-Trimethyl-4-nonyloxy polyethylene oxyethanol	= 7460 µL/kg (Rat)	= 8480 µL/kg (Rabbit)	no data available	no data available	no data available
Propylene glycol	= 20000 mg/kg (Rat)	= 20800 mg/kg (Rabbit)	no data available	no data available	no data available
Methyl Salicylate	= 887 mg/kg (Rat)	= 2500 mg/kg (Rat) > 5000 mg/kg (Rabbit)	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
2,6,8-Trimethyl-4-nonyloxy polyethylene oxyethanol	no data available	no data available	no data available	no data available	Bladder, Liver, Kidneys
Propylene glycol	no data available	no data available	no data available	no data available	CNS, liver, kidney
Methyl Salicylate	no data available	no data available	no data available	X	CNS, Kidneys

Carcinogenicity There are no known carcinogenic chemicals in this product.

Component	ACGIH	IARC	NTP	OSHA	Other
2,6,8-Trimethyl-4-nonyloxy polyethylene oxyethanol	not applicable	not applicable	not applicable	not applicable	not applicable
Propylene glycol	not applicable	not applicable	not applicable	not applicable	not applicable
Methyl Salicylate	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
2,6,8-Trimethyl-4-nonyloxy polyethylene oxyethanol	no data available	no data available	no data available	no data available	N/A
Propylene glycol	EC50 = 19000 mg/L Pseudokirchneriella subcapitata 96 h	LC50 = 51600 mg/L Oncorhynchus mykiss 96 h LC50 41 - 47 mL/L Oncorhynchus mykiss 96 h LC50 = 51400 mg/L Pimephales promelas 96 h LC50 = 710 mg/L Pimephales promelas 96 h	EC50 = 710 mg/L 30 min	EC50> 10000 mg/L 24 h EC50> 1000 mg/L 48 h	N/A
Methyl Salicylate	no data available	no data available	EC50 = 380 mg/L 16 h EC50 = 989 mg/L 1 h	EC50= 50 mg/L 24 h	2.55

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal

14. TRANSPORT INFORMATION

ADG Not regulated

15. REGULATORY INFORMATION

Poison Schedule None

16. OTHER INFORMATION

Prepared By	Technical Services Chemist
Supercedes Date	07/04/2011
Issuing Date	26/03/2014
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommendeduse, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-2; Flammability-3; Reactivity-0; Special-0	HMIS Rating: Health-2; Flammability-3; Reactivity-0; Personal Protection-B
Manufactured For: **Eagle Maintenance Supply, Inc.** Address: 80 Twinbridge Drive Address: Pennsauken, NJ 08110	DOT Hazard Classification: ORM-D Identity (trade name as used on label): **Eagle Pro Erase Graffiti Remover**
Phone: 856-317-9500	MSDS Number: A00178 Revision- 12
EMERGENCY RESPONSE NUMBER: 1-800-758-9022 NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA	Date Prepared: 05/08/03 Prepared By: DL/IB Information Calls: (770)432-2071

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
TOLUENE	108-88-3	Yes	200	100	d
ACETONE	67-64-1	No	1000	750	d
2-BUTOXYETHANOL	111-76-2	Yes	25 skin	25 skin	d
ISOBUTANE/PROPANE BLEND	75-28-5/74-98-6	No	800/1000	800/1000	d
METHYL ETHYL KETONE	78-93-3	Yes	200	200	d
WARNING: This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.					

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A	Specific Gravity (H_2O=1): Concentrate Only = .84
Vapor Pressure: PSIG @ 70°F (Aerosols): Max.60	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	Evaporation Rate (= 1): N/E
Solubility in Water: Partial	Water Reactive: No
Appearance and Odor: Clear liquid, aromatic solvent odor.	

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) EXTREMELY FLAMMABLE	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A	EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide, water.	
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.		
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.		

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [X] STABLE [ ] UNSTABLE	HAZARDOUS POLYMERIZATION [ ] WILL [X] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Acids and strong oxidizers.	Conditions to Avoid: Open flame, welding area, heat, sparks.
Hazardous Decomposition Products: CO, CO2.	

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [ ] INGESTION [X] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS

ACUTE EFFECTS:

Inhalation: Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness.

Eye Contact: Irritation

Skin Contact: Irritation

Ingestion: Possible chemical pneumonitis if aspirated into lungs. Nausea.

CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) May cause cardiac abnormality, liver abnormalities, kidney and/or lung damage. Lab animals have experienced anemia, liver, kidney, lung, blood damage to 2 butoxyethanol.

Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.

Skin Contact: Wash with soap and water. If irritated, seek medical attention.

Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.

Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH.

Protective Gloves: Rubber gloves.

Eye Protection: Safety glasses recommended.

Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.

Other Protective Clothing & Equipment: None

Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or Federal regulations. Prevent from entering drains or sewers.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.

Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid breathing vapors. Remove ignition sources.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

MATERIAL SAFETY DATA SHEET

(SIMILAR TO OSHA FORM 174)

N.A.=Not Applicable
Not Est.=Not Established
Prop.=Proprietary

SECTION 1-MANUFACTURER/DISTRIBUTOR INFORMATION

Product Name: Eagle Pro Floor Finish Glazer / Enhancer
Supplier's Name: EMS Brand Products
Supplier's Address: 9242 Commerce Highway • Pennsauken, NJ 08110
HMIS Hazard Code: Health:1 Flammability:0 Reactivity:0 Other:0
Chemical Family: Restorer
D.O.T. Shipping Name: N/A

Emergency Phone #: 1-800-756-9022
Chemical Name: N.A. Proprietary Blend
Formula: N.A. Blended Product
Hazard Class: N/A **D.O.T. ID#:** N/A

SECTION 2-HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NO.	% Concentrate Range	Hazard Ratings (TLV/PEL)

None

SECTION 3-PHYSICAL DATA

Boiling Point (F): Approx. = 212° **Specific Gravity:** 0.97
Vapor Pressure: = To Water **Evaporation Rate:** = To Water
Vapor Density: = To Water
Solubility In Water: Disperses
Appearance: Liquid Emulsion
Odor: Citrus

SECTION 4-FIRE AND EXPLOSION DATA

Flash Point (F): None to boiling (TOC)
Flammable Limits: N/A
Unusual Fire & Explosion Hazards: None

SECTION 5-HEALTH HAZARD DATA

Route(s) of Entry: Inhalation: No Skin:Yes Ingestion:Yes **Threshold Limit Value:** Not Established
Effects of Overexposure: May cause skin and eye irritation. If ingested, may cause gastric distress and blockage.
Emergency & First Aid Procedures: For Eyes: Flush with water for at least fifteen minutes. If irritation persists get medical aid.
For Skin: Wash with soap and water. **If Ingested:** Induce vomiting. Give large quantities of water. Get medical aid.
Conditions Aggravated by Exposure: None

Listed Carcinogen, Mutagen, Teratogen (Ingredient Source Amount): None

SECTION 6-REACTIVITY DATA

Stability: Stable
Conditions to Avoid: None
Incompatibility: Avoid contact with strong acids and oxidizers.
Hazardous Decomposition Products: Carbon Oxides and Acrylates
Hazardous Polymerization: Will not occur.

SECTION 7-SPILL OR LEAK PROCEDURES

Steps to be taken if material is released or spilled: Recontainerize by mopping, wet vacuum, or using a suitable absorbent. Rinse remaining material to drains.
Waste disposal method: Follow local, state, and federal regulations.

SECTION 8-SPECIAL PROTECTION INFORMATION

Respiratory Protection: Not required.
Ventilation: Local.
Protective Gloves: Not required
Eye Protection: Safety glasses
Other Protective Equipment: None

SECTION 9-SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Store between 40° and 140° F. Do not freeze.
Other Precautions: Keep out of reach of children. For sale to, use and storage by service personnel only.

The information contained in this MSDS was obtained from current and reliable sources, however the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of this company, it is not responsible for loss, injury and expense arising out of the product's improper use. No warranty, expressed or inferred, regarding the product described in this MSDS shall be created or inferred by any statement in this MSDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

DATE PREPARED-3/1/00 By: F.C.

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION

NFPA Rating: Health-1; Flammability-4; Reactivity-0; Special-0	**HMIS Rating:** Health-1; Flammability-4; Reactivity-0; Personal Protection-B
Manufactured For: **Eagle Maintenance Supply, Inc.** Address: 80 Twinbridge Drive Address: Pennsauken, NJ 08110	**DOT Hazard Classification:** ORM-D **Identity** (trade name as used on label)**:** **Eagle Pro Gum-Off**
Phone: 1-800-756-9022	**MSDS Number:** A00183 Revision- 4
EMERGENCY RESPONSE NUMBER: 1-800-756-9022 **NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA**	Date Prepared: 02/23/00 Prepared By: ES/CH Information Calls: (770)422-2071

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
ISOBUTANE / PROPANE BLEND	75-28-5	No	800	800	d
	74-98-6	No	1000	1000	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: (concentrate only) = -43.7°F	**Specific Gravity** (H2O=1): Concentrate Only = 0.5379
Vapor Pressure: PSIG @ 70°F (Aerosols): 70	**Vapor Pressure** (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): Concentrate only = greater than 1.5	**Evaporation Rate** (BuAc = 1): Faster
Solubility in Water: Slight	**Water Reactive:** No

Appearance and Odor: Clear, odorless spray.

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) **EXTREMELY FLAMMABLE**	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: 2.0 % UEL: 10.0

FLASH POINT AND METHOD USED (non-aerosols): **-156 ºF** **SPECIAL FIRE FIGHTING PROCEDURES: Cool containers with water. Wear** Self-contained breathing apparatus.	**EXTINGUISHER MEDIA:** Foam, dry chemical, carbon dioxide.

Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [X] STABLE [ ] UNSTABLE	**HAZARDOUS POLYMERIZATION** [ ] WILL [X] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Strong oxidizing agents.	**Conditions to Avoid:** Open flame, welding arcs, heat, sparks, or any source of ignition.

Hazardous Decomposition Products: CO, CO2.

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [ ] INGESTION [ ] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS

ACUTE EFFECTS:

Inhalation: Product is an asphyxiant at very high concentrations. Excessive inhalation of vapors can be harmful and may cause headache, disorientation, rapid respiration, nausea, anesthetic effects and possible unconsciousness. Vapors are heavier than air and displace oxygen required for breathing.

Eye Contact: May cause burns and frostbite.	**Skin Contact:** May cause burns and frostbite.

Ingestion: Unlikely route of exposure. Gas under normal (usual) circumstances.

CHRONIC EFFECTS: Unknown.

Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush immediately with fresh water for at least 15 minutes while holding eyelids open. Remove contact lenses if worn. Seek medical attention immediately.

Skin Contact: Treat burned or frostbitten skin by flushing or immersing affected areas in lukewarm water. If skin is not burned, keep warm and stimulate circulation with massage. Seek medical attention immediately.

Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention. Give oxygen.

Ingestion: Unlikely route of exposure.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH to be used in a positive pressure mode.

Protective Gloves: Rubber gloves recommended.	**Eye Protection: Safety** glasses recommended.

Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.

Other Protective Clothing & Equipment: Self-contained respirator should be available for non-routine and emergency situations.

Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Isolate hazard area and deny entry. Remove all ignition sources. Ventilate area to disperse vapors. If liquid gas has not ignited, disperse with water or by flooding.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use pose no disposal hazard.

Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid breathing vapors. Avoid contact with skin or eyes.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

THIS MSDS IS CURRENT AS OF March 25, 2003. The DATE PREPARED section is the original date assembled and remains current until a change is necessary. This is tracked internally at the manufacturer by these date codes and therefore must remain as the originating date.

KEN

Eagle Pro Meltdown Baseboard Stripper Item # 01617

Quick Identifier (In Plant Common Name)

Material Safety Data Sheet

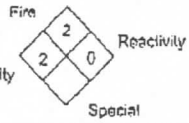
Distributor Name & Address	Eagle Maintenance Supply, Inc. 80 Twinbridge Drive Pennsauken, NJ 08110
Emergency Telephone No.	(800) 756-9022 Mon. - Fri. 8-5 (800) 255-3924 24 HOURS
Date Prepared:	August 13, 2001

HMIS Symbol:

Health	2
Flammability	2
Reactivity	0

HMIS—NFPA
Minimal - 0 - Insignificant
Slight - 1 - Slight
Moderate - 2 - Moderate
Serious - 3 - High
Severe - 4 - Extreme

NFPA Symbol:



Prepared By: V. Burnell 8/15/01

SECTION 1 - IDENTITY

Common Name: (used on label) (Trade name & Synonyms)	Eagle Pro Meltdown Baseboard Stripper Item#01617
Chemical Name	Mixture packaged in pressurized aerosol spray can.

SECTION 2 - HAZARDOUS INGREDIENTS

Principal Hazardous Component(s)	CAS No.	OSHA PEL	ACGIH TLV	Other Limits
Propane	74-98-6	Not Est.	1000 ppm	
Butane	106-97-8	Not Est.	800 ppm	
*Ammonium Hydroxide	1336-21-6	50 ppm	25 ppm (STEL)	35 ppm STEL
2 Butoxyethanol	111-76-2	25 ppm (skin)	25 ppm (skin)	
Dodecylbenzenesulfonate	27176-87-0	Not Est.	Not Est.	0.05 mg/m³ Supplier

*Section 313 Supplier Notification - Indicates hazardous ingredients which are toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS

Boiling Point	212°F	Specific Gravity (H_2O=1)	1.05 (Concentrate)	Vapor (Propellant) Pressure (PSI)	44 - 48
Volatile Organic Content (% Weight)	11.0%	Evaporation Rate (BuAc=1)	Slower	pH	11.5 - 12.5
Solubility In Water	Soluble	Appearance and Odor	White Foam Spray with Pungent Odor.		

SECTION 4 - FIRE & EXPLOSION DATA

Flammability (Under flame projection)	Non-Flammable	Flammable Limits in Air % by Volume	Lower 1.8%	Upper 9.5%	Extinguisher Media	Water, Reg. Foam, Dry Chemical, CO_2

Special Fire Fighting Procedures Keep containers cool using water spray. Use proper equipment to protect personnel from bursting containers.

Unusual Fire and Explosion Hazards Contents under pressure. Do not expose to temperatures exceeding 120°F, as containers may vent, rupture or burst.

SECTION 5 - PHYSICAL HAZARDS

Stability	Unstable ☐ Stable ■	Conditions to Avoid	Open Flames; Temp. > 120°F.	Hazardous Polymerization	May Occur ☐ Will not Occur ■	Conditions to Avoid	None

Incompatability (Materials to Avoid) Strong oxidizers, strong alkalies, zinc, halogens, and acids.

Hazardous Decomposition Products CO, CO_2, ammonia vapors.

SECTION 6 - HEALTH HAZARDS

Routes of Entry	Inhalation:	Yes	Eyes / Skin:	No	Ingestion:	Unlikely	

Signs and Symptoms of Exposure (Acute & Chronic) Contact may cause skin and eye irritation. High concentrations can cause nasal and respiratory irritation. Excessive inhalation or ingestion may produce signs of intoxication.

Medical Conditions Generally Aggravated by Exposure	None Known		Target Organs/Systems	Nervous system and several organs.			
Chemical Listed as Carcinogen or Potential Carcinogen	National Toxicology Program	Yes ☐ No ■	I.A.R.C. Monographs	Yes ☐ No ■	OSHA	Yes ☐ No ■	

Emergency and First Aid Procedures

Inhalation Remove victim to fresh air. Apply artificial respiration if necessary. Get medical attention.

Eyes Flush eyes with water for at least 15 minutes. Get medical attention.

Skin Wash affected areas w/ soap & water. Get medical attention if irritation persists.

Ingestion Drink large amounts of water and get medical attention. Induce vomiting only on the advice of a physician.

SECTION 7 - SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) None required for normal use.

Ventilation	Local Exhaust	Maintain adequate ventilation	Mechanical (General)	N/A	Special	N/A	Other N/A
Protective Gloves	Wear gloves if skin contact causes irritation.		Eye Protection	Wear safety glasses or goggles.			

Other Protective Clothing or Equipment None required.

SECTION 8 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken Handling and Storage Do not store at temperatures above 120°F. Do not puncture or incinerate containers. Keep out of reach of children.

Other Precautions Read label precautions carefully.

Steps to be Taken in Case Material is Released or Spilled Soak up spilled liquid with absorbent material. Place in closed container. Dispose of in accordance with local, state, and federal regulations.

Waste Disposal Methods Dispose of in accordance with local, state, and federal regulations.

We believe all information given is accurate. It is offered in good faith. but without guarantee. Since conditions are beyond our control, user assumes all responsibility and risk.

EAGLE PRO

MATERIAL SAFETY DATA SHEET
(SIMILAR TO OSHA FORM 174)

N.A.=Not Applicable
Not Est.=Not Established
Prop.=Proprietary

SECTION 1-MANUFACTURER/DISTRIBUTOR INFORMATION

Product Name: Soft Touch Plus Antibacterial Hand Soap
Supplier's Name: Eagle Maintenance Supply, Inc.
Supplier's Address: 80 Twinbridge Drive • Pennsauken, NJ 08110
HMIS Hazard Code: Health:1 Flammability:0 Reactivity:0 Other:0
Chemical Family: Synthetic Detergent
D.O.T. Shipping Name: N/A

Emergency Phone #:(856)317-9500
Chemical Name: N.A. Proprietary Blend
Formula: N.A. Blended Product
Hazard Class: N/A **D.O.T. ID#:** N/A

SECTION 2-HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NO.	% Concentrate Range	Hazard Ratings (TLV/PEL)
None			

SECTION 3-PHYSICAL DATA

Boiling Point (F): 212°
Vapor Pressure: = To Water
Vapor Density: = To Water
Solubility In Water: Complete
Appearance: Opaque, Viscous, Pink Liquid
Odor: Fruity
Specific Gravity: 1.023
Evaporation Rate: = To Water

SECTION 4-FIRE AND EXPLOSION DATA

Flash Point (F): None To Boiling (TOC)
Flammable Limits: Not Est.
Unusual Fire & Explosion Hazards: None

SECTION 5-HEALTH HAZARD DATA

Route(s) of Entry: Inhalation:No Skin:Yes Ingestion:Yes **Threshold Limit Value:** Not Est.
Effects of Overexposure: May cause eye irritation. May be harmful if swallowed.
Emergency & First Aid Procedures: For Eyes: Flush with water for at least fifteen minutes. If irritation persists get medical aid. **For Skin:** Flush thoroughly with water. **If Ingested:** Do not induce vomiting. Give large quantities of water. Get medical advice.
Conditions Aggravated by Exposure: None

Listed Carcinogen, Mutagen, Teratogen (Ingredient, Source, Amount): None

SECTION 6-REACTIVITY DATA

Stability: Stable
Conditions to Avoid: None
Incompatibility: Strong Acids and Oxidizers
Hazardous Decomposition Products: Carbon Oxides
Hazardous Polymerization: Will not occur.

SECTION 7-SPILL OR LEAK PROCEDURES

Steps to be taken if material is released or spilled: Recontainerize by mopping, wet vacuum, or using a suitable absorbent. Rinse remaining material to drains. Be cautious of slippery floors.
Waste disposal method: Follow local, state, and federal regulations.

SECTION 8-SPECIAL PROTECTION INFORMATION

Respiratory Protection: Not required.
Ventilation: Not required.
Protective Gloves: Not required.
Eye Protection: Not required.
Other Protective Equipment: None

SECTION 9-SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Store between 40° and 120° F.
Other Precautions: Keep out of reach of children. For sale to, use and storage by service personnel only.

The information contained in this MSDS was obtained from current and reliable sources, however the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of this company, it is not responsible for loss, injury and expense arising out of the product's improper use. No warranty, expressed or inferred, regarding the product described in this MSDS shall be created or inferred by any statement in this MSDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

DATE PREPARED-10/5/00 By: G.C.

Conforms to USDOL OSHA 29CFR 1910.1200 HAZCOM

SAFETY DATA SHEET

Easy-Off Heavy Duty Oven Cleaner Aerosol

HEALTH • HYGIENE • HOME

1. Product and company identification

Product name : Easy-Off Heavy Duty Oven Cleaner Aerosol

Distributed by : Reckitt Benckiser LLC.
Morris Corporate Center IV
399 Interpace Parkway (P.O. Box 225)
Parsippany, New Jersey 07054-0225
+1 973 404 2600

Emergency telephone number (Medical) : 1-800-338-6167

Emergency telephone number (Transport) : 1-800-424-9300 (U.S. & Canada) CHEMTREC
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887

Website: **http://www.rbnainfo.com**

Product use : Oven Cleaner

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

SDS # : 371752PSDS v3.0

Formulation #: : 772-004 (371752 v5.0)

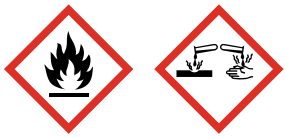
UPC Code / Sizes : 62338 00138 (16oz. Aerosol Can) 62338 87979 (14.5oz . Aerosol Can)

2. Hazards identification

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 2
CORROSIVE TO METALS - Category 1
SKIN CORROSION/IRRITATION - Category 1
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Flammable aerosol.
May be corrosive to metals.
Causes severe skin burns and eye damage.

Precautionary statements

2. Hazards identification

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Keep only in original container. Pressurized container: Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Do not breathe dust or mist. Wash hands thoroughly after handling.

Response : Absorb spillage to prevent material damage. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in corrosive resistant container with a resistant inner liner.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : None known.

Hazards not otherwise classified : None known.

3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
sodium hydroxide	2.5 - 5	1310-73-2
2-(2-butoxyethoxy)ethanol	2.5 - 5	112-34-5
2-aminoethanol	2.5 - 5	141-43-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance

4. First aid measures

for 48 hours.

Skin contact : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Move to fresh air. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Causes severe burns.

Ingestion : May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.

6. Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb spillage to prevent material damage. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Absorb spillage to prevent material damage.

Conditions for safe storage, including any incompatibilities : Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in corrosive resistant container with a resistant inner liner. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Control

Occupational exposure limits

Ingredient name	Exposure limits
sodium hydroxide	**ACGIH TLV (United States, 6/2013).** C: 2 mg/m³ **OSHA PEL 1989 (United States, 3/1989).** CEIL: 2 mg/m³ **NIOSH REL (United States, 10/2013).** CEIL: 2 mg/m³ **OSHA PEL (United States, 2/2013).** TWA: 2 mg/m³ 8 hours.
2-(2-butoxyethoxy)ethanol	**ACGIH TLV (United States, 6/2013).** TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapor
2-aminoethanol	**ACGIH TLV (United States, 6/2013).** TWA: 3 ppm 8 hours. TWA: 7.5 mg/m³ 8 hours. STEL: 6 ppm 15 minutes. STEL: 15 mg/m³ 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 3 ppm 8 hours. TWA: 8 mg/m³ 8 hours. STEL: 6 ppm 15 minutes.

8. Exposure controls/personal protection

	STEL: 15 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 3 ppm 10 hours. TWA: 8 mg/m³ 10 hours. STEL: 6 ppm 15 minutes. STEL: 15 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 3 ppm 8 hours. TWA: 6 mg/m³ 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

9. Physical and chemical properties

Appearance

Physical state : Liquid. [Liquefied compressed gas.]

Color : White.

Odor : Floral.

Odor threshold : Not available.

pH : 13.3 [Conc. (% w/w): 100%]

Melting point : Not available.

Boiling point : Not available.

Flash point : Not available.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.963 to 1.177

Solubility : Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Aerosol product

Type of aerosol : Foam

Heat of combustion : 3.816 kJ/g

10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur. Polymerization. : There are no data available on the mixture itself.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : Reactive or incompatible with the following materials: metals Do not mix with household chemicals

Hazardous decomposition products : Hazardous decomposition products : carbon oxides , Various Organic chemicals.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-(2-butoxyethoxy)ethanol	LD50 Dermal	Rabbit	2700 mg/kg	-
	LD50 Oral	Rat	4500 mg/kg	-
2-aminoethanol	LD50 Oral	Rat	1720 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
sodium hydroxide	Eyes - Severe irritant	Monkey	-	24 hours 1 Percent	-
	Eyes - Mild irritant	Rabbit	-	400 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	1 Percent	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes 1 milligrams	-
	Skin - Mild irritant	Human	-	24 hours 2 Percent	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams	-
2-(2-butoxyethoxy)ethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
2-aminoethanol	Eyes - Severe irritant	Rabbit	-	250 Micrograms	-
	Skin - Moderate irritant	Rabbit	-	505 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

11. Toxicological information

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Causes severe burns.

Ingestion : May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

11. Toxicological information

Route	ATE value
Oral Dermal	39686.2 mg/kg 56842.1 mg/kg

12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2-(2-butoxyethoxy)ethanol 2-aminoethanol	Acute LC50 1300000 µg/l Fresh water Acute EC50 8.42 mg/l Fresh water Acute LC50 >100000 µg/l Marine water Acute LC50 170000 µg/l Fresh water	Fish - Lepomis macrochirus Algae - Desmodesmus subspicatus Crustaceans - Crangon crangon - Adult Fish - Carassius auratus	96 hours 72 hours 48 hours 96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
2-(2-butoxyethoxy)ethanol 2-aminoethanol	1 -1.31	- -	low low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Release of large quantities into water may cause a pH-change resulting in danger for aquatic life.

13. Disposal considerations

Disposal methods : Waste packaging should be recycled. Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. Transport information

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1950	Aerosols, flammable	2.1 (8)	-		**Limited quantity**
TDG Classification	UN1950	Aerosols, flammable	2.1 (8)	-		**Limited quantity**
Mexico Classification	UN1950	Aerosols, flammable	2.1 (8)	-		**Limited quantity**
IMDG Class	UN1950	Aerosols, flammable	2.1 (8)	-		**Limited quantity**
IATA-DGR Class	UN1950	AEROSOLS, flammable, containing substances in Class 8 packing group II	2.1 (8)	-		**See DG List.**

PG* : Packing group

15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: 2-(4-tert-butylbenzyl)propionaldehyde; 3-p-cumenyl-2-methylpropionaldehyde

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): Not determined.

Clean Water Act (CWA) 311: sodium hydroxide

Clean Air Act (CAA) 112 regulated flammable substances: butane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

15. Regulatory information

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
Reactive
Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
sodium hydroxide	2.5 - 5	No.	No.	No.	Yes.	No.
2-(2-butoxyethoxy)ethanol	2.5 - 5	Yes.	No.	No.	Yes.	No.
2-aminoethanol	2.5 - 5	Yes.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	2-(2-butoxyethoxy)ethanol	112-34-5	4.75
Supplier notification	2-(2-butoxyethoxy)ethanol	112-34-5	4.75

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: SODIUM HYDROXIDE; ETHANOLAMINE; BUTANE

New York : The following components are listed: Sodium hydroxide

New Jersey : The following components are listed: SODIUM HYDROXIDE; CAUSTIC SODA; ETHANOLAMINE; ETHANOL, 2-AMINO-; GLYCOL ETHERS; BUTANE

Pennsylvania : The following components are listed: SODIUM HYDROXIDE (NA(OH)); ETHANOL, 2-AMINO-; GLYCOL ETHERS; BUTANE

Label elements

Signal word : DANGER

Hazard statements : CORROSIVE CAUSES EYE AND SKIN BURNS. HARMFUL IF SWALLOWED. CONTENTS UNDER PRESSURE.

Precautionary measures : Keep out of the reach of children. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 120 °F. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing spray. Wear suitable gloves. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	3
Flammability	1
Physical hazards	0
Personal protection	D

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of issue : 13/10/2014.

Date of previous issue : 29/05/2013

Version : 3

Prepared by : Reckitt Benckiser LLC.
Product Safety Department
1 Philips Parkway
Montvale, New Jersey 07646-1810 USA.
FAX: 201-476-7770

Revision comments : Update as per US GHS

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

16. Other information

RB is a member of the CSPA Product Care Product Stewardship Program.

SDS: 0006023
Date Prepared: 02/27/2013

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: **EASYPOXY® K-22 Part A Adhesive**
Synonyms: None
Molecular Formula: Mixture
Molecular Weight: Mixture
Intended/Recommended Use: Adhesive

CYTEC INDUSTRIES INC., FIVE GARRET MOUNTAIN PLAZA, WOODLAND PARK, NEW JERSEY 07424, USA
For Product and all Non-Emergency Information call 1-800/652-6013. Outside the USA and Canada call 1-973/357-3193.

EMERGENCY PHONE (24 hours/day) - For emergency only involving spill, leak, fire, exposure or accident call:
Asia Pacific:
Australia - +61-3-9663-2130 or 1800-033-111
China (PRC) - +86 10 5100 3039 (Carechem24 China)
New Guinea - +61-3-9663-2130
New Zealand - +61-3-9663-2130 or 0800-734-607
All Others - +65 3158 1074 (Carechem24 Singapore)
Canada: +1-905-356-8310 (Cytec Welland, Canada plant)
Europe/Africa/Middle East (Carechem24 UK):
Europe, Middle East, Africa, Israel - +44 (0) 1235 239 670
Middle East, Africa (Arabic speaking countries) - +44 (0) 1235 239 671
Latin America:
Brazil - 0800 0111 767 (SOS Cotec)
Chile - +56-2-247-3600 (CITUC QUIMICO)
All Others - +52-376-73 74122 (Cytec Atequiza, Mexico plant)
USA: +1-703-527-3887 or 1-800-424-9300 (CHEMTREC #CCN6083)

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2. HAZARDS IDENTIFICATION

GHS Classification
Carcinogenicity Hazard Category 1A
Germ Cell Mutagenicity Hazard Category 2
Specific Target Organ Toxicity - Repeated Exposure Hazard Category 1
Skin Corrosion / Irritation Hazard Category 2
Serious Eye Damage / Eye Irritation Hazard Category 2A
Skin Sensitizer Hazard Category 1B
Aquatic Environment Chronic Hazard Category 2
Aquatic Environment Acute Hazard Category 2

LABEL ELEMENTS



Hazard Statements
May cause cancer
Suspected of causing genetic defects
Causes damage to organs through prolonged or repeated exposure
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
Toxic to aquatic life with long lasting effects

Precautionary Statements
Obtain special instructions before use.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
IF ON SKIN: Wash with plenty of soap and water.
Specific treatment (see supplemental first aid instructions on this label).
Take off all contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local and national regulations.

Hazards Not Otherwise Classified (HNOC), Other Hazards
Polymerization may occur from excessive heat, contamination or exposure to direct sunlight.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS

Component / CAS No.	%	GHS Classification	Carcinogen
Poly(aromatic glycidyl ether) #2 -	60-90	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) Skin Sens. 1B (H317) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)	-
Silicon dioxide, amorphous (included under CAS # 7631-86-9) 112945-52-5	1-5	Not Classified	-
o-Cresol glycidyl ether 2210-79-9	1-5	Muta. 2 (H341) Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)	-
Silica, quartz 14808-60-7	10-30	Carc. 1A (H350i) STOT RE 1 (H372)	IARC 1 NTP ACGIH A2

The specific chemical identity and/or exact percentage of composition for one or more ingredients has been withheld as a trade secret.

Additional GHS classification or other information may be included in this section but has not been adopted by OSHA. See Section 16 for full text of H phrases.

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4. FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

Eye Contact:
Rinse immediately with plenty of water for at least 15 minutes. Obtain medical advice if there are persistent symptoms.

Skin Contact:
Wash immediately with plenty of water and soap. Remove contaminated clothing and shoes without delay. Obtain medical attention. Do not reuse contaminated clothing without laundering. Destroy or thoroughly clean shoes before reuse.

Ingestion:
If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Inhalation:
Remove to fresh air. If breathing is difficult, give oxygen. Apply artificial respiration if patient is not breathing. Obtain medical attention immediately.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

None known

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDS

Not applicable

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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:
Use water spray or fog, carbon dioxide or dry chemical.

Protective Equipment:
Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection).

Special Hazards:
Keep containers cool by spraying with water if exposed to fire.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions:
Where exposure level is known, wear approved respirator suitable for level of exposure. Where exposure level is not known, wear approved, positive pressure, self-contained respirator. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

Methods For Cleaning Up:
Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

References to other sections:
See Sections 8 and 13 for additional information.

---

7. HANDLING AND STORAGE

HANDLING

Precautions: Avoid release to the environment. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. Do not breathe vapors or spray mist. Wear protective gloves and eye/face protection.

Special Handling Statements: Provide good ventilation of working area (local exhaust ventilation if necessary).

STORAGE
Store in a dry place out of sun and away from heat. Observe the general rules of industrial fire protection.

Storage Temperature: Room temperature
Reason: Quality.

---

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:
Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure when spraying or curing at elevated temperatures.

Respiratory Protection:
Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure. A full facepiece respirator also provides eye and face protection. Cutting, grinding or sanding of parts fabricated after curing may create respirable dust particles. Respiratory protection appropriate for this dust may be required. Refer to components listed above for potential hazardous components in the dust.

Eye Protection:
Wear eye/face protection such as chemical splash proof goggles or face shield. Eyewash equipment and safety shower should be provided in areas of potential exposure.

Skin Protection:
Avoid skin contact. Wear impermeable gloves and suitable protective clothing. Barrier creams may be used in conjunction with the gloves to provide additional skin protection.

Hand Protection:
Nitrile or fluorinated rubber gloves. Consider the porosity and elasticity data of the glove manufacturer and the specific conditons in the work place. Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility etc) is noticed. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

Additional Advice:
Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. It is recommended that a shower be taken after completion of workshift especially if significant contact has occurred. Work clothing should then be laundered prior to reuse. Street clothing should be stored separately from work clothing and protective equipment. Work clothing and shoes should not be taken home.

Exposure Limit(s)

112945-52-5 Silicon dioxide, amorphous (included under CAS # 7631-86-9)

OSHA (PEL):	20 mppcf
ACGIH (TLV):	Not established
Other Value:	Not established

14808-60-7 Silica, quartz

OSHA (PEL):	0.1 mg/m^3 (respirable dust) (250)/(%SiO2 + 5) mppcf TWA (respirable) (10)/(%SiO2 + 2) mg/m^3 TWA (respirable) (30)/(%SiO2 + 2) mg/m^3 TWA (total dust)
ACGIH (TLV):	0.025 mg/m^3 respirable fraction (TWA)
Other Value:	Not established

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	black
Appearance:	paste
Odor:	mild epoxy
Boiling Point:	Not available
Melting Point:	Not available
Vapor Pressure:	Not available
Specific Gravity/Density:	1.28
Vapor Density:	Not available
Percent Volatile (% by wt.):	Not available
pH:	Not applicable
Saturation In Air (% By Vol.):	Not available
Evaporation Rate:	Not applicable
Solubility In Water:	Not available
Volatile Organic Content:	Not applicable
Flash Point:	>93 °C 200 °F Tag Closed Cup
Flammable Limits (% By Vol):	Not available
Autoignition Temperature:	Not available
Decomposition Temperature:	Not available
Partition coefficient (n-octanol/water):	Not available
Odor Threshold:	Not available
Viscosity (Kinematic):	Not available

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions To Avoid:	Avoid excess heating over long periods of time.
Polymerization:	May occur
Conditions To Avoid:	Avoid contact with acids, oxidizing agents, bases or amines. Do not heat above 100 C (212 F).
Materials To Avoid:	Avoid contact with acids, bases and amines.
Hazardous Decomposition Products:	Carbon dioxide Carbon monoxide (CO) oxides of nitrogen

11. TOXICOLOGICAL INFORMATION

11. TOXICOLOGICAL INFORMATION
PRODUCT TOXICITY INFORMATION

Likely Routes of Exposure: Skin, Eyes, Oral.

ACUTE TOXICITY DATA

oral	rat	Acute LD50	>2000 mg/kg
dermal	rabbit	Acute LD50	>2000 mg/kg
inhalation	rat	Acute LC50 4 hr	>5 mg/l (Dust/Mist)

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	eye	Irritating
Acute Irritation	skin	Irritating

ALLERGIC SENSITIZATION

Sensitization	skin	Sensitizing
Sensitization	respiratory	Not sensitizing

GENOTOXICITY

Assays for Gene Mutations

Ames Salmonella Assay	No data

OTHER INFORMATION

The product toxicity information above has been estimated.

HAZARDOUS INGREDIENT TOXICITY DATA

Poly(aromatic glycidyl ether) # 2 has an oral (rat) LD50 and dermal (rabbit) LD50 values of >5,000 mg/kg and >2,000 mg/kg, respectively. A 4-hour inhalation LC50 (rat) value of >700 mg/m^3 has been reported. Prolonged or repeated skin contact may cause allergic skin reactions. This material produced moderate skin irritation and mild to moderate eye irritation in animal tests. This material has shown positive results in in vitro screening tests for mutagenicity. When Ingested, Poly(aromatic glycidyl ether) has produced central nervous system effects in laboratory animals. Chronic ingestion caused reduced weight gain and death in laboratory animals. The oral (rat) LD50 and dermal (rabbit) LD50 values have also been reported to be ~10 gm/kg and greater than 20 ml/kg, respectively. The literature reports several cases of asthmatic symptoms developing in workers due to occupational exposure to this polymer.

Silicon Dioxide has acute oral (rat) LD50 values ranging from 3160 mg/kg to >7500 mg/kg. The LC50 (rat) following a 4-hour inhalation study is >0.25 mg/L (maximum attainable concentration). Chronic and sub-chronic inhalation tests with laboratory animals produced lung damage and death after the lung clearance mechanisms were overloaded. Amorphous silica does not cause the lung diseases crystalline silica is known to cause.

o-Cresyl glycidyl ether has an oral LD50 (rat) value of 2500 mg/kg and a dermal LD50 (rabbit) value of 2300 mg/kg. This material is irritating to eyes and skin. Liquid may cause skin sensitization. Inhalation of vapors may cause CNS depression and irritation to the nose, throat and respiratory tract.

Quartz silica (respirable fraction) can cause reduced pulmonary function when inhaled. Exposure to respirable quartz silica can cause delayed (chronic) fibrosis and other lung injury. Chronic inhalation exposure showed that quartz silica can cause lung cancer in rats but not in mice. There is also limited human evidence which shows an association of lung cancer with occupational exposure to quartz silica. This material is reported to have shown positive results in in vitro mutagenicity tests with human cell cultures. Studies have shown that tobacco smoking and high quartz silica exposure exhibit a synergistic effect for lung cancer. Silica, crystalline is a chemical known to the State of California to cause cancer.

California Proposition 65 Warning (applicable in California only) - This product contains (a) chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

12. ECOLOGICAL INFORMATION

TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

Overall Environmental Toxicity: Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Predicted to be not readily biodegradable.
The ecological assessment for this material is based on an evaluation of its components.

RESULTS OF PBT AND vPvB ASSESSMENT
Not determined

HAZARDOUS INGREDIENT TOXICITY DATA

Component / CAS No.	Toxicity to Algae	Toxicity to Fish	Toxicity to Water Flea
Poly(aromatic glycidyl ether) #2 -	Not available	Not available	Not available
Silicon dioxide, amorphous (included under CAS # 7631-86-9) 112945-52-5	Not available	Not available	Not available
o-Cresol glycidyl ether 2210-79-9	Not available	Not available	Not available
Silica, quartz 14808-60-7	Not available	Not available	Not available

13. DISPOSAL CONSIDERATIONS

13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA "listed hazardous waste" or has any of the four RCRA "hazardous waste characteristics." Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA "listed hazardous waste"; information contained in Section 15 of this MSDS is not intended to indicate if the product is a "listed hazardous waste." RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 9 of this MSDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 3 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. The Company encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. The Company recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. The Company has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

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14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

US DOT

Dangerous Goods? X

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.
Hazard Class: 9
Packing Group: III
UN/ID Number: UN3082
Transport Label Required: Miscellaneous
Marine Pollutant
Marine Pollutant
Technical Name (N.O.S.): poly(aromatic glycidyl ether)

Comments: Marine Pollutants - DOT requirements specific to Marine Pollutants do not apply to non-bulk packagings transported by motor vehicles, rail cars or aircraft.

TRANSPORT CANADA

Dangerous Goods? X

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.
Hazard Class: 9
Packing Group: III
UN Number: UN3082
Transport Label Required: Miscellaneous
Marine Pollutant
Marine Pollutant
Technical Name (N.O.S.): poly(aromatic glycidyl ether)

ICAO / IATA

Dangerous Goods? X

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.
Hazard Class: 9
Packing Group: III
UN Number: UN3082
Transport Label Required: Miscellaneous

Technical Name (N.O.S.): poly(aromatic glycidyl ether)

IMO

Dangerous Goods? X
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.
Hazard Class: 9
UN Number: UN3082
Packing Group: III
Transport Label Required: Miscellaneous
Marine Pollutant
Marine Pollutant
Technical Name (N.O.S.): poly(aromatic glycidyl ether)

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15. REGULATORY INFORMATION

Inventory Information

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

Canada: All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

European Economic Area (including EU): When purchased from a Cytec legal entity based in the EEA (EU or Norway), this product is compliant with the registration of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, pre-registered and/or registered.

Australia: All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on AICS.

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

Korea: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory.

Philippines: All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine inventory.

OTHER ENVIRONMENTAL INFORMATION
The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

This product does not contain any components regulated under these sections of the EPA

PRODUCT HAZARD CLASSIFICATION UNDER SECTION 311 OF SARA
- Acute
- Chronic

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16. OTHER INFORMATION

NFPA Hazard Rating (National Fire Protection Association)

16. OTHER INFORMATION

Health: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

Fire: 1 - Materials that must be preheated before ignition can occur.

Instability: 0 - Materials that in themselves are normally stable, even under fire exposure conditions.

Reasons For Issue: Revised Section 11

Date Prepared: 02/27/2013
Date of last significant revision: 10/26/2012

Component Hazard Phrases

Poly(aromatic glycidyl ether) #2

H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H411 - Toxic to aquatic life with long lasting effects.

o-Cresol glycidyl ether

H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H341 - Suspected of causing genetic defects.
H411 - Toxic to aquatic life with long lasting effects.

Silica, quartz

H350i - May cause cancer by inhalation.
H372 - Causes damage to organs through prolonged or repeated exposure.

Prepared By: Randy Deskin, Ph.D., DABT +1-973-357-3100

This information is given without any warranty or representation. We do not assume any legal responsibility for same, nor do we give permission, inducement, or recommendation to practice any patented invention without a license. It is offered solely for your consideration, investigation, and verification. Before using any product, read its label.

SDS: 0008124
Date Prepared: 04/03/2013

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: **EASYPOXY® K-22 Part B Hardener**
Synonyms: None
Chemical Family: Mixture
Molecular Formula: Mixture
Molecular Weight: Mixture
Intended/Recommended Use: Adhesive

CYTEC INDUSTRIES INC., FIVE GARRET MOUNTAIN PLAZA, WOODLAND PARK, NEW JERSEY 07424, USA
For Product and all Non-Emergency Information call 1-800/652-6013. Outside the USA and Canada call 1-973/357-3193.

EMERGENCY PHONE (24 hours/day) - For emergency only involving spill, leak, fire, exposure or accident call:
Asia Pacific:
Australia - +61-3-9663-2130 or 1800-033-111
China (PRC) - +86 10 5100 3039 (Carechem24 China)
New Guinea - +61-3-9663-2130
New Zealand - +61-3-9663-2130 or 0800-734-607
All Others - +65 3158 1074 (Carechem24 Singapore)
Canada: +1-905-356-8310 (Cytec Welland, Canada plant)
Europe/Africa/Middle East (Carechem24 UK):
Europe, Middle East, Africa, Israel - +44 (0) 1235 239 670
Middle East, Africa (Arabic speaking countries) - +44 (0) 1235 239 671
Latin America:
Brazil - 0800 0111 767 (SOS Cotec)
Chile - +56-2-247-3600 (CITUC QUIMICO)
All Others - +52-376-73 74122 (Cytec Atequiza, Mexico plant)
USA: +1-703-527-3887 or 1-800-424-9300 (CHEMTREC #CCN6083)

® indicates trademark registered in the U.S. Outside the U.S., mark may be registered, pending or a trademark. Mark is or may be used under license.

2. HAZARDS IDENTIFICATION

GHS Classification
Carcinogenicity Hazard Category 1A
Reproductive Toxicant Category 2
Acute Toxicity (Inhalation) Hazard Category 3
Specific Target Organ Toxicity - Repeated Exposure Hazard Category 1
Specific Target Organ Toxicity - Single Exposure Hazard Category 3
Skin Corrosion / Irritation Hazard Category 1B
Serious Eye Damage / Eye Irritation Hazard Category 1
Skin Sensitizer Hazard Category 1B
Aquatic Environment Chronic Hazard Category 2
Aquatic Environment Acute Hazard Category 2

LABEL ELEMENTS



Signal Word
Danger

Hazard Statements
May cause cancer
Suspected of damaging fertility or the unborn child
Toxic if inhaled
Causes damage to organs through prolonged or repeated exposure
May cause drowsiness or dizziness
May cause respiratory irritation
Causes severe skin burns and eye damage
May cause an allergic skin reaction
Toxic to aquatic life with long lasting effects

Precautionary Statements
Obtain special instructions before use.
Wear protective gloves/protective clothing/eye protection/face protection.
Use only outdoors or in a well-ventilated area.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Specific treatment (see supplemental first aid instructions on this label).
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash contaminated clothing before reuse.
Immediately call a POISON CENTER or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local and national regulations.

Hazards Not Otherwise Classified (HNOC), Other Hazards
Polymerization may occur from excessive heat, contamination or exposure to direct sunlight.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS

Component / CAS No.	%	GHS Classification	Carcinogen
Silica, quartz 14808-60-7	40 - 60	Carc. 1A (H350i) STOT RE 1 (H372)	IARC 1 NTP ACGIH A2

Component / CAS No.	%	GHS Classification	Carcinogen
Diethylenetriamine 111-40-0	5 - 10	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 2 (H330) STOT Single 3 (H335) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1B (H317)	-
Modified epoxy adduct -	30 - 40	Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)	-
Bisphenol A 80-05-7	5 - 10	Repr. 2 (H361f) STOT SE 3 (H335) Skin Irrit. 3 (H316) Eye Dam. 1 (H318) Skin Sens. 1B (H317)	-
Silica, amorphous 7631-86-9	1 - 5	Not Classified	-

The specific chemical identity and/or exact percentage of composition for one or more ingredients has been withheld as a trade secret.

Additional GHS classification or other information may be included in this section but has not been adopted by OSHA. See Section 16 for full text of H phrases.

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4. FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

Eye Contact:
Rinse immediately with plenty of water for at least 15 minutes. Obtain medical attention immediately.

Skin Contact:
Wash immediately with plenty of water and soap. Remove contaminated clothing and shoes without delay. Obtain medical attention. Do not reuse contaminated clothing without laundering. Destroy or thoroughly clean shoes before reuse.

Ingestion:
If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Inhalation:
Remove to fresh air. If breathing is difficult, give oxygen. Apply artificial respiration if patient is not breathing. Obtain medical attention immediately.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

None known

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDS

Not applicable

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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:
Use water spray or fog, carbon dioxide or dry chemical.

Protective Equipment:
Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection).

Special Hazards:
Keep containers cool by spraying with water if exposed to fire.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions:
Where exposure level is known, wear approved respirator suitable for level of exposure. Where exposure level is not known, wear approved, positive pressure, self-contained respirator. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

Methods For Cleaning Up:
Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

References to other sections:
See Sections 8 and 13 for additional information.

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7. HANDLING AND STORAGE

HANDLING

Precautions: Avoid release to the environment. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling. Wear protective gloves/clothing and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. Do not breathe vapors or spray mist.

Special Handling Statements: None

STORAGE
Avoid excessive heat. Store in tightly closed containers in a cool, well-ventilated area away from heat, sparks and flames. Observe the general rules of industrial fire protection.

Storage Temperature: Room temperature
Reason: Quality.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:
Utilize a closed system process where feasible. Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure when spraying or curing at elevated temperatures.

Respiratory Protection:
Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure. A full facepiece respirator also provides eye and face protection. Cutting, grinding or sanding of parts fabricated after curing may create respirable dust particles. Respiratory protection appropriate for this dust may be required. Refer to components listed above for potential hazardous components in the dust.

Eye Protection:
Prevent eye and skin contact. Provide eye wash fountain and safety shower in close proximity to points of potential exposure. Wear eye/face protection such as chemical splash proof goggles or face shield.

Skin Protection:
Prevent contamination of skin or clothing when removing protective equipment. Barrier creams may be used in conjunction with the gloves to provide additional skin protection. Wear impermeable gloves and suitable protective clothing.

Hand Protection:
Nitrile rubber gloves. Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility etc) is noticed. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

Additional Advice:
Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. It is recommended that a shower be taken after completion of workshift especially if significant contact has occurred. Work clothing should then be laundered prior to reuse. Street clothing should be stored separately from work clothing and protective equipment. Work clothing and shoes should not be taken home.

Exposure Limit(s)

111-40-0 Diethylenetriamine

OSHA (PEL):	Not established
ACGIH (TLV):	(skin) 1 ppm (TWA)
Other Value:	Not established

14808-60-7 Silica, quartz

OSHA (PEL):	0.1 mg/m^3 (respirable dust) (250)/(%SiO2 + 5) mppcf TWA (respirable) (10)/(%SiO2 + 2) mg/m^3 TWA (respirable) (30)/(%SiO2 + 2) mg/m^3 TWA (total dust)
ACGIH (TLV):	0.025 mg/m^3 respirable fraction (TWA)
Other Value:	Not established

7631-86-9 Silica, amorphous

OSHA (PEL):	(80)/(% SiO2) mg/m^3 TWA 20 mppcf (TWA)
ACGIH (TLV):	10 mg/m^3 Inhalable particles. (TWA) 3 mg/m^3 Respirable particles. (TWA) 0.1 mg/m^3
Other Value:	Not established

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9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	brown
Appearance:	viscous liquid
Odor:	amine
Boiling Point:	Not available
Melting Point:	Not available
Vapor Pressure:	Not available
Specific Gravity/Density:	1.5
Vapor Density:	Not available
Percent Volatile (% by wt.):	Not available
pH:	Not available
Saturation In Air (% By Vol.):	Not available
Evaporation Rate:	Negligible
Solubility In Water:	Not available
Volatile Organic Content:	Not available
Flash Point:	>100 °C 212 °F Tag Closed Cup

9. PHYSICAL AND CHEMICAL PROPERTIES

Flammable Limits (% By Vol): Not available
Autoignition Temperature: Not available
Decomposition Temperature: Not available
Partition coefficient (n-octanol/water): Not available
Odor Threshold: Not available
Viscosity (Kinematic): Not available

10. STABILITY AND REACTIVITY

Stability: Stable

Conditions To Avoid: Excessive heat

Polymerization: May occur

Conditions To Avoid: Avoid contact with epoxides Avoid contact with acrylates.

Materials To Avoid: Epoxides, acrylates, strong oxidizers, acids, aldehydes, acetones, organic halides

Hazardous Decomposition Products: oxides of carbon
oxides of nitrogen
phenols
Ammonia (NH3)

11. TOXICOLOGICAL INFORMATION

PRODUCT TOXICITY INFORMATION

Likely Routes of Exposure: Oral, Skin, Eyes, Respiratory System.

ACUTE TOXICITY DATA

oral	rat	Acute LD50	>2000 mg/kg
dermal	rabbit	Acute LD50	>2000 mg/kg
inhalation	rat	Acute LC50 4 hr	0.7 mg/l (Dust/Mist)

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	skin	Corrosive
Acute Irritation	eye	Causes serious damage

ALLERGIC SENSITIZATION

Sensitization	skin	Sensitizing
Sensitization	respiratory	Not sensitizing

GENOTOXICITY

Assays for Gene Mutations

Ames Salmonella Assay	No data

OTHER INFORMATION

The product toxicity information above has been estimated.

HAZARDOUS INGREDIENT TOXICITY DATA

Quartz silica (respirable fraction) can cause reduced pulmonary function when inhaled. Exposure to respirable quartz silica can cause delayed (chronic) fibrosis and other lung injury. Chronic inhalation exposure showed that quartz silica can cause lung cancer in rats but not in mice. There is also limited human evidence which shows an association of lung cancer with occupational exposure to quartz silica. This material is reported to have shown positive results in in vitro mutagenicity tests with human cell cultures. Studies have shown that tobacco smoking and high quartz silica exposure exhibit a synergistic effect for lung cancer. Silica, crystalline is a chemical known to the State of California to cause cancer.

Diethylenetriamine has acute oral (rat) LD50 values of 1620 mg/kg. Diethylenetriamine has acute dermal (rabbit) LD50 values of 1090 mg//kg. The LC50 value (rat, aerosol, 4 hr) is 0.07 - 0.3 mg/l. No mortality was seen in rats exposed to 300 ppm for 8-hours. This substance may cause respiratory tract irritation. Repeated inhalation exposures can cause asthmatic type responses. Direct contact with Diethylenetriamine may cause severe irritation and/or irreversible damage (burns) to the eyes and skin. Repeated or prolonged dermal contact may cause allergic skin reactions. In the majority of studies performed with microorganisms and in mammalian cell culture, a mutagenic effect was not found. A mutagenic effect was also not observed in in vivo tests. The substance showed no carcinogenic activity in animals after chronic administration to the skin. Under certain conditions the substance can form nitrosamines. Nitrosamines are carcinogenic in animal studies.

Bisphenol A has acute oral (rat) and dermal (rabbit) LD50 values of 3250 mg/kg and 3 ml/kg, respectively. The acute 6-hr inhalation LC50 is reported to be >170 mg/m^3. Direct contact with bisphenol A caused mild skin and severe eye irritation when tested in rabbits. Prolonged or repeated contact with bisphenol A may cause allergic skin reaction. Dust may be irritating to the respiratory tract. Carcinogenicity studies with rats and mice have shown that bisphenol A does not cause cancer. Laboratory studies have shown that bisphenol A possesses weak estrogenic/antiestrogenic hormone activity. Mice fed bisphenol A experienced adverse effects on male reproductive success during a continuous breeding study. However, no evidence of reproductive toxicity was observed in adult male or female mice or rats in multigeneration reproduction studies when administered bisphenol A in feed. Developmental effects were observed in offspring at high doses only. Based on developmental toxicity studies, BPA is not teratogenic. High oral doses of bisphenol A caused central nervous system depression and liver and kidney damage in laboratory animals. Ethanol interacted synergistically with bisphenol A, causing lethality to mice in laboratory animal tests. The scientific integrity of low-dose responses reported in rodents following BPA exposures are not considered of sufficient robustness or reproducibility for determination of hazard.

Amorphous silica has oral (rat) LD50 values ranging from 3160 mg/kg to >7500 mg/kg. The acute 4-hour inhalation LC50 (rat) is greater than the maximum attainable concentration of 0.25 mg/L. Exposure to synthetic amorphous silica dust by inhalation, absorption or ingestion is not expected to cause adverse effects. Some studies report that long term inhalation exposure to amorphous silica has caused lung effects in laboratory animals. Amorphous silica does not cause the lung diseases that crystalline silica is known to form.

California Proposition 65 Warning (applicable in California only) - This product contains (a) chemical(s) known to the State of California to cause cancer.

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12. ECOLOGICAL INFORMATION

TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

Overall Environmental Toxicity: Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

The ecological assessment for this material is based on an evaluation of its components.

RESULTS OF PBT AND vPvB ASSESSMENT
Not determined

HAZARDOUS INGREDIENT TOXICITY DATA

Component / CAS No.	Toxicity to Algae	Toxicity to Fish	Toxicity to Water Flea
Silica, quartz 14808-60-7	Not available	Not available	Not available
Diethylenetriamine 111-40-0	EC50 = 1164 mg/L - Pseudokirchneriella subcapitata (72h) EC50 = 345.6 mg/L - Pseudokirchneriella subcapitata (96h) EC50 = 592 mg/L - Desmodesmus subspicatus (96h)	LC50 = 248 mg/L - Poecilia reticulata (96h) LC50 = 1014 mg/L - Poecilia reticulata (96h) LC50 = 430 mg/L - Leuciscus idus (96h)	EC50 = 16 mg/L - Daphnia magna (48h) EC50 = 37 mg/L - Daphnia magna (24h)
Modified epoxy adduct -	Not available	Not available	Not available
Bisphenol A 80-05-7	EC50 = 2.5 mg/L - Pseudokirchneriella subcapitata (96h)	LC50 3.6 - 5.4 mg/L - Pimephales promelas (96h) LC50 = 4 mg/L - Oncorhynchus mykiss (96h) LC50 4.0 - 5.5 mg/L - Pimephales promelas (96h) LC50 = 9.9 mg/L - Brachydanio rerio (96h)	EC50 9.2 - 11.4 mg/L - Daphnia magna (48h) EC50 = 10.2 mg/L - Daphnia magna (48h) EC50 = 3.9 mg/L - Daphnia magna (48h)
Silica, amorphous 7631-86-9	EC50 = 440 mg/L - Pseudokirchneriella subcapitata (72h)	LC50 = 5000 mg/L - Brachydanio rerio (96h)	EC50 = 7600 mg/L - Ceriodaphnia dubia (48h)

13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA "listed hazardous waste" or has any of the four RCRA "hazardous waste characteristics." Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA "listed hazardous waste"; information contained in Section 15 of this MSDS is not intended to indicate if the product is a "listed hazardous waste." RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 9 of this MSDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 3 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. The Company encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. The Company recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. The Company has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

14. TRANSPORT INFORMATION

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

US DOT

Dangerous Goods? X
Proper Shipping Name: TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.
Hazard Class: 6.1
Subsidiary Class: 8
Packing Group: II
UN/ID Number: UN2927
Transport Label Required: Toxic
Corrosive
Marine Pollutant
Marine Pollutant
Technical Name (N.O.S.): diethylenetriamine, modified epoxy adduct

Comments: Marine Pollutants - DOT requirements specific to Marine Pollutants do not apply to non-bulk packagings transported by motor vehicles, rail cars or aircraft.

TRANSPORT CANADA

Dangerous Goods? X
Proper Shipping Name: TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.
Hazard Class: 6.1
Subsidiary Class: 8
Packing Group: II
UN Number: UN2927
Transport Label Required: Toxic
Corrosive
Marine Pollutant
Marine Pollutant
Technical Name (N.O.S.): Diethylenetriamine, modified epoxy adduct

ICAO / IATA

Dangerous Goods? X
Proper Shipping Name: TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.
Hazard Class: 6.1
Subsidiary Class: 8
Packing Group: II
UN Number: UN2927
Transport Label Required: Toxic
Corrosive
Technical Name (N.O.S.): diethylenetriamine

IMO

Dangerous Goods? X
Proper Shipping Name: TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.
Hazard Class: 6.1
Subsidiary Class: 8
UN Number: UN2927
Packing Group: II
Transport Label Required: Toxic
Corrosive
Marine Pollutant
Marine Pollutant

Technical Name (N.O.S.): diethylenetriamine, modified epoxy adduct

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15. REGULATORY INFORMATION

Inventory Information

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

Canada: All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

European Economic Area (including EU): Cytec has appointed an Only Representative to relieve our customers from their registration requirements under the REACH Regulation (EC) No. 1907/2006. Please contact us if you wish to benefit from the OR arrangement.

Australia: All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on AICS.

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan: One or more components of this product are NOT included on the Japanese (ENCS) inventory.

Korea: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory.

Philippines: All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine inventory.

OTHER ENVIRONMENTAL INFORMATION
The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

Component / CAS No.	%	TPQ (lbs)	RQ(lbs)	S313	TSCA 12B
Bisphenol A 80-05-7	5 - 10	None	0	Yes	No

PRODUCT HAZARD CLASSIFICATION UNDER SECTION 311 OF SARA

- Acute
- Chronic

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16. OTHER INFORMATION

NFPA Hazard Rating (National Fire Protection Association)

Health: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

Fire: 1 - Materials that must be preheated before ignition can occur.

Instability: 0 - Materials that in themselves are normally stable, even under fire exposure conditions.

Reasons For Issue: Revised Section 14

Date Prepared: 04/03/2013
Date of last significant revision: 04/03/2013

Component Hazard Phrases

Silica, quartz

H350i - May cause cancer by inhalation.
H372 - Causes damage to organs through prolonged or repeated exposure.

Diethylenetriamine

H302 - Harmful if swallowed.
H312 - Harmful in contact with skin.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H330 - Fatal if inhaled.
H335 - May cause respiratory irritation.

Modified epoxy adduct

H411 - Toxic to aquatic life with long lasting effects.

Bisphenol A

H316 - Causes mild skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.
H361f - Suspected of damaging fertility.

Prepared By: Randy Deskin, Ph.D., DABT +1-973-357-3100

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Echo Power Blend Two-Cycle Engine Oil
Material Safety Data Sheet

CITGO Petroleum Corporation
P.O. Box 4689
Houston, TX 77210

MSDS No. 625478416
Revision Date 3/30/2010

IMPORTANT: This MSDS is prepared in accordance with 29 CFR 1910.1200. Read this MSDS before transporting, handling, storing or disposing of this product and forward this information to employees, customers and users of this product.

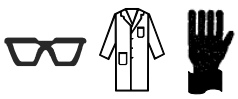
Hazard Rankings

	HMIS	NFPA
Health Hazard	* 1	1
Fire Hazard	2	2
Reactivity	0	0

*** = Chronic Health Hazard**

Protective Equipment

Minimum Recommended
See Section 8 for Details



Emergency Overview

Physical State Liquid.
Color Blue-green. **Odor** Petroleum.

WARNING:
Contains Petroleum Distillates.
Harmful if swallowed - Can enter lungs and cause damage.
If swallowed, DO NOT induce vomiting. Call a physician immediately.
Combustible Liquid.
Heated material can release vapor that can cause flash fire.
Spills may create a slipping hazard.

SECTION 1. PRODUCT IDENTIFICATION

Trade Name	Echo Power Blend Two-Cycle Engine Oil	**Technical Contact**	(800) 248-4684
Product Number	625478416	**Medical Emergency**	(832) 486-4700
CAS Number	Mixture.	**CHEMTREC Emergency (United States Only)**	(800) 424-9300
Product Family	Two cycle engine oil		
Synonyms	Two cycle engine oil; CITGO® Material Code: 625478416		

SECTION 2. COMPOSITION

Component Name(s)	CAS Registry No.	Concentration (%)
Highly-refined petroleum lubricant oils	Various	40 - 70
Polybutene	9003-29-6	15 - 40
Distillates (petroleum), hydrotreated light	64742-47-8	10 - 30
Proprietary Ingredients	Proprietary Mixture	3 - 7

SECTION 3. HAZARDS IDENTIFICATION

Also see Emergency Overview and Hazard Ratings on the top of Page 1 of this MSDS.

Major Route(s) of Entry Skin contact. Eye contact.

Signs and Symptoms of Acute Exposure

Inhalation At elevated temperatures or in enclosed spaces, product mist or vapors may irritate the mucous membranes of the nose, the throat, bronchi, and lungs.

Eye Contact	This product can cause eye irritation with short-term contact with liquid, mists or vapor. Symptoms include stinging, watering, redness, and swelling.
Skin Contact	This product can cause mild, transient skin irritation. The severity of irritation will depend on the amount of material that is applied to the skin and the speed and thoroughness that it is removed. Symptoms include redness, itching, and burning of the skin. Repeated or prolonged skin contact can produce moderate irritation (dermatitis).
Ingestion	If swallowed, large volumes of material can cause generalized depression, headache, drowsiness, nausea, vomiting and diarrhea. Smaller doses can cause a laxative effect. If aspirated into the lungs, liquid can cause lung damage.
Chronic Health Effects Summary	Prolonged and/or repeated skin contact may cause irritation and inflamation. Symptoms include defatting, redness, dryness, blistering eczema-like lesions, scaly dermatitis, and/or more serious skin disorders. Chronic effects of ingestion and subsequent aspiration into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction.
Conditions Aggravated by Exposure	Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin, Respiratory System, Liver, Kidneys, Central Nervous System (CNS)
Target Organs	May cause damage to the following organs: upper respiratory tract, skin, eye, lens or cornea
Carcinogenic Potential	This product is not known to contain any components at concentrations above 0.1% which are considered carcinogenic by OSHA, IARC or NTP.

OSHA Hazard Classification is indicated by an "X" in the box adjacent to the hazard title. If no "X" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

OSHA Health Hazard Classification				OSHA Physical Hazard Classification					
Irritant		Sensitizer		Combustible	X	Explosive		Pyrophoric	
Toxic		Highly Toxic		Flammable		Oxidizer		Water-reactive	
Corrosive		Carcinogenic		Compressed Gas		Organic Peroxide		Unstable	

SECTION 4. FIRST AID MEASURES

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid. For more specific information, refer to Exposure Controls and Personal Protection in Section 8 of this MSDS.

Inhalation	Move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately. Keep the affected individual warm and at rest.
Eye Contact	Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. Seek medical attention if excessive tearing, redness, or pain persists.
Skin Contact	If burned by hot material, cool skin by quenching with large amounts of cool water. For contact with product at ambient temperatures, remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists. Thoroughly clean contaminated clothing before reuse. Clean or discard contaminated leather goods. If material is injected under the skin, seek medical attention immediately.
Ingestion	Do not induce vomiting unless directed to by a physician. Do not give anything to drink unless directed to by a physician. Never give anything by mouth to a person who is not fully conscious. If significant amounts are swallowed or irritation or discomfort occurs, seek medical attention immediately.

Notes to Physician INGESTION: The viscosity range of the product(s) represented by this MSDS is greater than 100 SUS at 100°F. Careful gastric lavage may be considered to evacuate large quantities of material.

SECTION 5. FIRE FIGHTING MEASURES

NFPA Flammability Classification NFPA Class-IIIA combustible liquid.

Flash Point Closed cup: 68°C (154°F). (Pensky-Martens (ASTM D-93)) Open cup: 84°C (183°F) (Cleveland.).

Lower Flammable Limit No data. **Upper Flammable Limit** No data.

Autoignition Temperature Not available.

Hazardous Combustion Products Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur and/or nitrogen.

Special Properties This material will release vapors when heated above the flash point temperature that can ignite when exposed to a source of ignition. In enclosed spaces, vapors can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point.

Extinguishing Media SMALL FIRE: Use dry chemicals, carbon dioxide, foam, or inert gas (nitrogen). Carbon dioxide and inert gas can displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces.
LARGE FIRE: Use foam, water fog, or water spray. Water fog and spray are effective in cooling containers and adjacent structures. However, water can cause frothing and/or may not extinguish the fire. Water can be used to cool the external walls of vessels to prevent excessive pressure, autoignition or explosion. DO NOT use a solid stream of water directly on the fire as the water may spread the fire to a larger area.

Protection of Fire Fighters Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Slipping hazard; do not walk through spilled material. Stop leak if you can do so without risk. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal. Contain large spills to maximize product recovery or disposal. Prevent entry into waterways or sewers. In urban area, cleanup spill as soon as possible. In natural environments, seek cleanup advice from specialists to minimize physical habitat damage. This material will float on water. Absorbent pads and similar materials can be used. Comply with all laws and regulations.

SECTION 7. HANDLING AND STORAGE

Handling

A spill or leak can cause an immediate fire or explosion hazard. Keep containers closed and do not handle or store near heat, sparks, or any other potential ignition sources. Avoid contact with oxidizing agents. Do not breathe vapor. Use only with adequate ventilation and personal protection. Never siphon by mouth. Avoid contact with eyes, skin, and clothing. Prevent contact with food and tobacco products. Do not take internally.

When performing repairs and maintenance on contaminated equipment, keep unnecessary persons away from the area. Eliminate all potential ignition sources. Drain and purge equipment, as necessary, to remove material residues. Follow proper entry procedures, including compliance with 29 CFR 1910.146 prior to entering confined spaces such as tanks or pits. Use gloves constructed of impervious materials and protective clothing if direct contact is anticipated. Provide ventilation to maintain exposure potential below applicable exposure limits. Use appropriate respiratory protection when concentrations exceed any established occupational exposure level (See Section 8). Promptly remove contaminated clothing. Wash exposed skin thoroughly with soap and water after handling.

Non equilibrium conditions may increase the fire hazard associated with this product. Always bond receiving containers to the fill pipe before and during loading. Always confirm that receiving container is properly grounded. Bonding and grounding alone may be inadequate to eliminate fire and explosion hazards. Carefully review operations that may increase the risks such as tank and container filling, tank cleaning, sampling, gauging, loading, filtering, mixing, agitation, etc. In addition to bonding and grounding, efforts to mitigate the hazards may include, but are not limited to, ventilation, inerting and/or reduction of transfer velocities. Always keep nozzle in contact with the container throughout the loading process. Do NOT fill any portable container in or on a vehicle. Do NOT use compressed air for filling, discharging or other handling operations.

Product container is not designed for elevated pressure. Do not pressurize, cut, weld, braze solder, drill, or grind on containers. Do not expose product containers to flames, sparks, heat or other potential ignition sources. Empty containers may contain product residues that can ignite with explosive force. Observe label precautions. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

Storage

Keep container tightly closed. Store in a cool, dry, well-ventilated area. Store only in approved containers. Do not store with oxidizing agents. Do not store at elevated temperatures or in direct sunlight. Protect containers against physical damage. Head space in tanks and other containers may containers may contain vapor in the flammable range. Vapor may be ignited by static discharge. Storage area must meet OSHA requirements and applicable fire codes.

Additional information regarding the design and control of hazards associated with the handling and storage of flammable and combustible liquids may be found in professional and industrial documents including, but not limited to, the National Fire Protection Association (NFPA) publications NFPA 30 ("Flammable and Combustible Liquid Code"), NFPA 77 ("Recommended Practice on Static Electricity") and the American Petroleum Institute (API) Recommended Practice 2003, “Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents' (liquids)."

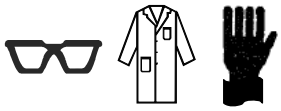
SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits (see below). An eye wash station and safety shower should be located near the work-station.

Personal Protective Equipment

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.



Eye Protection	Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Wear goggles if splashing or spraying is anticipated. Wear goggles and face shield if material is heated above 125°F (51°C). Have suitable eye wash water available.
Hand Protection	Avoid skin contact. Use heavy duty gloves constructed of chemical resistant materials such as Viton® or heavy nitrile rubber. Wash hands with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners.
Body Protection	Use clean protective clothing if splashing or spraying conditions are present. Protective clothing may include long-sleeve outer garment, apron, or lab coat. If significant contact occurs, remove oil-contaminated clothing as soon as possible and promptly shower. Launder contaminated clothing before reuse or discard. Wear heat protective boots and protective clothing when handling material at elevated temperatures.
Respiratory Protection	The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).
General Comments	Use good personal hygiene practices. Wash hands and other exposed skin areas with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities, or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners. Since specific exposure standards/control limits have not been established for this product, the "Oil Mist, Mineral" exposure limits shown below are suggested as minimum control guidelines.

Occupational Exposure Guidelines

Substance	**Applicable Workplace Exposure Levels**
Oil Mist, Mineral	**ACGIH (United States).** TWA: 5 mg/m^3 STEL: 10 mg/m^3 **OSHA (United States).** TWA: 5 mg/m^3
Petroleum hydrocarbon distillates	**ACGIH (United States).** TWA: 100 ppm **OSHA (United States).** TWA: 500 ppm

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

Physical State	Liquid.	**Color**	Blue-green.	**Odor**	Petroleum.
Specific Gravity	0.87 (Water = 1)	**pH**	Not applicable	**Vapor Density**	>1 (Air = 1)
Boiling Range	Not available.			**Melting/Freezing Point**	Not available.
Vapor Pressure	<0.1 kPa (<1 mm Hg) (at 20°C)			**Volatility**	AP 135 g/l VOC (w/v)
Solubility in Water	Negligible solubility in cold water.			**Viscosity (cSt @ 40°C)**	77

Flash Point Closed cup: 68°C (154°F). (Pensky-Martens (ASTM D-93)) Open cup: 84°C (183°F) (Cleveland.).

Additional Properties

Gravity, ºAPI (ASTM D287) = 31.3 @ 60º F
Density = 7.24 Lbs/gal.
Viscosity (ASTM D2161) = 400 SUS @ 100º F

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability Stable.

Hazardous Polymerization Not expected to occur.

Conditions to Avoid Keep away from extreme heat, sparks, open flame, and strongly oxidizing conditions.

Materials Incompatibility Strong oxidizers.

Hazardous Decomposition Products No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS.

SECTION 11. TOXICOLOGICAL INFORMATION

For other health-related information, refer to the Emergency Overview on Page 1 and the Hazards Identification in Section 3 of this MSDS.

Toxicity Data

Highly-refined petroleum lubricant oils

ORAL (LD50): Acute: >5000 mg/kg [Rat].
DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested.

Distillates (petroleum), hydrotreated light

ORAL (LD50): Acute: >5000 mg/kg [Rat].
DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Studies on laboratory animals have associated similar materials with eye and respiratory tract irritation. Repeated exposure to elevated concentrations of hydrocarbon solvents can produce a variety of transient CNS effects (e.g., dizziness, headache, narcosis, etc). Studies on laboratory animals have shown similar materials to cause skin irritation after repeated or prolonged contact. Repeated direct application of similar materials to the skin can produce defatting dermatitis and kidney damage in laboratory animals. The most common effects observed in repeated dose animal studies with mineral spirits are kidney changes that are consistent with an alpha 2u-globulin- mediated process that is not regarded as relevant to humans. Certain studies have reported effects in the liver as well as hematological or urine chemistry changes. In general, these effects have not to been shown to be dose-related.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity Analysis for ecological effects has not been conducted on this product. However, if spilled, this product and any contaminated soil or water may be harmful to human, animal, and aquatic life. Also, the coating action associated with petroleum and petroleum products can be harmful or fatal to aquatic life and waterfowl.

Environmental Fate

An environmental fate analysis is not available for this specific product. Plants and animals may experience harmful or fatal effects when coated with petroleum products. Petroleum-based (mineral) lubricating oils normally will float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway may be sufficient to cause a fish kill or create an anaerobic environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

Conditions of use may cause this material to become a "hazardous waste", as defined by federal or state regulations. It is the responsibility of the user to determine if the material is a "hazardous waste" at the time of disposal. Transportation, treatment, storage, and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive. Contact your regional US EPA office for guidance concerning case specific disposal issues. Empty drums and pails retain residue. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose this product's empty container to heat, flame, or other ignition sources. DO NOT attempt to clean it. Empty drums and pails should be drained completely, properly bunged or sealed, and promptly sent to a reconditioner.

SECTION 14. TRANSPORT INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.

US DOT Status A U.S. Department of Transportation regulated material.

Proper Shipping Name UN1268, Petroleum Distillates, n.o.s., Combustible Liquid, PG III
[This product has a flash point temperature between 60.5° to 93°C (141° and 200°F). Bulk shipments of this product are regulated.]

Hazard Class Combustible liquid.

Packing Group Combustible liquid

UN/NA Number UN 1268

Reportable Quantity A Reportable Quantity (RQ) has not been established for this material.

Placard(s)



Emergency Response Guide No. 128

MARPOL III Status Not a DOT "Marine Pollutant" per 49 CFR 171.8.

Oil: The product(s) represented by this MSDS is (are) regulated as “oil” under 49 CFR Part 130. Shipments by rail or highway in packaging having a capacity of 3500 gallons or more or in a quantity greater 42,000 gallons are subject to these requirements. In addition, mixtures containing 10% or more of this product may be subject to these requirements.

SECTION 15. REGULATORY INFORMATION

TSCA Inventory	This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.
SARA 302/304 Emergency Planning and Notification	The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.
SARA 311/312 Hazard Identification	The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: Fire, Acute (Immediate) Health Hazard, Chronic (Delayed) Health Hazard
SARA 313 Toxic Chemical Notification and Release Reporting	This product contains the following components in concentrations above *de minimis* levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA: No components were identified.
CERCLA	The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. This product or refinery stream is not known to contain chemical substances subject to this statute. However, it is recommended that you contact state and local authorities to determine if there are any other reporting requirements in the event of a spill.
Clean Water Act (CWA)	This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.
California Proposition 65	This material may contain the following components which are known to the State of California to cause cancer, birth defects or other reproductive harm, and may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5): Ethylbenzene: <0.005% Naphthalene: <0.0002%
New Jersey Right-to-Know Label	Petroleum Oil (Two Cycle Engine Oil)
Additional Remarks	No additional regulatory remarks.

SECTION 16. OTHER INFORMATION

Refer to the top of Page 1 for the HMIS and NFPA Hazard Ratings for this product.

REVISION INFORMATION

Version Number 4.1

Revision Date 3/30/2010

ABBREVIATIONS

AP: Approximately	EQ: Equal	>: Greater Than	<: Less Than
NA: Not Applicable	ND: No Data	NE: Not Established	

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

IARC: International Agency for Research on Cancer

NIOSH: National Institute of Occupational Safety and Health

NPCA: National Paint and Coating Manufacturers Association

EPA: US Environmental Protection Agency

HMIS: Hazardous Materials Information System

OSHA: Occupational Safety and Health Administration

NTP: National Toxicology Program

NFPA: National Fire Protection Association

DISCLAIMER OF LIABILITY

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THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE, AND DISPOSAL OF THE PRODUCT ARE BEYOND OUR CONTROL AND MAY BE BEYOND OUR KNOWLEDGE. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.

* * * * * END OF MSDS * * * * *

SAFETY DATA SHEET

1. IDENTIFICATION

1.1. PRODUCT IDENTIFIER USED ON LABEL:

1.1.1. ECHO 30WT BAR AND CHAIN OIL

1.2. OTHER MEANS OF IDENTIFICATION:

1.2.1. Part Numbers:

6450110	6459006	6459013
6450112	6459012	

1.3. RECOMMENDED USE OF THE CHEMICAL AND RESTRICTIONS ON USE;

1.3.1.PETROLEUM LUBRICATING OIL

1.3.2.NO OTHER USES RECOMMENDED

1.4. NAME, ADDRESS, AND TELEPHONE NUMBER OF THE CHEMICAL MANUFACTURE R, IMPORTER, OR OTHER RESPONSIBLE PARTY:

1.4.1.

Spectrum Lubricants Corporation

500 Industrial Park Drive
Selmer, TN 38375-3276
United States of America

Product Information

MSDS Requests: (800) 264-6457 or +17316454972
Technical Information: (800) 264-6457 or +17316454972
General Information: vswedley@spectrumcorporation.com

1.5. EMERGENCY PHONE NUMBER:

1.5.1.

Emergency Response
North America: CHEMTREC (800) 424-9300 after 5:00pm CST Or +17035273887
Health Emergency
USA: (800) 264-6457 or +17316454972

2. HAZARD(S) IDENTIFICATION

2.1. CLASSIFICATION OF THE CHEMICAL IN ACCORDANCE WITH PARAGRAPH (d) of §1910.1200;

2.1.1.



S24/25 Avoid contact with skin and eyes

2.2. Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200

2.2.1.Inhalation: Inhalation of fumes may result in dizziness, headache and respiratory irritation.

2.2.2.Eye Contact: Contact with eyes may cause minimal irritation.

2.2.3.Skin Contact: Mild irritation may occur with prolonged or repeated contact.

2.2.4.Ingestion: Slightly toxic. Pulmonary aspiration hazard if vomiting occurs.

2.3. Hazards not otherwise classified that have been identified during the classification process;

2.3.1.TLV: 5mg/m3 as mist. ACGIH 1984-85.

2.3.2.Chronic Effects: Ingredients of this product are not listed as potential carcinogens in N.T.P. Annual Report on Carcinogens, I.A.R.C. Monographs, or by O.S.H.A. HCS (g) (2) (vii).

3. Composition/ information on ingredients

3.1. The chemical name and concentration (exact percentage) or concentration ranges of all ingredients which are classified as health hazards in accordance with paragraph (d) of §1910.1200

3.1.1.

COMPONENTS	CAS Number	EU Number	Concentration (%)	R-Phrase S-Phrase
Petroleum distillates, hydrotreated heavy naphthenic	64742-52-5	265-155-0	95-100	*
Petroleum Hydrocarbon	64742-53-6	265-156-6	0.1-1	*
Polyisobutylene	9003-27-4	Not available	<0.1	S24/25

- * (Note L) The classification as a carcinogen need not apply the substance contains less than 3 %DMSO extract as measured by IP 346
- ** This substance is not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93 on the evaluation and control of the risks of existing substances.).

4. FIRST AID MEASURES

4.1.

Skin:	Wash skin with soap and warm water. Wash clothing before re-use.
Eye:	If splashed into eyes flush eyes with clear water for five (5) minutes.
Inhalation:	If overcome by fumes remove from exposure immediately.
Ingestion:	If ingested, do not induce vomiting. Call a physician.

5. FIRE FIGHTING MEASURES

5.1. **PROTECTION OF FIRE FIGHTERS:**

5.1.1. **Fire Fighting Instructions:**

5.1.2. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self contained breathing apparatus.

5.2. **Extinguishing Media:**

5.2.1. Use water fog, foam, dry chemical or carbon dioxide (CO_2) to extinguish flames.

5.3. **Special Firefighting Procedures:**

5.3.1. Cool exposed containers with water spray.

5.4. **Unusual Fire and Explosion Hazards:**

5.4.1. Pressure increase in over heated closed containers. Cool containers with water spray.

6. ACCIDENTAL RELEASE MEASURES

6.1. **Spill Procedures:**

6.1.1. Remove ignition sources. Recover Liquid. Add absorbent to spill area. Ventilate confined spaces. Advise authorities if product enters sewers, etc.

6.2. **Waste Disposal:**

6.2.1. Assure conformity with applicable disposal regulations. Dispose of absorbed material at approved waste site

6.3. Precautionary Measures:

6.3.1. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Wash thoroughly after handling.

6.3.2. Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

7. HANDLING AND STORAGE

7.1. HANDLING

7.1.1. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

7.2. STORAGE

7.2.1. Keep container closed when not in use. Do not store with strong oxidizing agents. Do not store at elevated temperatures.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1. EXPOSURE LIMIT:

8.1.1.OSHA – 5mg/m3 mist

8.2. **Ventilation Procedure:**

8.2.1.Ventilate as needed to comply with exposure limit

8.3. **Eye Protection:**

8.3.1.Use goggles/face shield to avoid eye contact

8.4. **Work/Hygienic Practices:**

8.4.1.If clothing becomes contaminated, change to fresh clean clothing. Do not wear until thoroughly laundered

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1.

9.1.1.	**Vapor Pressure (mmHg) at 20°C:**	<1
9.1.2.	**Specific Gravity at 60°F (15.6°C):**	.9194
9.1.3.	**Water Solubility:**	Negligible
9.1.4.	**Boiling Point:**	Wide Range
9.1.5.	**Vapor Density (Air=1):**	>1
9.1.6.	**Evaporation Rate (BUAC=1):**	<1
9.1.7.	**Odor:**	Mild Hydrocarbon Odor
9.1.8.	**Appearance:**	Amber Colored Liquid

9.1.9. Viscosity at 100°C CST:	10.3cSt (10.3mm^2/s)
9.1.10. Viscosity at 40°C CST	146cSt (146mm^2/s)
9.1.11. Flash Point:	425°F (218.3**°C)**
9.1.12. Fire Point	450°F (232**°C)**

10.STABILITY AND REACTIVITY

10.1. **Stability:**
- 10.1.1. Stable

10.2. **Incompatibility:**
- 10.2.1. Avoid strong oxidants

10.3. **Polymerization:**
- 10.3.1. Will not occur

10.4. **Thermal Decomposition:**
- 10.4.1. Partial burning produces fumes, smoke and carbon monoxide

11. TOXICOLOGY INFORMATION

11.1. Distillates (petroleum), hydrotreated light
- 11.1.1. ORAL (LD50): Acute: >5000 mg/kg [Rat].
- 11.1.2. DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].
  - 11.1.2.1. Studies on laboratory animals have associated similar materials with eye and respiratory tract irritation. Repeated exposure to elevated concentrations of hydrocarbon solvents can produce a variety of transient CNS effects (e.g., dizziness, headache, narcosis, etc). Studies on laboratory animals have shown similar materials to cause skin irritation after repeated or prolonged contact. Repeated direct application of similar materials to the skin can produce defatting dermatitis and kidney damage in laboratory animals. The most common effects observed in repeated dose animal studies with mineral spirits are kidney changes that are consistent with an alpha 2u-globulin-mediated process that is not regarded as relevant to humans. Certain studies have reported effects in the liver as well as hematological or urine chemistry changes. In general, these effects have not to been shown to be dose-related.

11.2. Highly-refined petroleum lubricant oils:
- 11.2.1. ORAL (LD50): Acute: >5000 mg/kg [Rat].
- 11.2.2. DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].
  - 11.2.2.1. Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested.

12.ECOLOGICAL INFORMATION

12.1. Ecotoxicity

12.1.1. An environmental fate analysis is not available for this specific product. Plants and animals may experience harmful or fatal effects when coated with petroleum products. Petroleum-based (mineral) lubricating oils normally will float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway may be sufficient to cause a fish kill or create an anaerobic environment.

12.2. Environmental Fate

12.2.1. Analysis for ecological effects has not been conducted on this product. However, if spilled, this product and any contaminated soil or water may be harmful to human, animal, and aquatic life. Also, the coating action associated with petroleum and petroleum products can be harmful or fatal to aquatic life and waterfowl.

13. DISPOSAL CONSIDERATIONS

13.1. **Waste Disposal**:

13.1.1. Assure conformity with applicable disposal regulations. Dispose of absorbed material at approved waste site.

14.TRANSPORTATION INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.

14.1. ROAD AND RAIL

14.1.1. DOT: NOT REGULATED

14.2. VESSEL

14.2.1. IMDG: NOT REGULATED

14.3. AIR

14.3.1. IATA: NOT REGULATED

15.REGULATORY INFORMATION

15.1. TSCA Inventory

15.1.1. This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.

15.2. SARA 302/304 Emergency Planning and Notification

15.2.1. The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.

15.3. SARA 311/312 Hazard Identification

15.3.1. The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: Fire, Acute (Immediate) Health Hazard, Chronic (Delayed) Health Hazard

15.4. SARA 313 Toxic Chemical Notification and Release Reporting

15.4.1. This product contains the following components in concentrations above *de minimis* levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA: No components were identified.

15.5. CERCLA

15.5.1. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this statute are: No components were identified

15.6. Clean Water Act (CWA)

15.6.1. This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

15.7. New Jersey Right-to-Know Label

15.7.1. Petroleum Oil, Bar and Chain oil.

16.OTHER INFORMATION

16.1.

HAZARD RANKINGS			
HMIS		NFPA	
HEALTH HAZARD	1	HEALTH HAZARD	1
FIRE HAZARD	1	FIRE HAZARD	1
PHYSICAL HAZARD	0	INSTABILITY/REACTIVITY	0
PERSONAL PROTECTION	B		

16.2. **Date of preparation:** 03/25/2013

16.3. MANUFACTURER DISCLAIMER:

16.3.1. ***The data presented herein is based upon tests and information, which we believe to be reliable. However, users should make their own investigations to determine the suitability of the information for their particular purpose***

Downloaded 10/1/2007

MATERIAL SAFETY DATA SHEET

MON-ECO INDUSTRIES, INC.
5 JOANNA COURT
EAST BRUNSWICK, NJ 08816-2108
PHONE: 732-257-7942
FAX: 732-257-6525

I. GENERAL INFORMATION

DATE: August 1, 2002
SUPERCEDES: February 12, 1998
MON-ECO CODE: **55-50 / 55-51 and Colors**
TRADE NAME & SYNONYMS: **Eco-Mastic**
CHEMICAL FAMILY: Water Based Paint
PROPER DOT SHIPPING NAME: Paint, Water Based, Not Hazardous, Not Regulated.
DOT HAZARD CLASSIFICATION: None
FOR EMERGENCY CONTACT CHEM-TEL, INC. 1-800-255-3924

II. INGREDIENTS

PRINCIPAL HAZARDOUS COMPONENTS CAS# THRESHOLD LIMIT VALUE
Ethylene Glycol 3%by wt. 107-21-1
This chemical is subject to the reporting requirements of Section 313 of SARA Tittle III. OSHA, IARC or NTP does not class the ingredients in this product as carcinogens. All ingredients in this product are on the TSCA Inventory.
HAZARD RATING: Toxicity-1, Fire-0, Reactivity-0

III. PHYSICAL DATA

BOILING POINT: 212 Degrees F.
SPECIFIC GRAVITY (WATER=1): 1.34
VAPOR PRESSURE (mmHg.): 17
PERCENT VOLATILE: 34% by weight
VAPOR DENSITY (AIR=1): Greater than air.
EVAPORATION RATE (=1): Slow, water.
SOLUBILITY IN WATER: Dilutable when wet.
APPEARANCE & ODOR: Soft paste, mild odor.
VOLATILE ORGANIC CONTENT: 0.53 lbs/gal or 63 grams/liter

IV. FIRE & EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD): None to boiling. Tag closed cup.
FLAMMABLE LIMITS: LEL: N/A
UEL: N/A
EXTINGUISHING MEDIA: Water Spray, Foam, CO2, Dry Chemical.
SPECIAL FIRE FIGHTING PROCEDURES: Burning may produce irritating or toxic fume of Hydrogen Chloride or oxides of carbon or nitrogen. Wear self-contained breathing apparatus.
UNUSUAL FIRE & EXPLOSION HAZARDS: None

V. HEALTH HAZARD DATA

Threshold Limit Value - None
Effects Of Exposure:
Caution: May be harmful if swallowed.
May cause eye irritation.
May cause skin irritation.
No harmful effects expected if inhaled.
Emergency First Aid:
Ingestion: Induce vomiting if victim is conscious. Call a physician.
Contact: Flush eyes with plenty of water for 15 minutes. Call a physician.
Wash
skin with soap and water. Call a physician if irritation develops.
Inhalation: No emergency care anticipated.

VI. REACTIVITY DATA

STABILTY: Stable
CONDITIONS TO AVOID: N/A
INCOMPATABILITY:
MATERIALS TO AVOID: None
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: N/A
HAZARDOUS DECOMPOSITION PRODUCTS: Burning may produce irritating of toxic fume.

VII. ENVIRONMENTAL PROTECTION PROCUDURES

SPILL RESPONSE: Wipe and clean up spill. Place in sealed container and remove.
WASTE DISPOSAL METHOD: Obey all, State and Federal laws. Approved landfill.

VIII. SPECIAL PROTECTION PROCEDURES

EYE PROTECTION: Splash goggles or safety glasses.
SKIN PROTECTION: Impermeable gloves.
RESPIRATORY PROTECTION (SPECIFIC TYPE): Not required.
VENTILATION RECOMMENDED: Local exhaust.
OTHER PROTECTION: Eye wash fountain, safety shower.

IX. SPECIAL PRECAUTIONS

HYGIENIC PRACTICES IN HANDLING & STORAGE:

Use with adequate ventilation to avoid prolonged breathing of vapors. We know of no harmful effects, but some persons may become upset by the mild odor. Avoid prolonged or repeated contact with skin. Irritation could result. Wash with soap and water. Avoid contact with eyes. If splashed in eyes, flush with clean water to remove. If irritation results, consult a physician. Do not take internally. If ingested, contact a physician. Keep out of reach of children.

WARNING-This product contains chemicals known to the State of California to cause cancer.

While Mon-Eco Industries, Inc. believes that the data presented here is factual. The data is not to be considered a warranty or a representation for which Mon-Eco Industries, Inc. assumes legal responsibility. The data is offered solely for your consideration, investigation, and verification. The user must determine if any use of this information is in accordance with applicable federal, state and local regulations.

900043-02 MATERIAL SAFETY DATA SHEET
MEDICAL EMERGENCIES ONLY (24 Hour Service): 1-800-328-0026
Medical Calls from Outside of the USA: 1-612-851-8162
INSTITUTIONAL DIVISION Ecolab Inc.
Ecolab Center St. Paul MN 55102
Product Information: 1-800-352-5326 Issue Date: August 5, 1999

1.0 IDENTIFICATION /

1.1 Product Name: ECO-SAN
1.2 Product Type: Liquid Sodium Hypochlorite Sanitizer
1.3 Hazard Rating: Health: 3 Fire: 0 Reactivity: 1

Substances Subject to SARA 313 Reporting Are Indicated by "#"

2.0 HAZARDOUS COMPONENTS /

	CAS No.	%	PEL (mg/m3)	TWA (mg/m3)
2.1 Sodium hypochlorite	7681-52-9	8.4	*	*

*PEL for chlorine = 3 C; ACGIH STEL = 3

2.2 This product contains no other components considered hazardous according to the criteria of 29 CFR 1910.1200.

STEL = ACGIH short term exp. limit (15 min) PEL = OSHA 8 hr ave in air
TWA = ACGIH 8 hr average C = ceiling limit in air, do not exceed

3.0 PHYSICAL DATA /

3.1 Appearance: Clear light yellow liquid; chlorine odor
3.2 Solubility in Water: Mixes with water in all proportions
3.3 pH: 10.5 (1%)
3.4 Initial Boiling Point: >212 deg F
3.5 Specific Gravity: 1.154 @ 68 deg F

4.0 FIRE AND EXPLOSION DATA /

4.1 Special Fire Hazards: See Line 5.1
4.2 Fire Fighting Methods: Does not support combustion.

5.0 REACTIVITY DATA /

5.1 Stability: High temperatures may generate hazardous decomposition products including chlorine gas.
5.2 Conditions to Avoid: Mix only with water. Do not mix with acids or ammonia - will cause hazardous vapors.

6.0 SPILL OR LEAK PROCEDURES / USE PROPER PROTECTIVE EQUIPMENT

6.1 Cleanup: Dike or dam large spills. Pump to containers or soak up on inert absorbent. Flush residue to sanitary sewer.

6.2 Waste Disposal: Consult state/local authorities for limits on chemical waste disposal.

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7.0 HEALTH HAZARD DATA / DANGER

7.1 Effects of Overexposure to Concentrate:
Eyes: CAUSES CHEMICAL BURNS. May cause blindness.
Skin: CAUSES CHEMICAL BURNS.
If Swallowed: HARMFUL. Causes chemical burns of mouth, throat and stomach.
If Inhaled: Vapors or mist cause irritation, including a burning taste, sneezing, coughing and difficulty breathing. People with asthma or other lung problems may be more affected.

8.0 FIRST AID /

8.1 Eyes: Flush at once with cool running water. Remove contact lenses and continue flushing for 15 minutes, holding eyelids apart so as to rinse entire eye. CALL A PHYSICIAN IMMEDIATELY.
8.2 Skin: Immediately flush skin with plenty of cool running water for at least 15 minutes while removing contaminated clothing and shoes. Discard or wash before reuse.
8.3 If Swallowed: Rinse mouth at once; then drink 1 or 2 large glasses of water. DO NOT induce vomiting. NEVER give anything by mouth to an unconscious person.
8.4 If Inhaled: Immediately move to fresh air.

IMMEDIATELY CALL THE MEDICAL EMERGENCY NUMBER, 1-800-328-0026,
A POISON CONTROL CENTER, OR A PHYSICIAN

9.0 PROTECTIVE MEASURES /

9.1 FOR CONCENTRATE:
Eyes: Wear chemical splash goggles. For continued or severe exposure wear a face shield over the goggles.
Skin: Wear any industrial rubber glove.
Respiratory: Avoid breathing mists or vapors of this product.
9.2 FOR USE SOLUTION: Avoid skin or eye contact. May cause skin and eye irritation. Eye protection recommended.

10.0 ADDITIONAL INFORMATION/PRECAUTIONS /

10.1 Purpose of 8/5/1999 issue: Correct hazard rating. Replaces May 17, 1999 issue.

KEEP OUT OF REACH OF CHILDREN

The above information is believed to be correct with respect to the

formula used to manufacture the product. As data, standards and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.

MATERIAL SAFETY DATA SHEET: ELECTRA COAT AEROSOL

Section I - General Information

(000000-000000- - 5687)

Date of Issue:
11/14/2007 12:00:00 AM

Supercedes:
8/20/2004 12:00:00 AM

Chemical Name & Synonyms:
N/A

Trade Name & Synonyms:
ELECTRA COAT AEROSOL

Chemical Family:
Aliphatic/Aromatic hydrocarbon blend

Formula is a mixture: [√]

Manufacturer Name:
CERTIFIED LABS, DIV. OF NCH CORP.

Manufacturer Address:
BOX 152170
IRVING, TEXAS 75015

Prepared By:
M MCDOWELL/CHEMIST

Product Code Number:
5687

Emergency Phone Number:
800-424-9300

Section II - Hazardous Ingredients

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
XYLENE	IRR/FLAM	100 ppm 1	100 ppm 2	N/E	1330-20-7
STYRENE POLYMER WITH 1,3 BUTADIENE	IRRITANT	N/E 1	N/E 2	N/E	9003-55-8
N-HEXANE	IRR/FLAM	50 ppm $1	500 ppm 2	N/E	110-54-3
PROPANE	FLAM/ASPHY	1000 ppm*1	1000 ppm 2	N/E	74-98-6
BUTANE	FLAM/ASPHY	1000 ppm*1	N/E 2	N/E	106-97-8
ACETONE	IRR/FLAM	500 ppm 1	1000 ppm 2	750 ppm 1	67-64-1
TOLUENE	IRR/FLAM	20 ppm 1	200 ppm 2	300 ppm 2	108-88-3

$ SKIN
* Aliphatic hydrocarbon gases

Section III - Physical Data

Boiling Point (°F): N/E
Vapor Pressure (mm Hg): <75 psi
Vapor Density (Air=1): >1
pH @ 100% : N/A
% Volatile by Volume: 88
H_2O Solubility: Negligible

Specific Gravity (H_2O=1): 0.77
Color: Colorless-Lt yellow
Odor: Aromatic solvent
Clarity: Transparent-hazy
Evaporation Rate (BuAc=1): <1
Viscosity: Semi-viscous

Section IV - Fire and Explosion Hazard

Flash Point: -10°F
Flammable Limits: Product mixture
LEL: 0.9%

Method Used: Setaflash
UEL: 12.8%
Aerosol Level (NFPA 30B): 3

Extinguishing Media:

[ ] Foam	[ ] Alcohol Foam	[√] CO2
[√] Dry Chemical	[√] Water Spray	[√] Other

NFPA 704 Hazard Rating:

4-Extreme
3-High
2-Moderate
1-Slight
0-Insignificant

Health: 2
Flammability: 4
Instability: 0
Special:

Special Fire Fighting Procedures:
Firefighters should wear a self-contained breathing apparatus and full protective gear. Cool fire-exposed containers with water spray to prevent bursting.

Unusual Fire and Explosion Hazards:
Vapors are heavier than air and may travel to distant and/or low-lying sources of ignition and flashback. Product may produce a floating fire hazard as liquid floats on water. The use of water spray (fog), while effective, may cause frothing and foaming. Never use a water jet as this will just spread the fire. Use care as spills may be slippery. Flame extension is >30 inches, burnback is 6 inches.

Section V - Health and Hazard Data

Threshold Limit Value:
Not Established for Mixture. See Section II.

Effects of Overexposure:

Acute: (Short Term Exposure)
EYE CONTACT: Causes irritation seen as tearing and redness.
SKIN CONTACT: May cause irritation seen as itching and redness. Product may be absorbed through the skin in harmful amounts. Prolonged or repeated contact as from clothing wet with material may cause drying, defatting, and cracking of the skin.
INHALATION: May cause respiratory irritation seen as coughing and sneezing. At low vapor concentrations, no harmful effects are expected. At high vapor concentrations, inhalation may cause central nervous system effects such as headache, dizziness, drowsiness, weakness, unconsciousness, possible anesthetic effects from central nervous system depression, and may be fatal.
INGESTION: May cause irritation with possible nausea, vomiting, and diarrhea. May cause central nervous system effects similar to inhalation.

Chronic: (Long Term Exposure)
Chronic inhalation may cause damage to liver and kidneys. Chronic inhalation of solvents like Xylene and Toluene have caused heartbeat irregularity, heartbeat increase, and permanent central and peripheral nervous system damage, resulting in decreased learning ability, loss of memory, personality changes, and disturbances in gait. A condition known as "painter's syndrome" can occur causing a loss of sensation in the arms and hands (peripheral neuropathy). Prolonged or repeated exposure may cause cardiac sensitization. Chronic skin contact may promote dermatitis and oil acne. In rarer cases, an increased senstivity to sunlight (photosensitivity) may occur.
Medical conditions aggravated by exposure are pre-existing respiratory and skin conditions such as asthma, emphysema, and dermatitis, preexisting neurological conditions, hepatic and renal conditions, cardiovascular, and auditory system conditions.
Target organs: Central and peripheral nervous systems, heart, kidneys, liver, blood, and auditory system. The primary routes of exposure are skin and eye contact.

Primary Routes of Entry

[√] Inhalation	[√] Ingestion	[√] Absorption

Emergency First Aid Procedures:

Inhalation:
Remove from the area to fresh air. If not breathing, clear the airway and start mouth to mouth artificial respiration. Get immediate medical attention.

Eye Contact:
Rinse the eyes with water. Remove any contact lenses and continue flushing with plenty of water for several minutes. Seek medical attention if irritation develops.

Skin Contact:
Wash affected areas with plenty of soap and water for several minutes. Seek medical attention if irritation develops.

Ingestion:
Give 3 to 4 glasses of water, but DO NOT induce vomiting. If vomiting occurs, give fluids again. Seek medical attention if discomfort occurs.

Notes to Physician:
There is no specific antidote. Treat the patient symptomatically.

Section VI - Toxicity Information

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

[ ] IARC [ ] NTP [ ] OSHA [ ] ACGIH [ ] Other

VOC content: 88% by weight, 792 g/L
MIR content: 1.50

XYLENE
ORL-RAT LD_{50}: 4300 mg/kg 3.
IHL-RAT LC_{50}: 5000 ppm/4h 3.
IHL-HMN LC_{L0}: 1000 ppm/6h 3.
SKN-RBT LD_{50}: >1700 mg/kg 3.
SKN-RBT SDT: 500 mg/24h moderate 3.
EYE-RBT SDT: 5 mg/24h severe 3.

Xylene causes hearing loss, cardiac stimulation, and arrhythmia (irregular heart beat) in laboratory animals. 4.

STYRENE POLYMER WITH 1,3 BUTADIENE
EYE-RBT SDT: 500 mg/24h mild 3.

N-HEXANE
ORL-RAT LD_{50}: 25 gm/kg 4.
IHL-RAT LC_{50}: 48,000 ppm/4h 6.
IHL-HMN TC_{L0}: 190 ppm/8w 4.
SKN-RBT LD_{50}: 3000 mg/kg 6.
EYE-RBT-SDT: 10 mg mild 4.

This material may adversely affect the male reproductive system (decreased sperm counts and degenerative changes in the testes) based on testing in laboratory animals. 3.

Kidney effects in male rats were observed in laboratory animals exposed to a similar material. Effects were consistent with male rats hyaline droplet nephropathy which is of questionable significance to human health. In animals, repeated exposure to high concentrations of a similar solvent has caused a decrease in the red blood cell count. 3.

Causes fetotoxicity in animals at doses which are maternally toxic. 3.

PROPANE
IHL-LC_{50} >40% by volume 4.

N-BUTANE
IHL-RAT LC_{50}: 658 g/m^3/4h 3.
IHL-MUS LC_{50}: 680 g/m^3/4h 3.

Human volunteers exposed repeatedly to gases of similar hydrocarbon mixtures ranging from 250 to 1000 ppm exhibited no cardiac or pulmonary function abnormalities. 4.

No apparent ill effects in breathing concentrations of 5% for 2 hours. 4.
Causes drowsiness in short time in concentrations of 1%. 4.

ACETONE
EYE-RBT SDT: 20 mg severe 4.
SKN-RBT SDT: 500 mg/24h mild 4.
SKN-GPG LD_{50}: >9400 uL/kg 4.
ORL-RAT LD_{50}: 5800 mg/kg 4.
IHL-RAT LC_{50}: 50,100 mg/m^3/8h 4.
ORL-RAT TD_{Lo}: 273 g/kg/13w-c 4.

TOLUENE
EYE-RBT SDT: 870 ug mild 3.
SKN-RBT SDT: 20 mg/24h moderate 3.
SKN-RBT LD_{50}: 8390 mg/kg 6.
ORL-HMN LD_{L0}: 50 mg/kg 3.
ORL-RAT LD_{50}: 636 mg/kg 3.
IHL-RAT LC_{50}: 12.5 mg/L/4h 6.

Animal studies have shown that repeated inhalation of high levels produced histological changes in the brain, degeneration of the heart tissue, cardiac sensitization and possible immune system suppression. Intentional abuse of toluene vapors has been linked to damage of the brain, kidney, and liver. 4.

Many case studies involving abuse during pregnancy indicate that toluene can cause birth defects, growth retardation and learning difficulties. 4.

Section VII - Reactivity Data

Stability

[√] Stable [ ] Unstable

Conditions to Avoid:
Avoid heat, hot surfaces, sparks, and open flames.

Hazardous Polymerization

[√] Will not occur [ ] May occur

Conditions to Avoid:
N/A

Incompatibility (Materials to Avoid):
Strong oxidizing agents such as Chlorine bleach and concentrated Hydrogen Peroxide.

Hazardous Decomposition Products:
Oxides of Carbon.

Section VIII - Spill Or Leak Procedures

Steps to be Taken if Material is Released or Spilled:
Eliminate ignition sources of electrical, static, or frictional sparks. Ventilate the contaminated area and avoid creating dusty conditions. Wear appropriate protective clothing. Transfer solid using non-sparking equipment into a properly labeled container for re-use or disposal. If necessary, wash area with water. Prevent product from contaminating soil or from entering sewage, drainage systems, and bodies of water.

Waste Disposal Method(s):
Dispose of in accordance with all Federal, state, and local regulations. Typical disposal is to wrap the empty aerosol container in several layers of newspaper and dispose of in the trash. Aerosol recycling programs are available in many areas. Do not puncture or incinerate this container.

Neutralizing Agent:
N/A

Section IX - Special Protection Information

Required Ventilation:
Local ventilation is recommended to control exposure from operations that can generate excessive levels of mists or vapors. Local ventilation is preferred, because it prevents dispersion into work areas by controlling it at its source.

Respiratory Protection:
Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). For concentrations above the TLV and/or PEL but less than 10 times these limits, a NIOSH approved half-facepiece respirator equipped with appropriate chemical cartridges may be used. For concentrations greater than 10 times the TLV and/or PEL, consult the NIOSH respirator decision logic found in publication No. 87-116 or ANSI Z88.2-1992.

Glove Protection:
Neoprene or nitrile rubber gloves should be worn. Ensure compliance with OSHA's personal protective equipment (PPE) standard for hand protection, 29 CFR 1910.138.

Eye Protection:
Safety glasses with side shields if the method of application presents the likelihood of eye contact. Ensure compliance with OSHA's Personal Protective Equipment (PPE) standard for eye and face protection, 29 CFR 1910.133.

Other Protection:
Wear protective clothing when handling. A safety shower and an eyewash station should be available. Remove soaked clothing and shoes. Wash clothing and clean shoes before re-use.

Section X - Storage and Handling Information

Storage Temperature

Max: 120°F Min: 35°F

Storage Conditions

[√] Indoors [ ] Outdoors [ ] Heated [ ] Refrigerated

Precautions to be Taken in Handling and Storing:
Use with caution around heat, sparks, pilot lights, static electricity, and open flame.

Other Precautions:
Keep out of reach of children. Read the entire label before using the product. Follow the label directions.

Section XI - Regulatory Information

Chemical Name	CAS Number	Upper % Limit
XYLENE	1330-20-7	10
HEXANE	110-54-3	50

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Please call 1-800-527-9919 for additional information if you are a California customer. This MSDS is not intended for users in the state of California.

Section XII - References

1. Threshold Limit Values for chemical substances and physical agents and biological exposure indices, ACGIH, 2007.
2. OSHA PEL.
3. Vendor's MSDS.
4. Registry of toxic effects of chemical substances, CCINFOWeb, 2007.
5. European Chemical Substances Information System (ESIS), International Uniform Chemical Information Database (IUCLID) Chemical Data Sheets.
6. ChemADVISOR, Inc. Database Release: 2007-4.

All the components of this product are in compliance with the Toxic Substances Control Act (TSCA) and are either listed on the TSCA inventory or otherwise exempted from listing.

IRR: Irritant, OSHA: Occupational Safety & Health Administration, IARC: International Agency for the Research on Cancer, TOX: Toxic, NFPA: National Fire Protection Association, ppm: Parts Per Million, UEL: Upper Explosion Limit, STEL: Short-term Exposure Limit, HMN: Human, mg/m3, IHL: Inhalation, COMB: Combustible, CORR: Corrosive, MUT: Mutagenic, CARC: Carcinogenic, N/A: Not Applicable, TLV: Threshold Limit Value, N/E: Not Established, ORL: Oral, FLAM: Flammable, ASPHYX: Asphyxiant, C.O.C.: Cleveland Open Cup, PNOR: Particles Not Otherwise Regulated, LEL: Lower Explosion Limit, mg/L: Milligrams per Liter, PNOS: Particles Not Otherwise Specified, g/L: Grams per Liter, PMCC: Pensky-Martin Closed Cup, NTP: National Toxicology Program, µg/L: Micrograms per Liter, TCC: Tagliabue Closed Cup, SEV: Severe, RBT: Rabbit, INV: Intravenous, ACGIH: American Conference of Governmental Industrial Hygienists, PEL: Permissible Exposure Limit, MOD: Moderate, IPT: Intraperitoneal, gm/kg: Grams per Kilogram, C.C.C.: Cleveland Closed Cup, SKN: Skin, Milligrams per Cubic Meter, mg/kg: Milligrams per Kilogram, VOC: Volatile Organic Compound, SDT: Standard Draize Test, MSE: Mouse, GPG: Guinea Pig.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING

THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CERTIFIED LABS, DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage, or disposal of the product.

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Material Safety Data Sheet

F

1. Chemical Product and Company Identification

DESCRIPTION: ELMER'S CARPENTERS WOOD GLUE
PRODUCT TYPE: PVAC BASED ADHESIVE
APPLICATION: FOR PRODUCT CODES SEE SECTION 16

· Manufacturer/Supplier Information

MSDS Prepared by:
Elmer's Products, Inc.
460 Polaris Parkway
Westerville, OH 43082

Emergency Phone Number
Poison Control Center
1-888-516-2502

For additional health, safety or regulatory information, call 1-888-435-6377
Call 1-800-848-9400 to place an order or request additional MSDSs.

2. Composition, Information on Ingredients

No hazardous ingredients known to company.

3. Hazards Identification

3.1 Emergency Overview

Appearance	Light yellow liquid
Odor	Mild acetic aroma

Not an immediate health hazard.

· HMIS Rating

HEALTH = 0 (minimal)

```
FLAMMABILITY = 0 (minimal)
  REACTIVITY = 0 (minimal)
```

3.2 Potential Health Effects

- **Immediate Hazards**

```
INGESTION:   No hazards known to company.
INHALATION:  No hazards known to company.
SKIN:        No hazards known to company.
EYES:        No hazards known to company.
```

- **Delayed Hazards**

None of the components present in this product at concentrations equal to or greater than 0.1% have been listed by NTP, classified by IARC, nor regulated by OSHA as a carcinogen.

4. First Aid Measures

```
INGESTION:   If accidentally swallowed, dilute by drinking large
             quantities of water.  Immediately contact poison control
             center or hospital emergency room for any other
             additional treatment directions.
EYES:        Immediately flush eyes with plenty of water.  Call a
             physician if irritation persists.
```

5. Fire Fighting Measures

```
Autoignition Temperature            Not available
Upper/Lower Flammable Limits        Not applicable
Up/Lower Explosive Limits, % by Vol Not applicable
Flash Point                         Not applicable
Will not burn unless water has evaporated.  Dried material may
burn.
In case of fire, water should be used to keep fire-exposed
containers cool.
```

6. Accidental Release Measures

```
Soak up with absorbent material and remove to a chemical disposal
area.  Prevent entry into natural bodies of water.
```

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices.

7.2 Storage

Keep from freezing.
Store in a cool, dry place.
Keep containers tightly closed.

8. Exposure Controls/Personal Protection

8.1 Exposure Controls

No special control measures necessary under normal conditions of use.

8.2 Personal Protection

No special protection necessary.

8.3 Exposure Guidelines

None established

9. Physical and Chemical Properties

Percent Volatiles	54.5
pH @ 25 C	5.0
Specific Gravity	1.08
Appearance	Light yellow liquid
Autoignition Temperature	Not available
Boiling Point	100°C (212°F)
Vapor Density (Air=1)	<1
Vapor Pressure, mm Hg @ 20 C	17.5
Evaporation Rate (Butyl Acetate=1)	<1
Upper/Lower Flammable Limits	Not applicable

Up/Lower Explosive Limits, % by Vol	Not applicable
Flash Point	Not applicable
Freezing Point	0°C (32°F)
Odor	Mild acetic aroma
Odor Threshold, ppm	Not available
Solubility in Water	Dispersible
Coefficient of Water/Oil Distrib.	Not available

10. Stability and Reactivity

Normally stable as defined in NFPA 704-12(4-3.1).

- **Incompatibilities:**

Strong acids and alkaline materials.

- **Decomposition products may include:**

CO, CO2.

- **Hazardous polymerization:**

Will not occur.

- **Other Hazards:**

None known to company.

11. Toxicological Information

INGESTION:	A similar product was found to be non-toxic orally when tested as described in 16 CFR Part 1500.3(c)(1) and (2).
INHALATION:	A similar product was found to be non-toxic by inhalation when tested as described in 16 CFR Part 1500.3 (c)(1) and (2).
SKIN ABSORPTION:	A similar product was found to be non-toxic dermally when tested as described in 16 CFR Part 1500.3 (c)(1) and (2).
SKIN:	A similar product was not an irritant when tested as described in 16 CFR Part 1500.41.
EYES:	A similar product was not an irritant when tested as described in 16 CFR Part 1500.42.

12. Ecological Information

Not determined.

13. Disposal Considerations

Recover free liquid. Absorb residue and dispose of according to local, state/provincial, and federal requirements.

14. Transport Information

14.1 U.S. Department of Transportation (DOT)

The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.
Non-Regulated.

14.2 Canadian Transportation of Dangerous Goods (TDG)

Non-Regulated.

15. Regulatory Information (Selected Regulations)

15.1 U.S. Federal Regulations

- **OSHA Hazard Communication Standard 29CFR1910.1200**

This material is not a "health hazard" or a "physical hazard" as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

- **SARA Title III: Section 311/312**

Does not meet any hazard category

· **SARA Title III Section 313 and 40 CFR Part 372**

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.
None required per SARA TITLE III SECTION 313.

· **TSCA Section 8(b) Inventory**

All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by us.

15.2 Canadian Regulations

· **Workplace Hazardous Materials Information System (WHMIS)**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR.
Not a controlled product

· **Canadian Environmental Protection Act (CEPA)**

All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.

· **National Pollutant Release Inventory (NPRI)**

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory.
None required.

---

16. Other Information

AP (Non-Toxic): Products bearing the AP (Non-Toxic) Product Seal of The Art & Creative Materials Institute, Inc. (ACMI) are certified in a program of toxicological evaluation by a medical expert to contain no materials in sufficient quantities to be toxic or injurious to humans or to cause acute or chronic health problems. This program is reviewed by ACMI's Toxicological Advisory Board. These products are certified by ACMI to be labeled in accordance with the chronic hazard labeling standard, ASTM D-4236 and Federal Law, P.L. 100-695. In addition, there is no physical hazard as defined within 29 CFR Part 1910.1200(c).
MSDS covers items:
U.S.: E614, E700, E701, E702, E704, E705, E706, E970, E980, E1367, E1825, E1850, E67000, E7000, E7010, E7020, E7040, E7050
Canada: 60613, 60614, 60615, 60616, 60617, 60618, 60619, 61367

· User's Responsibility

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Educate and train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts to guard against hazards associated with use of this product and its ingredients.

· Disclaimer

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

CURRENT ISSUE: 05-MAY-11
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12/14/1999 09:22 55OND MI To DICK BLICK +1-309-343-5785 From Elmer's Products, Inc. Telcom Fax Page 2 of 9

[5829-00] √

23709-1011 *

(Elmers Spray Glue - Acid Free)

Material Safety Data Sheet

1. Chemical Product and Company Identification

DESCRIPTION: CRAFT BOND MULTI-PURPOSE SPRAY GLUE
PRODUCT TYPE: RUBBER BASED ADHESIVE
APPLICATION: E-421, E-422 (AEROSOLS)

• Manufacturer/Supplier Information

MSDS Prepared by:
Elmer's Products, Inc.
1000 Kingsmill Parkway
Columbus, OH 43229

Emergency Phone Number
Poison Control Center
1-800-228-5635 ext 22

For additional health, safety or regulatory information, call 614-225-7589.
Call 1-800-848-9400 to place an order or request additional MSDSs.

V-510

2. Composition, Information on Ingredients

The ingredients listed below have been associated with one or more immediate and/or delayed(*) health hazards. Risk of damage and effects depends upon duration and level of exposure. BEFORE USING, HANDLING, OR EXPOSURE TO THESE INGREDIENTS, READ AND UNDERSTAND THE MSDS.

		% by weight
67-64-1	*Acetone	10-30
115-10-6	Dimethyl Ether	50-70
142-82-5	Heptane	10-30

3. Hazards Identification

3.1 Emergency Overview

Appearance: White to off white in color
Odor: Mild to slight ethereal odor
DANGER:
EXTREMELY FLAMMABLE
May be harmful if inhaled.
Can cause central nervous system depression.
Skin irritant.
Eye irritant.

- **HMIS Rating**

```
      HEALTH = 2 (moderate)
FLAMMABILITY = 4 (severe)
  REACTIVITY = 0 (minimal)
     CHRONIC = *
```

3.2 Potential Health Effects

- **Immediate Hazards**

```
INGESTION:   Not expected to be harmful under normal conditions of
             use.
             If accidently swallowed, burns or irritation to mucous
             membranes, esophagus or GI tract can result.
INHALATION:  May be harmful if inhaled.  Liquid or vapor may cause
             irritation of nose, throat and lungs.
             Can cause central nervous system depression.
SKIN:        Causes irritation.
EYES:        Causes irritation.
Acetone        67-64-1
Can cause central nervous system depression.  Signs and symptoms may
include headache, dizziness, nausea, vomiting, unconsciousness and
even asphyxiation.
Dimethyl Ether        115-10-6
Can cause central nervous system depression.  Signs and symptoms may
include headache, dizziness, nausea, vomiting, unconsciousness and
even asphyxiation.
Heptane        142-82-5
Can cause central nervous system depression.  Signs and symptoms may
include headache, dizziness, nausea, vomiting, unconsciousness and
even asphyxiation.
```

- **Delayed Hazards**

```
Acetone        67-64-1
Ingestion may cause liver damage.
Ingestion may cause kidney damage.
-- See Footnote C.
Footnote C:  As of the date of issuance of this document, this
material has not been listed by NTP, classified by IARC nor regulated
by OSHA as a carcinogen.
```

4. First Aid Measures

```
INGESTION:   If accidently swallowed, dilute by drinking large
             quantities of water.  Immediately contact poison control
             center or hospital emergency room for any other
             additional treatment directions.
INHALATION:  If inhaled, remove to fresh air.  If not breathing,
             give artificial respiration, preferably mouth-to-mouth.
             Call a physician.
SKIN:        Flush with plenty of water.  Remove contaminated
             clothing.  Call a physician if irritation persists.
EYES:        Immediately flush eyes with plenty of water for at
             least 15 minutes.  Eyelids should be held apart during
             irrigation to insure water contact with entire surface of
             eyes and lids.  Call a physician.
```

5. Fire Fighting Measures

Autoignition Temperature	Not available
Upper/Lower Flammable Limits	Not available
Up/Lower Explosive Limits, % by Vol	18/3.4
Flash Point	-42 deg F (TOC)

EXTREMELY FLAMMABLE.
DO NOT INCINERATE (BURN) CONTAINER. AVOID HEAT. KEEP CONTAINER BELOW 120 F (50 C). High temperatures may cause bursting. Do not place container on radiator, stove, in direct sunlight or near other heat sources. DO NOT PUNCTURE CONTAINER. Contents under pressure will discharge. AVOID OPEN FLAMES, SPARKS, PILOT LIGHTS. DO NOT SMOKE. Vapor may ignite explosively. Spray mist or vapor evaporating from a deposited film is heavier than air and may settle in low places or travel outward to a source of ignition and flashback. In case of fire, use dry chemical, foam or CO2. Water may be ineffective, but should be used to keep fire-exposed containers cool.

6. Accidental Release Measures

Eliminate all ignition sources. Soak up with absorbent material and remove to a chemical disposal area. Prevent entry into natural bodies of water.

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing.
Wash thoroughly after handling.
INHALATION: USE WITH ADEQUATE VENTILATION. To avoid breathing vapors or spray mist, open windows and doors or use other means, such as an exhaust fan to ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness, increase fresh air, wear respiratory protection (NIOSH/MSHA TC-23C or equivalent), or leave the area.
SKIN: Avoid contact with skin and clothing.
EYES: Avoid contact with eyes.

7.2 Storage

Store in a cool, dry place.
Empty container may contain product residues. DO NOT cut, torch or reuse without commercial cleaning.
Keep containers tightly closed.
Do not store at temperatures above 50 C.
Keep away from heat, sparks, flame and other ignition sources.
Do not store near strong oxidizing chemicals.

8. Exposure Controls/Personal Protection

8.1 Exposure Controls

ENGINEERING CONTROLS: The following exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design, process isolation and remote control in combination with appropriate use of personal protective equipment and prudent work practices. These techniques may not necessarily address all issues pertaining to your operations. We, therefore, recommend that you consult with experts of your choice to determine whether or not your programs are adequate.
If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

8.2 Personal Protection

Where air contaminants can exceed acceptable criteria, use NIOSH/MSHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air in accordance with OSHA laws and regulations or other applicable standards or guidelines, including ANSI standards regarding respiratory protection. Use goggles if contact is likely. Wear impervious gloves as required to prevent skin contact.

8.3 Exposure Guidelines

Acetone 67-64-1
ACGIH TLV: 500 ppm (1185 mg/m³) TWA; 750 ppm (1782 mg/m³) STEL
OSHA PEL: 1000 ppm (2400 mg/m³)TWA
REMANDED PEL: 750 ppm (1800 mg/m³) TWA; 1000 ppm (2400 mg/m³) STEL
OSHA 1989 PEL remanded, but in effect in some states
Dimethyl Ether 115-10-6
ACGIH TLV: NONE ESTABLISHED
OSHA PEL: NONE ESTABLISHED
Heptane 142-82-5
ACGIH TLV: 400 ppm (1640 mg/m³) TWA; 500 ppm (2050 mg/m³)STEL
OSHA PEL: 500 ppm (2000 mg/m³) TWA
REMANDED PEL: 400 ppm (1600 mg/m³) TWA; 500 ppm (2000 mg/m³)STEL
OSHA 1989 PEL remanded, but in effect in some states

9. Physical and Chemical Properties

Percent Volatiles	88
pH @ 25 C	Not available
Specific Gravity	0.72
Appearance	White to off white in color
Autoignition Temperature	Not available
Boiling Point	66 deg C
Vapor Density (Air=1)	> 1
Vapor Pressure, mm Hg @ 20 C	> 1
Evaporation Rate (Butyl Acetate=1)	< 1---(ethyl ether=1)
Upper/Lower Flammable Limits	Not available
Up/Lower Explosive Limits, % by Vol	18/3.4
Flash Point	-42 deg F (TOC)
Freezing Point	Not available
Odor	Mild to slight ethereal odor
Odor Threshold, ppm	Not available
Solubility in Water	Negligible
Coefficient of Water/Oil Distrib.	Not applicable

10. Stability and Reactivity

Normally stable as defined in NFPA 704-12(4-3.1).

- **Incompatibilities:**

Strong oxidizers.

- **Decomposition products may include:**

Oxides of carbon.

- **Hazardous polymerization:**

Will not occur.

- **Other Hazards:**

None known to Borden.

11. Toxicological Information

See Section 3 Hazards Identification information.
Acetone 67-64-1
LC50: Not available
LD50: oral-rat=5800 mg/kg (RTECS); skin-rabbit=20 gm/kg (RTECS)
Dimethyl Ether 115-10-6
LC50: Not available
LD50: Not available
Heptane 142-82-5
LC50: Not available
LD50: Not available

12. Ecological Information

Not determined.

13. Disposal Considerations

Dispose of according to local, state/provincial, and federal requirements.
Empty container: May contain explosive vapors. DO NOT cut, puncture or weld on or nearby. Incineration will cause container to burst violently.

14. Transport Information

14.1 U.S. Department of Transportation (DOT)

The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.
ORM-D Consumer Commodity.

14.2 Canadian Transportation of Dangerous Goods (TDG)

Not determined.

15. Regulatory Information (Selected Regulations)

15.1 U.S. Federal Regulations

- **OSHA Hazard Communication Standard 29CFR1910.1200**

This material is a "health hazard" and/or a "physical hazard" as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

- **SARA Title III: Section 311/312**

Fire hazard
Sudden release of pressure (explosion) hazard
Immediate health hazard
Delayed health hazard

- **SARA Title III Section 313 and 40 CFR Part 372**

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.
None required per SARA TITLE III SECTION 313.

- **TSCA Section 8(b) Inventory**

All reportable chemical substances are listed on the TSCA Inventory.
We rely on certifications of compliance from our suppliers for

chemical substances not manufactured by Borden.

15.2 Canadian Regulations

• Workplace Hazardous Materials Information System (WHMIS)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR.
CLASS D, DIV 2B
CLASS B, DIV 2

• Canadian Environmental Protection Act (CEPA)

All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.

• National Pollutant Release Inventory (NPRI)

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory.

Acetone	67-64-1	15.00%

16. Other Information

HL (Cautions Required): Products bearing the HL Health Label (Cautions Required) Seal of The Art & Creative Materials Institute, Inc. (ACMI) are certified to be properly labeled in a program of toxicological evaluation by a medical expert. This program is reviewed by ACMI's Toxicological Advisory Board. These products are certified by ACMI to be labeled in accordance with the chronic hazard labeling standard, ASTM D-4236 and Federal Law, P.L. 100-695.

• User's Responsibility

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Educate and train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts to guard against hazards associated with use of this product and its ingredients.

• Disclaimer

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not

infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

CUR ISSUE 10-MAR-98
PREVIOUS ISSUE: 27-FEB-97

Material Safety Data Sheet

1. Chemical Product and Company Identification

<!--[if !supportEmptyParas]--> <!--[endif]-->
DESCRIPTION: ELMER'S EXTRA STRENGTH SPRAY ADHESIVE
PRODUCT TYPE: RUBBER BASED ADHESIVE
APPLICATION: E-456

<!--[if !supportLists]-->• <!--[endif]-->Manufacturer/Supplier Information

<!--[if !supportEmptyParas]--> <!--[endif]-->
MSDS Prepared by:
Elmer's Products, Inc. Emergency Phone Number
1 Easton Oval Poison Control Center
Columbus, OH 43219 888-516-2502
For additional health, safety or regulatory information, call 888-435-6377.
Call 1-800-848-9400 to place an order or request additional MSDSs.

2. Composition, Information on Ingredients

<!--[if !supportEmptyParas]--> <!--[endif]-->
The ingredients listed below have been associated with one or more immediate and/or delayed(*) health hazards. Risk of damage and effects depends upon duration and level of exposure. BEFORE USING, HANDLING, OR EXPOSURE TO THESE INGREDIENTS, READ AND UNDERSTAND THE MSDS.

		% by weight
67-64-1	*Acetone	10-30
74-98-6	Propane	10-30
75-28-5	Isobutane	10-30
107-83-5	2-Methylpentane	30-50
109-66-0	Pentane	1-5
115-10-6	Dimethyl Ether	1-5

3. Hazards Identification

<!--[if !supportEmptyParas]--> <!--[endif]-->

3.1 Emergency Overview

<!--[if !supportEmptyParas]--> <!--[endif]-->
Appearance White liquid

```
Odor                                    Mint when wet
DANGER!
EXTREMELY FLAMMABLE
May be harmful if inhaled.  May cause irritation of nose, throat and
lungs.
Can cause central nervous system depression.
Causes skin irritation.
Causes eye irritation.
```

<!--[if !supportLists]-->• <!--[endif]-->HMIS Rating

```
<!--[if !supportEmptyParas]--> <!--[endif]-->
           HEALTH = 2 (moderate)
     FLAMMABILITY = 4 (severe)
       REACTIVITY = 0 (minimal)
          CHRONIC = *
```

3.2 Potential Health Effects

```
<!--[if !supportEmptyParas]--> <!--[endif]-->
```

<!--[if !supportLists]-->• <!--[endif]-->Immediate Hazards

```
<!--[if !supportEmptyParas]--> <!--[endif]-->
     INGESTION:   Not expected to be harmful under normal conditions of
                  use.
     INHALATION:  May be harmful if inhaled.  Liquid or vapor may cause
                  irritation of nose, throat and lungs.
                  Can cause central nervous system depression.
     SKIN:        Causes irritation.
     EYES:        Causes irritation.
     Acetone        67-64-1
     Can cause central nervous system depression.  Signs and symptoms may
     include headache, dizziness, nausea, vomiting, unconsciousness and
     even asphyxiation.
     Propane        74-98-6
     This material is a simple asphyxiant.  Signs and symptoms of
     overexposure include cyanosis, respiratory distress, headache,
     dizziness, drowsiness, unconsciousness and asphyxiation.  Can cause
     central nervous system depression.
     2-Methylpentane       107-83-5
     Can cause central nervous system depression.  Signs and symptoms may
     include headache, dizziness, nausea, vomiting and drowsiness.
     Pentane       109-66-0
     Can cause central nervous system depression.  Signs and symptoms may
     include headache, dizziness, nausea, vomiting, unconsciousness and
     even asphyxiation.
     Dimethyl Ether       115-10-6
     Can cause central nervous system depression.  Signs and symptoms may
     include headache, dizziness, nausea, vomiting, unconsciousness and
     even asphyxiation.
```

<!--[if !supportLists]-->• <!--[endif]-->Delayed Hazards

<!--[if !supportEmptyParas]--> <!--[endif]-->
Acetone 67-64-1
Ingestion may cause liver damage.
Ingestion may cause kidney damage.
-- See Footnote C.
Footnote C: As of the date of issuance of this document, this material has not been listed by NTP, classified by IARC nor regulated by OSHA as a carcinogen.

---

4. First Aid Measures

<!--[if !supportEmptyParas]--> <!--[endif]-->
INGESTION: If accidentally swallowed, dilute by drinking large quantities of water. Immediately contact poison control center or hospital emergency room for any other additional treatment directions.
INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Call a physician.
SKIN: Flush with plenty of water. Remove contaminated clothing. Call a physician if irritation persists.
EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held apart during irrigation to insure water contact with entire surface of eyes and lids. Call a physician.

---

5. Fire Fighting Measures

<!--[if !supportEmptyParas]--> <!--[endif]-->
Autoignition Temperature Not available
Upper/Lower Flammable Limits Not available
Up/Lower Explosive Limits, % by Vol 18/1
Flash Point -156 deg F (pensky-martens c.c.)
EXTREMELY FLAMMABLE.
DO NOT INCINERATE (BURN) CONTAINER. AVOID HEAT. KEEP CONTAINER BELOW 120 F (50 C). High temperatures may cause bursting. Do not place container on radiator, stove, in direct sunlight or near other heat sources. DO NOT PUNCTURE CONTAINER. Contents under pressure will discharge. AVOID OPEN FLAMES, SPARKS, PILOT LIGHTS. DO NOT SMOKE. Vapor may ignite explosively. Spray mist or vapor evaporating from a deposited film is heavier than air and may settle in low places or travel outward to a source of ignition and flashback. In case of fire, use dry chemical, foam or CO2. Water may be ineffective, but should be used to keep fire-exposed containers cool.

---

6. Accidental Release Measures

<!--[if !supportEmptyParas]--> <!--[endif]-->
Eliminate all ignition sources. Soak up with absorbent material and remove to a chemical disposal area. Prevent entry into natural bodies of water.

---

7. Handling and Storage

<!--[if !supportEmptyParas]--> <!--[endif]-->

7.1 Handling

<!--[if !supportEmptyParas]--> <!--[endif]-->
Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing.
Wash thoroughly after handling. Always use appropriate Personal Protective Equipment (PPE).
INHALATION: USE WITH ADEQUATE VENTILATION. To avoid breathing vapors or spray mist, open windows and doors or use other means, such as an exhaust fan to ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness, increase fresh air, wear respiratory protection (NIOSH/MSHA TC23C or equivalent), or leave the area.
SKIN: Avoid contact with skin and clothing.
EYES: Avoid contact with eyes.

7.2 Storage

<!--[if !supportEmptyParas]--> <!--[endif]-->
Store in a cool, well-ventilated area.
Store in cool, dry area away from sun, heat, oxidizing materials and alkaline materials.
Keep containers tightly closed.
Do not store at temperatures above 50 C.
Keep away from heat, sparks, flame and other ignition sources.

---

8. Exposure Controls/Personal Protection

<!--[if !supportEmptyParas]--> <!--[endif]-->

8.1 Exposure Controls

<!--[if !supportEmptyParas]--> <!--[endif]-->
ENGINEERING CONTROLS: The following exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design, process isolation and remote control in combination with appropriate use of personal protective equipment and prudent work practices. These techniques may not necessarily address all issues pertaining to your operations. We, therefore, recommend that you consult with experts of your choice to determine whether or not your programs are adequate.
If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

8.2 Personal Protection

<!--[if !supportEmptyParas]--> <!--[endif]-->
Where air contaminants can exceed acceptable criteria, use NIOSH/MSHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air in accordance with OSHA laws and regulations or other applicable standards or guidelines, including ANSI standards regarding respiratory protection. Use goggles if contact is likely. Wear impervious gloves as required to prevent skin contact.

8.3 Exposure Guidelines

<!--[if !supportEmptyParas]--> <!--[endif]-->
Acetone 67-64-1
ACGIH TLV: 500 ppm (1188 mg/m³) TWA; 750 ppm (1782 mg/m³) STEL
OSHA PEL: 1000 ppm (2400 mg/m³)TWA
REMANDED PEL: 750 ppm (1800 mg/m³) TWA; 1000 ppm (2400 mg/m³) STEL
OSHA 1989 PEL remanded, but in effect in some states
Propane 74-98-6
ACGIH TLV: 2500 ppm (4508 mg/m³) TWA
OSHA PEL: 1000 ppm (1800 mg/m³) TWA
Isobutane 75-28-5
ACGIH TLV: NONE ESTABLISHED
OSHA PEL: NONE ESTABLISHED
2-Methylpentane 107-83-5
ACGIH TLV: HexIso.500ppm(1760mg/m³)TWA;1000ppm(3500mg/m³)STEL
OSHA PEL: REMANDED PEL: HexIso.500ppm(1800mg/m³)TWA;1000ppm(3600mg/m³)STEL
OSHA 1989 PEL remanded, but in effect in some states
Pentane 109-66-0
ACGIH TLV: 600 ppm (1770 mg/m³) TWA
OSHA PEL: 1000 ppm (2950 mg/m³) TWA
REMANDED PEL: 600 ppm (1800 mg/m³) TWA; 750 ppm (2250 mg/m³)STEL
OSHA 1989 PEL remanded, but in effect in some states
Dimethyl Ether 115-10-6
ACGIH TLV: NONE ESTABLISHED
OSHA PEL: NONE ESTABLISHED

---

9. Physical and Chemical Properties

<!--[if !supportEmptyParas]--> <!--[endif]-->

Percent Volatiles	80.5
pH @ 25 C	Not available
Specific Gravity	0.6937
Appearance	White liquid
Autoignition Temperature	Not available
Boiling Point	66 deg C
Vapor Density (Air=1)	> 1
Vapor Pressure, mm Hg @ 20 C	Not determined
Evaporation Rate (Butyl Acetate=1)	> 1
Upper/Lower Flammable Limits	Not available
Up/Lower Explosive Limits, % by Vol	18/1
Flash Point	-156 deg F (pensky-martens c.c.)
Freezing Point	Not available
Odor	Mint when wet
Odor Threshold, ppm	Not available
Solubility in Water	Negligible
Coefficient of Water/Oil Distrib.	Not determined

10. Stability and Reactivity

<!--[if !supportEmptyParas]--> <!--[endif]-->
Normally stable as defined in NFPA 704-12(4-3.1).

<!--[if !supportLists]-->• <!--[endif]-->Conditions to Avoid:

<!--[if !supportEmptyParas]--> <!--[endif]-->
Exposure to heat, flame and incompatibles.

<!--[if !supportLists]-->• <!--[endif]-->Incompatibilities:

<!--[if !supportEmptyParas]--> <!--[endif]-->
Oxidizers, acids, bases and amines.

<!--[if !supportLists]-->• <!--[endif]-->Decomposition products may include:

<!--[if !supportEmptyParas]--> <!--[endif]-->
Oxides of carbon.

<!--[if !supportLists]-->• <!--[endif]-->Hazardous polymerization:

<!--[if !supportEmptyParas]--> <!--[endif]-->
Will not occur.

<!--[if !supportLists]-->• <!--[endif]-->Other Hazards:

<!--[if !supportEmptyParas]--> <!--[endif]-->
None known to company.

11. Toxicological Information

<!--[if !supportEmptyParas]--> <!--[endif]-->
See Section 3 Hazards Identification information.
Acetone 67-64-1
LC50: Not available
LD50: oral-rat=5800 mg/kg (RTECS); skin-rabbit=20 g/kg (RTECS)
Propane 74-98-6
LC50: Not available
LD50: Not available
Isobutane 75-28-5
LC50: Not available
LD50: Not available
2-Methylpentane 107-83-5
LC50: Not available
LD50: Not available
Pentane 109-66-0

```
     LC50: Not available
     LD50: Not available
     Dimethyl Ether       115-10-6
     LC50: Not available
     LD50: Not available
```

12. Ecological Information

```
<!--[if !supportEmptyParas]--> <!--[endif]-->
     Not determined.
```

13. Disposal Considerations

```
<!--[if !supportEmptyParas]--> <!--[endif]-->
     Dispose of according to local, state/provincial, and federal
     requirements.
     Empty container:  May contain explosive vapors.  DO NOT cut, puncture
     or weld on or nearby.  Incineration will cause container to burst
     violently.
```

14. Transport Information

```
<!--[if !supportEmptyParas]--> <!--[endif]-->
```

14.1 U.S. Department of Transportation (DOT)

```
<!--[if !supportEmptyParas]--> <!--[endif]-->
     The data provided in this section is for information only and may not
     be specific to your package size.  You will need to apply the
     appropriate regulations to properly classify your shipment for
     transportation.
     ORM-D Consumer Commodity.
```

14.2 Canadian Transportation of Dangerous Goods (TDG)

```
<!--[if !supportEmptyParas]--> <!--[endif]-->
     Not determined.
```

15. Regulatory Information (Selected Regulations)

```
<!--[if !supportEmptyParas]--> <!--[endif]-->
```

15.1 U.S. Federal Regulations

```
<!--[if !supportEmptyParas]--> <!--[endif]-->
```

<!--[if !supportLists]-->• <!--[endif]-->OSHA Hazard Communication Standard 29CFR1910.1200

<!--[if !supportEmptyParas]--> <!--[endif]-->
This material is a "health hazard" and/or a "physical hazard" as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

<!--[if !supportLists]-->• <!--[endif]-->SARA Title III: Section 311/312

<!--[if !supportEmptyParas]--> <!--[endif]-->
Fire hazard
Sudden release of pressure (explosion) hazard
Immediate health hazard
Delayed health hazard

<!--[if !supportLists]-->• <!--[endif]-->SARA Title III Section 313 and 40 CFR Part 372

<!--[if !supportEmptyParas]--> <!--[endif]-->
This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.
None required per SARA TITLE III SECTION 313.

<!--[if !supportLists]-->• <!--[endif]-->TSCA Section 8(b) Inventory

<!--[if !supportEmptyParas]--> <!--[endif]-->
All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by us.

15.2 Canadian Regulations

<!--[if !supportEmptyParas]--> <!--[endif]-->

<!--[if !supportLists]-->• <!--[endif]-->Workplace Hazardous Materials Information System (WHMIS)

<!--[if !supportEmptyParas]--> <!--[endif]-->
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR.
CLASS D, DIV 2B
CLASS B, DIV 5
CLASS A

<!--[if !supportLists]-->• <!--[endif]-->Canadian Environmental Protection Act (CEPA)

<!--[if !supportEmptyParas]--> <!--[endif]-->
All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.

<!--[if !supportLists]-->• <!--[endif]-->National Pollutant Release Inventory (NPRI)

<!--[if !supportEmptyParas]--> <!--[endif]-->
This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory.
None required.

---

16. Other Information

<!--[if !supportEmptyParas]--> <!--[endif]-->
CL (Cautionary Labeling): Products bearing the CL (Cautionary Labeling) Seal of The Art & Creative Materials Institute, Inc. (ACMI) are certified to be properly labeled in a program of toxicological evaluation by a medical expert. This program is reviewed by ACMI's Toxicological Advisory Board. These products are certified by ACMI to be labeled in accordance with the chronic hazard labeling standard, ASTM D-4236 and Federal Law, P.L. 100-695.

<!--[if !supportLists]-->• <!--[endif]-->User's Responsibility

<!--[if !supportEmptyParas]--> <!--[endif]-->
The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Educate and train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts to guard against hazards associated with use of this product and its ingredients.

<!--[if !supportLists]-->• <!--[endif]-->Disclaimer

<!--[if !supportEmptyParas]--> <!--[endif]-->
SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

<!--[if !supportEmptyParas]--> <!--[endif]-->
CURRENT ISSUE: 07-DEC-06
PREVIOUS ISSUE: 18-MAY-06

Safety Data Sheet:
Material Name: Elmer's Glue-All
SDS ID: SDS-11
Issue Date: 2014-09-11
Revision: 1.0

Other Sections
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
Elmer's Glue-All

Trade Names
Elmer's Glue-All

Synonyms
US: E135; E371; E372; E375; E379; E381; E382; E383; E384; E385; E386; E393; E395; E477; E619; E960; E981; E1235; E1321; E1322; E1323; E1324; E1325; E1326; E1327; E1329; E1330 E1366; E1462; E1501; E3810; E3815; E3820; E3830; E3850; E3860
Canada: 30325; 60345; 60352; 60355; 60359; 60375; 60382; 60383; 60385; 60387; 60395; 65120

Product Use
adhesives

Restrictions on Use
None known.

Manufacturer Information

Elmer's Products, Inc.
460 Polaris Parkway, Suite 500
Westerville, OH 43082
USA
Phone:1-888-435-6377
Fax:1-800-741-6046
Email:comments@elmers.com

Emergency Phone Number:
Poison Control Center
1-888-516-2502

For additional product information, access our website at www.elmers.com. To place an order, call 1-800-848-9400.

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.
None needed according to classification criteria

GHS Label Elements

Symbol(s)
None needed according to classification criteria

Signal Word
None needed according to classification criteria

Hazard Statement(s)
None needed according to classification criteria

Precautionary Statement(s)

Prevention
None needed according to classification criteria

Response
None needed according to classification criteria

Storage
None needed according to classification criteria

Disposal
None needed according to classification criteria

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
NA	Non-hazardous substance	100

Section 4 - FIRST AID MEASURES

Inhalation
If adverse effects occur, remove to uncontaminated area. If discomfort persists, contact a physician.

Skin
If on skin, wash immediately with plenty of soap and water. Get medical attention if irritation develops.

Eyes
Remove contact lenses, if present and easy to do. IMMEDIATELY wash with large amounts of warm water, occasionally lifting upper and lower lids, until no evidence of chemical remains (at least 15-20 minutes). Get medical attention immediately.

Ingestion
Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious or convulsive person. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms/Effects

Acute
No information on significant adverse effects.

Delayed
No information on significant adverse effects.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media
carbon dioxide, regular dry chemical, regular foam, water

Unsuitable Extinguishing Media
None known.

Hazardous Combustion Products
oxides of carbon

Special Protective Equipment and Precautions for Firefighters
Slight fire hazard.

Fire Fighting Measures
Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Wear personal protective clothing and equipment. See Section 8 for personal protection information.

Methods and Materials for Containment and Cleaning Up
Stop leak if possible without personal risk. Absorb with earth, sand or other non-combustible material and transfer to container. Collect spilled material in appropriate container for disposal.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Use only with adequate ventilation. Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities
None needed according to classification criteria
Store in accordance with all current regulations and standards. See original container for storage recommendations. Keep separated from incompatible substances.

Incompatible Materials
oxidizing materials.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

ACGIH, NIOSH, EU, OSHA (US) and Mexico have not developed exposure limits for any of this product's components

Biological limit value
There are no biological limit values for any of this product's components.

Engineering Controls
Based on available information, additional ventilation is not required.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection
Eye protection not required under normal conditions.

Skin Protection
Protective clothing is not required under normal conditions.

Respiratory Protection
No respirator is required under normal conditions of use.

Glove Recommendations
Protective gloves are not required under normal conditions.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white liquid	Physical State	Liquid
Odor	mild odor	Color	white
Odor Threshold	Not available	**pH**	4.8 - 5.1
Melting Point	Not available	**Boiling Point**	100 °C
Freezing point	0 °C	Evaporation Rate	Not available
Boiling Point Range	Not available	**Flammability (solid, gas)**	Not flammable

Autoignition	Not available	**Flash Point**	Not available
Lower Explosive Limit	Not available	**Decomposition**	Not available
Upper Explosive Limit	Not available	**Vapor Pressure**	Not available
Vapor Density (air=1)	Not available	**Specific Gravity (water=1)**	1.04 - 1.07
Water Solubility	dispersible	**Partition coefficient: n-octanol/water**	Not available
Viscosity	Not available	**Solubility (Other)**	Not available
Density	8.7 - 8.9 g/cc	**Physical Form**	liquid

Section 10 - STABILITY AND REACTIVITY

Reactivity
No hazard expected.

Chemical Stability
Stable at normal temperatures and pressure.

Possibility of Hazardous Reactions
Will not polymerize.

Conditions to Avoid
Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials
strong oxidizing materials.

Hazardous decomposition products

Combustion
oxides of carbon

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation
No information on significant adverse effects.

Skin Contact
No information on significant adverse effects.

Eye Contact
No information on significant adverse effects.

Ingestion
No information on significant adverse effects.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and no selected endpoints have been identified

Immediate Effects
No information on significant adverse effects.

Delayed Effects
No information on significant adverse effects.

Irritation/Corrosivity Data
No information on significant adverse effects.

Respiratory Sensitization
No information available for the product.

Dermal Sensitization
No information available for the product.

Component Carcinogenicity
None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA

Germ Cell Mutagenicity
No information available for the product.

Reproductive Toxicity
No information available for the product.

Specific Target Organ Toxicity - Single Exposure
No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure
No target organs identified.

Aspiration hazard
No data available.

Medical Conditions Aggravated by Exposure
No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

No LOLI ecotoxicity data are available for this product's components

Persistence and Degradability
No information available for the product.

Bioaccumulative Potential
No information available for the product.

Biodegradation
No information available for the product.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose in accordance with all applicable regulations.

Component Waste Numbers
The U.S. EPA has not published waste numbers for this product's components

---

Section 14 - TRANSPORT INFORMATION

US DOT Information:
UN/NA #: Not regulated.

TDG Information:
UN#: Not regulated.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations
None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.
SARA Section 311/312 (40 CFR 370 Subparts B and C)
Acute Health: No **Chronic Health:** No **Fire:** No **Pressure:** No **Reactivity:** No

U.S. State Regulations
None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA

Not listed under California Proposition 65

Canada Regulations
This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Canadian WHMIS Ingredient Disclosure List (IDL)

The components of this product are either not listed on the IDL or are present below the threshold limit listed on the IDL.

WHMIS Classification

Not a Controlled Product under Canada's Workplace Hazardous Material Information System.

Component Analysis - Inventory

Component	CAS#	US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Non-hazardous substance	NA	No	No	No	No	No	No	No	No	No	No	No	No

U.S. Inventory (TSCA)

All the components of this substance are listed on or are exempt from the inventory.

Section 16 - OTHER INFORMATION

NFPA Ratings

Health: 1 Fire: 1 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: 09/11/2014

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Reasonable care has been taken in the preparation of this information; however, the manufacturer makes no warranty whatsoever including the warranty of merchantability, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental, consequential, or other such damages resulting from its use or misuse.

Disclaimer:

Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

Safety Data Sheet:
Material Name: Elmer's Multi-Purpose Spray Adhesive
SDS ID: SDS-23
Issue Date: 2015-09-16
Revision: 2.2

Other Sections
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
Elmer's Multi-Purpose Spray Adhesive

Synonyms
E451, E452, 60451, E6451B, E6452B

Chemical Family
Adhesive

Details of the supplier of the safety data sheet

Elmer's Products, Inc
460 Polaris Parkway, Suite 500
Westerville, OH 43082
USA
Phone:1-888-435-6377
Fax:1-800-741-6046
Email:comments@elmers.com

Emergency Phone Number:
Poison Control Center
1-888-516-2502

For additional product information, access our website at www.elmers.com. To place an order, call 1-800-848-9400.

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Aerosols - Category 1
Aspiration Hazard - Category 1
Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 2A
Specific Target Organ Toxicity - Single Exposure - Category 3
Hazardous to the Aquatic Environment - Acute - Category 2
Hazardous to the Aquatic Environment - Chronic - Category 2

GHS Label Elements

Symbol(s)



Signal Word
Danger

Hazard Statement(s)
Extremely flammable aerosol
May be fatal if swallowed and enters airways
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation. May cause drowsiness or dizziness
Toxic to aquatic life with long lasting effects

Precautionary Statement(s)

Prevention
Keep away from heat/sparks/open flame/hot surfaces - No smoking
Pressurized container: Do not pierce or burn, even after use
Do not spray on an open flame or other ignition sources
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapours/spray
Wash thoroughly after handling
Avoid release to the environment

Response
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists, get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse

IF SWALLOWED: Immediately call a POISON CENTER/doctor
Do NOT induce vomiting
Call a POISON CENTER or doctor if you feel unwell
Specific treatment (see label)

Storage
Store in a well-ventilated place. Keep container tightly closed
Store locked up
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
107-83-5	Isohexane	10-20
67-64-1	Acetone	10-20
75-83-2	Neohexane	2.5-10
74-98-6	Propane	10-20
115-10-6	Dimethyl ether	2.5-10
79-29-8	2,3-Dimethylbutane	2.5-10
96-14-0	3-Methylpentane	2.5-10
106-97-8	Butane	2.5-10

The chemical identity and/or percentage of composition is being withheld as a trade secret.

Section 4 - FIRST AID MEASURES

Description of Necessary Measures
Call a POISON CENTER or doctor if you feel unwell.

Inhalation
Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin
Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Remove contaminated clothing and wash it before reuse.

Eyes
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops or persists.

Ingestion
Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration. Aspiration into the lungs may result in pulmonary edema and pneumonitis.

Most Important Symptoms/Effects

Acute
May cause respiratory irritation, eye irritation, skin irritation.

Delayed
no information on significant adverse effects.

Note to Physicians
Mineral oil, vegetable oil, or petroleum jelly may help soften the bonding between skin surfaces.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media
regular dry powder, alcohol resistant foam, water, carbon dioxide.

Unsuitable Extinguishing Media
None known.

Special Hazards Arising from the Chemical
Contains gas under pressure, may explode when heated.

Advice for firefighters
Vapors are heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Extremely flammable aerosol.Pressurized container: may burst if heated.

Fire Fighting Measures
Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn. In case of fire and/or explosion do not breathe fumes. Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. Wear personal protective clothing and equipment, see Section 8. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and Materials for Containment and Cleaning Up
Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering. Stay upwind and keep out of low areas. Eliminate all sources of ignition. Stop leak if possible without personal risk. Move containers away from spill to a safe area. Isolate area until gas has dispersed. Collect spillage. Prevent entry into waterways, sewers, basements, or confined areas.

Environmental Precautions
Avoid release to the environment. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling
Pressurized container: Do not pierce or burn, even after use. Do not spray on naked flames or any incandescent material. Do not eat, drink or smoke when using this product. Do not puncture container. Ground any equipment used in handling. Keep away from heat, sparks and flame. Do not cut, puncture, or weld on or near this container. Do not reuse containers. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with eyes and skin. Avoid repeated or prolonged contact. Use only in well-ventilated areas. Wash hands thoroughly after handling. Do not empty into drains.

Conditions for Safe Storage, Including any Incompatibilities
Store in a well-ventilated place. Keep container tightly closed
Store locked up
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
Keep away from incompatible materials. Keep away from heat, sparks and flame. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. This material can accumulate static charge by flow or agitation and can be ignited by static discharge. Keep out of reach of children.

Incompatible Materials
oxidizing agents

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Isohexane	107-83-5
ACGIH:	500 ppm TWA
	1000 ppm STEL
NIOSH:	100 ppm TWA; 350 mg/m3 TWA (related to Isohexane)
	510 ppm Ceiling 15 min; 1800 mg/m3 Ceiling 15 min (related to Isohexane)
Mexico:	500 ppm TWA LMPE-PPT (except n-Hexane); 1760 mg/m3 TWA LMPE-PPT (except n-Hexane) (related to Hexane, branched and linear)
	1000 ppm STEL [LMPE-CT] (except n-Hexane); 3500 mg/m3 STEL [LMPE-CT] (except n-Hexane) (related to Hexane, branched and linear)
Acetone	67-64-1
ACGIH:	250 ppm TWA
	500 ppm STEL
NIOSH:	250 ppm TWA; 590 mg/m3 TWA
	2500 ppm IDLH (10% LEL)
Europe:	500 ppm TWA; 1210 mg/m3 TWA
OSHA (US):	1000 ppm TWA; 2400 mg/m3 TWA
Mexico:	1000 ppm TWA LMPE-PPT; 2400 mg/m3 TWA LMPE-PPT
	1260 ppm STEL [LMPE-CT]; 3000 mg/m3 STEL [LMPE-CT]
Neohexane	75-83-2
ACGIH:	500 ppm TWA
	1000 ppm STEL
NIOSH:	100 ppm TWA; 350 mg/m3 TWA (related to Isohexane)
	510 ppm Ceiling 15 min; 1800 mg/m3 Ceiling 15 min (related to Isohexane)
Mexico:	500 ppm TWA LMPE-PPT (except n-Hexane); 1760 mg/m3 TWA LMPE-PPT (except n-Hexane) (related to Hexane, branched and linear)
	1000 ppm STEL [LMPE-CT] (except n-Hexane); 3500 mg/m3 STEL [LMPE-CT] (except n-Hexane) (related to Hexane, branched and linear)
Propane	74-98-6
ACGIH:	(See Appendix F: Minimal Oxygen Content)
NIOSH:	1000 ppm TWA; 1800 mg/m3 TWA
	2100 ppm IDLH (10% LEL)
OSHA (US):	1000 ppm TWA; 1800 mg/m3 TWA

Dimethyl ether	115-10-6
Europe:	1000 ppm TWA; 1920 mg/m3 TWA
2,3-Dimethylbutane	79-29-8
ACGIH:	500 ppm TWA
	1000 ppm STEL
NIOSH:	100 ppm TWA; 350 mg/m3 TWA (related to Isohexane)
	510 ppm Ceiling 15 min; 1800 mg/m3 Ceiling 15 min (related to Isohexane)
Mexico:	500 ppm TWA LMPE-PPT (except n-Hexane); 1760 mg/m3 TWA LMPE-PPT (except n-Hexane) (related to Hexane, branched and linear)
	1000 ppm STEL [LMPE-CT] (except n-Hexane); 3500 mg/m3 STEL [LMPE-CT] (except n-Hexane) (related to Hexane, branched and linear)
3-Methylpentane	96-14-0
ACGIH:	500 ppm TWA
	1000 ppm STEL
NIOSH:	100 ppm TWA; 350 mg/m3 TWA (related to Isohexane)
	510 ppm Ceiling 15 min; 1800 mg/m3 Ceiling 15 min (related to Isohexane)
Mexico:	500 ppm TWA LMPE-PPT (except n-Hexane); 1760 mg/m3 TWA LMPE-PPT (except n-Hexane) (related to Hexane, branched and linear)
	1000 ppm STEL [LMPE-CT] (except n-Hexane); 3500 mg/m3 STEL [LMPE-CT] (except n-Hexane) (related to Hexane, branched and linear)
Butane	106-97-8
ACGIH:	1000 ppm STEL
NIOSH:	800 ppm TWA; 1900 mg/m3 TWA
Mexico:	800 ppm TWA LMPE-PPT; 1900 mg/m3 TWA LMPE-PPT

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear safety glasses with side shields. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection
Wear appropriate chemical resistant clothing.

Respiratory Protection
A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Glove Recommendations
Wear protective gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Not available	**Physical State**	gas
Odor	Not available	**Color**	Not available
Odor Threshold	Not available	**pH**	Not available
Melting Point	Not available	**Boiling Point**	Not available
Freezing point	Not available	**Evaporation Rate**	Not available
Boiling Point Range	Not applicable	**Flammability (solid, gas)**	Not available
Autoignition	Not available	**Flash Point**	74.18 °F (23.44 °C estimated)
Lower Explosive Limit	Not available	**Decomposition**	Not available
Upper Explosive Limit	Not available	**Vapor Pressure**	373.4 psig @70 °F (estimated)
Vapor Density (air=1)	Not available	**Specific Gravity (water=1)**	0.645 (estimated)
Water Solubility	Not available	**Partition coefficient: n-octanol/water**	Not available
Viscosity	Not available	**Solubility (Other)**	Not available
Density	Not available		

Section 10 - STABILITY AND REACTIVITY

Reactivity
Under normal conditions, no hazard is expected.

Chemical Stability
Stable under normal conditions of use.

Possibility of Hazardous Reactions
Hazardous polymerization will not occur.

Conditions to Avoid
Avoid heat, flames, sparks and other sources of ignition. Avoid friction and static electricity.

Incompatible Materials
oxidizing agents,

Hazardous decomposition products
oxides of carbon, hydrocarbons,

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation
May be fatal if swallowed and enters airways. Prolonged exposure can cause nausea, dizziness, headache, and narcotic effects. May cause respiratory irritation. May cause drowsiness or dizziness.

Skin Contact
Causes skin irritation.

Eye Contact
Causes serious eye irritation.

Ingestion
May be fatal if swallowed and enters airways.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and the following selected endpoints are published:
Isohexane (107-83-5)
Oral LD50 Rat 15000 mg/kg (related to Hexane, branched and linear)
Acetone (67-64-1)
Oral LD50 Rat 5800 mg/kg
Inhalation LC50 Rat 50100 mg/m3 8 h
Neohexane (75-83-2)
Oral LD50 Rat 15000 mg/kg (related to Hexane, branched and linear)
Propane (74-98-6)

Inhalation LC50 Rat 658 mg/L 4 h
Dimethyl ether (115-10-6)
Inhalation LC50 Rat 308.5 mg/L 4 h
2,3-Dimethylbutane (79-29-8)
Oral LD50 Rat 15000 mg/kg (related to Hexane, branched and linear)
3-Methylpentane (96-14-0)
Oral LD50 Rat 15000 mg/kg (related to Hexane, branched and linear)
Butane (106-97-8)
Inhalation LC50 Rat 658 g/m3 4 h

Immediate Effects
Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness.

Delayed Effects
No target organs identified.

Irritation/Corrosivity Data
May cause respiratory irritation, eye irritation, skin irritation.

Respiratory Sensitization
No information available for the product.

Dermal Sensitization
no effects expected.

Component Carcinogenicity

Acetone	67-64-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen

Germ Cell Mutagenicity
No information available for the product.

Tumorigenic Data
No data available

Reproductive Toxicity
No information available for the product.

Specific Target Organ Toxicity - Single Exposure
respiratory system.

Specific Target Organ Toxicity - Repeated Exposure

Aspiration hazard
Aspiration Hazard. May be fatal if swallowed and enters airways.

Medical Conditions Aggravated by Exposure
No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Acetone	67-64-1
Fish:	LC50 96 h Oncorhynchus mykiss 4.74 - 6.33 mL/L; LC50 96 h Pimephales promelas 6210 - 8120 mg/L [static]; LC50 96 h Lepomis macrochirus 8300 mg/L
Invertebrate:	EC50 48 h Daphnia magna 10294 - 17704 mg/L [static] EPA; EC50 48 h Daphnia magna 12600 - 12700 mg/L IUCLID

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose in accordance with all applicable regulations. Do not puncture container.

Section 14 - TRANSPORT INFORMATION

Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants

Component	CAS #	Minimum Concentration
Isohexane	107-83-5	DOT regulated

US DOT Information:
Shipping Name: AEROSOLS
Hazard Class: 2.2
UN/NA #: UN1950
Required Label(s): 2.2, 6.1

TDG Information:
Shipping Name: AEROSOLS
Hazard Class: 2.1
UN#: UN1950
Required Label(s): 2.1

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Acetone	67-64-1
CERCLA:	5000 lb final RQ; 2270 kg final RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C)
Acute Health: Yes **Chronic Health:** Yes **Fire:** Yes **Pressure:** Yes **Reactivity:** No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Isohexane	107-83-5	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes
Neohexane	75-83-2	Yes	Yes	Yes	Yes	Yes
Propane	74-98-6	No	Yes	Yes	Yes	Yes
Dimethyl ether	115-10-6	No	Yes	Yes	Yes	Yes
2,3-Dimethylbutane	79-29-8	Yes	Yes	Yes	Yes	Yes
3-Methylpentane	96-14-0	Yes	Yes	Yes	No	Yes
Butane	106-97-8	Yes	Yes	Yes	Yes	Yes

Not listed under California Proposition 65

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Isohexane	107-83-5
	1 %
Acetone	67-64-1
	1 %
Neohexane	75-83-2
	1 %
2,3-Dimethylbutane	79-29-8
	1 %

3-Methylpentane	96-14-0
	1 % (related to Hexane, branched and linear)
Butane	106-97-8
	1 %

Component Analysis - Inventory

Isohexane (107-83-5)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

Acetone (67-64-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

Neohexane (75-83-2)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

Propane (74-98-6)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

Dimethyl ether (115-10-6)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

2,3-Dimethylbutane (79-29-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

3-Methylpentane (96-14-0)

US	CA	EU	AU	PH					CN	NZ	MX	TW

					JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA				
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

Butane (106-97-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 4 Reactivity: 1
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

Summary of Changes

New SDS:11/24/2014

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

Safety Data Sheet:
Material Name: Elmer's No-Wrinkle Rubber Cement
SDS ID: SDS-34
Issue Date: 2014-12-04
Revision: .

Other Sections
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
Elmer's No-Wrinkle Rubber Cement

Synonyms
E141; E904; 231, 232, 233, 234, 61518; E63231T; E425; E1539

Chemical Family
Adhesive

Product Use
Adhesive

Manufacturer Information

Elmer's Products, Inc
460 Polaris Parkway, Suite 500
Westerville, OH 43082
USA
Phone:1-888-435-6377
Fax:1-800-741-6046
Email:comments@elmers.com

Emergency Phone Number:
Poison Control Center
1-888-516-2502

For additional product information, access our website at www.elmers.com. To place an order, call 1-800-848-9400.

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 2
Aspiration Hazard - Category 1
Skin Corrosion/Irritation - Category 2
Serious Eye Damage/Eye Irritation - Category 2A
Specific Target Organ Toxicity - Single Exposure - Category 1 (body, central nervous system, kidneys, systemic toxicity)
Specific Target Organ Toxicity - Single Exposure - Category 3
Specific Target Organ Toxicity - Repeated Exposure - Category 2 (Cardiovascular system,liver,spleen,blood)
Hazardous to the Aquatic Environment - Chronic - Category 1

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement(s)

Highly flammable liquid and vapor
May be fatal if swallowed and enters airways
Causes skin irritation
Causes serious eye irritation
Causes damage to organs
May cause respiratory irritation. May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure
Very toxic to aquatic life with long lasting effects

Precautionary Statement(s)

Prevention

Keep container tightly closed
Keep away from heat/sparks/open flame/hot surfaces - No smoking
Ground/Bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Take precautionary measures against static discharge
Use only non-sparking tools
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapours/spray
Wash thoroughly after handling

Do not eat, drink or smoke when using this product
Avoid release to the environment

Response
In case of fire: Use appropriate media to extinguish
Collect spillage
If exposed: Call a POISON CENTER or doctor/physician
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation occurs: Get medical advice/attention
Wash contaminated clothing before reuse
IF SWALLOWED: Immediately call a POISON CENTER/doctor
Do NOT induce vomiting

Storage
Store in a well-ventilated place. Keep container tightly closed
Keep cool
Store locked up

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations

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Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
142-82-5	n-Heptane	> 85
67-63-0	Isopropyl alcohol	1-5

Section 4 - FIRST AID MEASURES

Description of Necessary Measures
IF exposed or concerned: Call a POISON CENTER or doctor/physician.

Inhalation
Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin
Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eyes
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion
Immediately call a POISON CENTER or doctor/physician. DO NOT induce vomiting. Aspiration hazard. If vomiting occurs, keep head lower than hips to help prevent aspiration. Aspiration into the lungs may result in pulmonary edema and pneumonitis.

Most Important Symptoms/Effects

Acute
May be fatal if swallowed and enters airways. May cause respiratory irritation, skin irritation. eye irritation. central nervous system damage, kidney damage, systemic toxicity.

Delayed
central nervous system damage, kidney damage. Cardiovascular system effect, liver effects, spleen damage, blood damage.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media
Dry chemical, foam or carbon dioxide, water.

Unsuitable Extinguishing Media
None known.

Special Hazards Arising from the Chemical
Highly flammable liquid and vapor. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Vapor/air mixtures are explosive.

Special Protective Equipment and Precautions for Firefighters
Wear self-contained breathing apparatus with a full facepiece and protective clothing.

Fire Fighting Measures
Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Do not scatter spilled material with high-pressure water streams. In case of fire and/or explosion do not breathe fumes. Stay upwind and keep out of low areas.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Keep unnecessary people away, isolate hazard area and deny entry. Do not breath gas/vapor/spray. Avoid contact with skin and eyes. Vapors may cause drowsiness and dizziness. Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Eliminate all ignition sources if safe to do so. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. Ventilate closed spaces before entering. Stop leak if possible without personal risk. Reduce vapors with water spray. Ground any equipment used in handling. Do not touch or walk through spilled material. Absorb with earth, sand or other non-combustible material and transfer to container. Use only non-sparking tools. Large spills: Dike for later disposal.

Environmental Precautions

Prevent entry into waterways, sewers, basements, or confined areas.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid heat, flames, sparks and other sources of ignition. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed
Keep cool
Store locked up

Incompatible Materials

acids, bases, amines, oxidizing materials.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

n-Heptane	142-82-5
ACGIH:	400 ppm TWA

	500 ppm STEL
NIOSH:	85 ppmTWA; 350 mg/m3TWA
	440 ppm Ceiling 15 min; 1800 mg/m3 Ceiling 15 min
	750 ppmIDLH
Europe:	500 ppm TWA; 2085 mg/m3 TWA
OSHA (US):	500 ppmTWA; 2000 mg/m3TWA
Mexico:	400 ppmTWA LMPE-PPT; 1600 mg/m3TWA LMPE-PPT
	500 ppmSTEL [LMPE-CT]; 2000 mg/m3STEL [LMPE-CT]
	Skin - potential for cutaneous absorption
Isopropyl alcohol	67-63-0
ACGIH:	200 ppm TWA
	400 ppm STEL
NIOSH:	400 ppmTWA; 980 mg/m3TWA
	500 ppmSTEL; 1225 mg/m3STEL
	2000 ppmIDLH (10% LEL)
OSHA (US):	400 ppmTWA; 980 mg/m3TWA
Mexico:	400 ppmTWA LMPE-PPT; 980 mg/m3TWA LMPE-PPT
	500 ppmSTEL [LMPE-CT]; 1225 mg/m3STEL [LMPE-CT]

Biological limit value

There are no biological limit values for any of this product's components.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	opaqueliquid	**Physical State**	liquid
Odor	mild odor,solvent odor	**Color**	Not available
Odor Threshold	Not available	**pH**	Not available
Melting Point	Not available	**Boiling Point**	90 °C
Freezing point	Not available	**Evaporation Rate**	<1 (ether =1)
Boiling Point Range	Not available	**Flammability (solid, gas)**	Not available

Autoignition	Not available	**Flash Point**	-4 °C TCC
Lower Explosive Limit	Not available	**Decomposition**	Not available
Upper Explosive Limit	Not available	**Vapor Pressure**	Not available
Vapor Density (air=1)	>1	**Specific Gravity (water=1)**	0.71
Water Solubility	almost insoluble	**Partition coefficient: n-octanol/water**	Not available
Viscosity	Not available	**Solubility (Other)**	Not available
Density	Not available	**Volatility**	90 %

Section 10 - STABILITY AND REACTIVITY

Reactivity
No hazard expected.

Chemical Stability
Stable under normal conditions of use.

Possibility of Hazardous Reactions
Hazardous polymerization will not occur.

Conditions to Avoid
Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat.

Incompatible Materials
acids. bases, amines, oxidizing materials.

Hazardous decomposition products
oxides of carbon.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May cause respiratory irritation.

Skin Contact
Causes skin irritation.

Eye Contact
Causes serious eye irritation.

Ingestion
Aspiration hazard. May be fatal if swallowed.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and the following selected endpoints are published:
n-Heptane (142-82-5)
Oral LD50Mouse 5000 mg/kg
Dermal LD50Rabbit 3000 mg/kg
Inhalation LC50Rat 103 g/m3 4 h
Isopropyl alcohol (67-63-0)
Oral LD50Rat 1870 mg/kg
Dermal LD50Rabbit 4059 mg/kg
Inhalation LC50Rat 72600 mg/m3 4 h

Immediate Effects
May cause respiratory irritation, skin irritation, eye irritation. May cause kidney damage, central nervous system damage, systemic toxicity. May be fatal if swallowed.

Delayed Effects
Cardiovascular system Effects, liver effects, spleen effect, blood

Irritation/Corrosivity Data
Causes skin irritation. May cause eye irritation. May cause respiratory irritation.

Respiratory Sensitization
No information available for the product.

Dermal Sensitization
No information available for the product.

Component Carcinogenicity

Isopropyl alcohol	67-63-0
ACGIH:	A4 - Not Classifiable as a Human Carcinogen

IARC:	Monograph 71 [1999]; Supplement 7 [1987]; Monograph 15 [1977](Group 3 (not classifiable))

Germ Cell Mutagenicity
No information available for the product.

Reproductive Toxicity
No information available for the product.

Specific Target Organ Toxicity - Single Exposure
body, central nervous system, kidneys, systemic toxicity.

Specific Target Organ Toxicity - Repeated Exposure
Cardiovascular system, liver, spleen, blood.

Aspiration hazard
May be fatal if swallowed.

Medical Conditions Aggravated by Exposure
No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

n-Heptane	142-82-5
Fish:	LC50 96 h Cichlid fish 375 mg/L
Isopropyl alcohol	67-63-0
Fish:	LC50 96 h Pimephales promelas 9640 mg/L [flow-through]; LC50 96 h Pimephales promelas 11130 mg/L [static]; LC50 96 h Lepomis macrochirus >1400000 µg/L
Algae:	EC50 96 h Desmodesmus subspicatus >1000 mg/L IUCLID; EC50 72 h Desmodesmus subspicatus >1000 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 13299 mg/L IUCLID

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose in accordance with all applicable regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:
Shipping Name:HEPTANES
Hazard Class: 3
UN/NA #: UN1206
Packing Group: II
Required Label(s): 3

TDG Information:
Shipping Name:HEPTANES
Hazard Class: 3
UN#: UN1206
Packing Group: II
Required Label(s):

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

n-Heptane	142-82-5
TSCA 12b:	Section 4 , 1 % de minimus concentration (related to Hydrocarbons, C>4)
Isopropyl alcohol	67-63-0
SARA 313:	1 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)

SARA Section 311/312 (40 CFR 370 Subparts B and C)
Acute Health: Yes **Chronic Health:** Yes **Fire:** Yes **Pressure:** No **Reactivity:** No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
n-Heptane	142-82-5	Yes	Yes	Yes	Yes	Yes
Isopropyl alcohol	67-63-0	Yes	Yes	Yes	Yes	Yes

Not listed under California Proposition 65

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

n-Heptane	142-82-5
	1 %
Isopropyl alcohol	67-63-0
	1 %

Component Analysis - Inventory

n-Heptane (142-82-5)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Isopropyl alcohol (67-63-0)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 3 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire

Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Reasonable care has been taken in the preparation of this information; however, the manufacturer makes no warranty whatsoever including the warranty of merchantability, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental, consequential, or other such damages resulting from its use or misuse.

Disclaimer:

Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

Safety Data Sheet:
Material Name: Elmer's ProBond Wood Filler
SDS ID: SDS-4
Issue Date: 2015-12-16
Revision: 1.7

Other Sections
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Elmer's ProBond Wood Filler

Trade Names

Elmer's ProBond Wood Filler

Synonyms

E811; E812; E813; E814; E818; E901; P9887; P9889; P9890; P9891; E8110; E8120; E8130; E8180; E8140, E8150; E8180; P9892; P9030

Product Use

building/construction product

Restrictions on Use

None known.

Details of the supplier of the safety data sheet

Elmer's Products, Inc
460 Polaris Parkway, Suite 500
Westerville, OH 43082
USA
Phone:1-888-435-6377
Fax:1-800-741-6046
Email:comments@elmers.com

Emergency Phone Number:
Poison Control Center

1-888-516-2502

For additional product information, access our website at www.elmers.com. To place an order, call 1-800-848-9400.

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

None needed according to classification criteria

GHS Label Elements

Symbol(s)

None needed according to classification criteria

Signal Word

None needed according to classification criteria

Hazard Statement(s)

None needed according to classification criteria.

Precautionary Statement(s)

Prevention

None needed according to classification criteria.

Response

None needed according to classification criteria.

Storage

None needed according to classification criteria.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
NA	Non-hazardous substance	100

Section 4 - FIRST AID MEASURES

Inhalation

If adverse effects occur, remove to uncontaminated area. If discomfort persists, contact a physician.

Skin

If on skin, wash immediately with plenty of soap and water. Get medical attention if irritation develops.

Eyes

Remove contact lenses, if present and easy to do. IMMEDIATELY wash with large amounts of warm water, occasionally lifting upper and lower lids, until no evidence of chemical remains (at least 15-20 minutes). Get medical attention immediately.

Ingestion

Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious or convulsive person. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms/Effects

Acute

No information on significant adverse effects.

Delayed

No information on significant adverse effects.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

carbon dioxide, regular dry chemical, regular foam, water

Unsuitable Extinguishing Media

None known.

Hazardous Combustion Products

oxides of carbon

Advice for firefighters

Slight fire hazard.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment. See Section 8 for personal protection information.

Methods and Materials for Containment and Cleaning Up

Stop leak if possible without personal risk. Absorb with earth, sand or other non-combustible material and transfer to container. Collect spilled material in appropriate container for disposal.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Use only with adequate ventilation. Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities

None needed according to classification criteria.

Store in accordance with all current regulations and standards. Protect from freezing. Keep separated from incompatible substances.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

EU - Occupational Exposure (98/24/EC) - Binding Biological Limit Values and Health Surveillance Measures

There are no biological limit values for any of this product's components.

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles. When sanding: Wear safety glasses or safety goggles, with a faceshield, as appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear appropriate chemical resistant clothing.

Respiratory Protection

Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use. Any chemical cartridge respirator with organic vapor cartridge(s). Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s). Any air-purifying respirator with a full facepiece and an organic vapor canister. For Unknown Concentrations or Immediately Dangerous to Life or Health -. Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode. Any self-

contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	paste	Physical State	Liquid
Odor	mild acrylic odor	Color	various colors
Odor Threshold	Not available	pH	8.3 - 9.2
Melting Point	Not available	Boiling Point	100 °C
Freezing point	0 °C	Evaporation Rate	Not available
Boiling Point Range	Not available	Flammability (solid, gas)	Not flammable
Autoignition	Not available	Flash Point	Not available
Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	1.038
Water Solubility	miscible	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Solubility (Other)	Not available
Density	Not available	Physical Form	paste
Molecular Weight	Not available	Percent Solids	76 - 78 %

Section 10 - STABILITY AND REACTIVITY

Reactivity

No hazard expected.

Chemical Stability

Stable at normal temperatures and pressure.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials

strong oxidizing materials.

Hazardous decomposition products

Combustion

oxides of carbon

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

No information on significant adverse effects.

Skin Contact

No information on significant adverse effects.

Eye Contact

May cause irritation.

Ingestion

No information on significant adverse effects.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and no selected endpoints have been identified

Immediate Effects

No information on significant adverse effects.

Delayed Effects

No information on significant adverse effects.

Irritation/Corrosivity Data

No information on significant adverse effects.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

No information available for the product.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA

Germ Cell Mutagenicity

No information available for the product.

Tumorigenic Data

No data available

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure

No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

No LOLI ecotoxicity data are available for this product's components

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Biodegradation

No information available for the product.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with all applicable regulations.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components

Section 14 - TRANSPORT INFORMATION

US DOT Information:
UN/NA #: Not regulated.

TDG Information:
UN#: Not regulated.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.
SARA Section 311/312 (40 CFR 370 Subparts B and C)
Acute Health: No Chronic Health: No Fire: No Pressure: No Reactivity: No

U.S. State Regulations

None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA

Not listed under California Proposition 65

Canada Regulations

This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Canadian WHMIS Ingredient Disclosure List (IDL)

The components of this product are either not listed on the IDL or are present below the threshold limit listed on the IDL.
WHMIS Classification
Not a Controlled Product under Canada's Workplace Hazardous Material Information System.

Component Analysis - Inventory

U.S. Inventory (TSCA)

All the components of this substance are listed on or are exempt from the inventory.

Section 16 - OTHER INFORMATION

NFPA Ratings
Health: 1 Fire: 1 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: 08/08/2014

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

Material Safety Data Sheet

F

1. Chemical Product and Company Identification

DESCRIPTION: ELMER'S SPRAY ADHESIVE
PRODUCT TYPE: RUBBER BASED ADHESIVE
APPLICATION: E-451, E-452 (AEROSOLS)

- **Manufacturer/Supplier Information**

MSDS Prepared by:
Elmer's Products, Inc.
1 Easton Oval
Columbus, OH 43219

Emergency Phone Number
Poison Control Center
1-888-516-2502

For additional health, safety or regulatory information, call 1-888-435-6377
Call 1-800-848-9400 to place an order or request additional MSDSs.

2. Composition, Information on Ingredients

The ingredients listed below have been associated with one or more immediate and/or delayed(*) health hazards. Risk of damage and effects depends upon duration and level of exposure. BEFORE USING, HANDLING, OR EXPOSURE TO THESE INGREDIENTS, READ AND UNDERSTAND THE MSDS.

		% by weight
67-64-1	*Acetone	10-30
74-98-6	Propane	10-30
75-28-5	Isobutane	10-30
107-83-5	2-Methylpentane	30-50
109-66-0	Pentane	1-5
115-10-6	Dimethyl Ether	5-10

3. Hazards Identification

3.1 Emergency Overview

```
Appearance                          White to off white in color
Odor                                Mint when wet
DANGER!
EXTREMELY FLAMMABLE
May be harmful if inhaled.  May cause irritation of nose, throat and
lungs.
Can cause central nervous system depression.
Causes skin irritation.
Causes eye irritation.
```

- **HMIS Rating**

```
      HEALTH = 2 (moderate)
FLAMMABILITY = 4 (severe)
  REACTIVITY = 0 (minimal)
     CHRONIC = *
```

3.2 Potential Health Effects

- **Immediate Hazards**

```
INGESTION:   Not expected to be harmful under normal conditions of
             use.
INHALATION:  May be harmful if inhaled.  Liquid or vapor may cause
             irritation of nose, throat and lungs.
             Can cause central nervous system depression.
SKIN:        Causes irritation.
EYES:        Causes irritation.
Acetone        67-64-1
Can cause central nervous system depression.  Signs and symptoms may
include headache, dizziness, nausea, vomiting, unconsciousness and
even asphyxiation.
Propane        74-98-6
This material is a simple asphyxiant.  Signs and symptoms of
overexposure include cyanosis, respiratory distress, headache,
dizziness, drowsiness, unconsciousness and asphyxiation.  Can cause
central nervous system depression.
2-Methylpentane       107-83-5
Can cause central nervous system depression.  Signs and symptoms may
include headache, dizziness, nausea, vomiting and drowsiness.
Pentane       109-66-0
Can cause central nervous system depression.  Signs and symptoms may
include headache, dizziness, nausea, vomiting, unconsciousness and
even asphyxiation.
Dimethyl Ether       115-10-6
Can cause central nervous system depression.  Signs and symptoms may
include headache, dizziness, nausea, vomiting, unconsciousness and
```

even asphyxiation.

- **Delayed Hazards**

Acetone 67-64-1
Ingestion may cause liver damage.
Ingestion may cause kidney damage.
-- See Footnote C.
Footnote C: As of the date of issuance of this document, this material has not been listed by NTP, classified by IARC nor regulated by OSHA as a carcinogen.

4. First Aid Measures

INGESTION:	If accidentally swallowed, dilute by drinking large quantities of water. Immediately contact poison control center or hospital emergency room for any other additional treatment directions.
INHALATION:	If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Call a physician.
SKIN:	Flush with plenty of water. Remove contaminated clothing. Call a physician if irritation persists.
EYES:	Immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held apart during irrigation to insure water contact with entire surface of eyes and lids. Call a physician.

5. Fire Fighting Measures

Autoignition Temperature	Not available
Upper/Lower Flammable Limits	Not available
Up/Lower Explosive Limits, % by Vol	18.0/1.0
Flash Point	-156 deg F (pensky-martens c.c.)

EXTREMELY FLAMMABLE.
DO NOT INCINERATE (BURN) CONTAINER. AVOID HEAT. KEEP CONTAINER BELOW 120 F (50 C). High temperatures may cause bursting. Do not place container on radiator, stove, in direct sunlight or near other heat sources. DO NOT PUNCTURE CONTAINER. Contents under pressure will discharge. AVOID OPEN FLAMES, SPARKS, PILOT LIGHTS. DO NOT SMOKE. Vapor may ignite explosively. Spray mist or vapor evaporating from a deposited film is heavier than air and may settle in low places or travel outward to a source of ignition and flashback. In case of fire, use dry chemical, foam or CO2. Water may be ineffective, but should be used to keep fire-exposed containers cool.

6. Accidental Release Measures

Eliminate all ignition sources. Soak up with absorbent material and

remove to a chemical disposal area. Prevent entry into natural bodies of water.

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing.
Wash thoroughly after handling. Always use appropriate Personal Protective Equipment (PPE).
INHALATION: USE WITH ADEQUATE VENTILATION. To avoid breathing vapors or spray mist, open windows and doors or use other means, such as an exhaust fan to ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness, increase fresh air, wear respiratory protection (NIOSH/MSHA TC23C or equivalent), or leave the area.
SKIN: Avoid contact with skin and clothing.
EYES: Avoid contact with eyes.

7.2 Storage

Store in a cool, well-ventilated area.
Store in cool, dry area away from sun, heat, oxidizing materials and alkaline materials.
Keep containers tightly closed.
Do not store at temperatures above 50 C.
Keep away from heat, sparks, flame and other ignition sources.

8. Exposure Controls/Personal Protection

8.1 Exposure Controls

ENGINEERING CONTROLS: The following exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design, process isolation and remote control in combination with appropriate use of personal protective equipment and prudent work practices. These techniques may not necessarily address all issues pertaining to your operations. We, therefore, recommend that you consult with experts of your choice to determine whether or not your programs are adequate.
If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should

be provided to keep air contaminant concentration levels below acceptable criteria.

8.2 Personal Protection

Where air contaminants can exceed acceptable criteria, use NIOSH/MSHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air in accordance with OSHA laws and regulations or other applicable standards or guidelines, including ANSI standards regarding respiratory protection. Use goggles if contact is likely. Wear impervious gloves as required to prevent skin contact.

8.3 Exposure Guidelines

Acetone 67-64-1
ACGIH TLV: 500 ppm (1188 mg/m³) TWA; 750 ppm (1782 mg/m³) STEL
OSHA PEL: 1000 ppm (2400 mg/m³)TWA
REMANDED PEL: 750 ppm (1800 mg/m³) TWA; 1000 ppm (2400 mg/m³) STEL
OSHA 1989 PEL remanded, but in effect in some states
Propane 74-98-6
ACGIH TLV: 2500 ppm (4508 mg/m³) TWA
OSHA PEL: 1000 ppm (1800 mg/m³) TWA
Isobutane 75-28-5
ACGIH TLV: NONE ESTABLISHED
OSHA PEL: NONE ESTABLISHED
2-Methylpentane 107-83-5
ACGIH TLV: HexIso.500ppm(1760mg/m³)TWA;1000ppm(3500mg/m³)STEL
OSHA PEL: REMANDED PEL: HexIso.500ppm(1800mg/m³)TWA;1000ppm(3600mg/m³)STEL
OSHA 1989 PEL remanded, but in effect in some states
Pentane 109-66-0
ACGIH TLV: 600 ppm (1770 mg/m³) TWA
OSHA PEL: 1000 ppm (2950 mg/m³) TWA
REMANDED PEL: 600 ppm (1800 mg/m³) TWA; 750 ppm (2250 mg/m³)STEL
OSHA 1989 PEL remanded, but in effect in some states
Dimethyl Ether 115-10-6
ACGIH TLV: NONE ESTABLISHED
OSHA PEL: NONE ESTABLISHED

9. Physical and Chemical Properties

Percent Volatiles	90
pH @ 25 C	Not applicable
Specific Gravity	0.69
Appearance	White to off white in color
Autoignition Temperature	Not available
Boiling Point	-44 - 150 deg F
Vapor Density (Air=1)	> 1
Vapor Pressure, mm Hg @ 20 C	Not determined
Evaporation Rate (Butyl Acetate=1)	>1
Upper/Lower Flammable Limits	Not available

Up/Lower Explosive Limits, % by Vol	18.0/1.0
Flash Point	-156 deg F (pensky-martens c.c.)
Freezing Point	Not available
Odor	Mint when wet
Odor Threshold, ppm	Not available
Solubility in Water	Negligible
Coefficient of Water/Oil Distrib.	Not determined

10. Stability and Reactivity

Normally stable as defined in NFPA 704-12(4-3.1).

- **Incompatibilities:**

Strong oxidizers.

- **Decomposition products may include:**

Oxides of carbon.

- **Hazardous polymerization:**

Will not occur.

- **Other Hazards:**

None known to company.

11. Toxicological Information

See Section 3 Hazards Identification information.
Acetone 67-64-1
LC50: Not available
LD50: oral-rat=5800 mg/kg (RTECS); skin-rabbit=20 g/kg (RTECS)
Propane 74-98-6
LC50: Not available
LD50: Not available
Isobutane 75-28-5
LC50: Not available
LD50: Not available
2-Methylpentane 107-83-5
LC50: Not available
LD50: Not available

Pentane 109-66-0
LC50: Not available
LD50: Not available
Dimethyl Ether 115-10-6
LC50: Not available
LD50: Not available

12. Ecological Information

Not determined.

13. Disposal Considerations

Dispose of according to local, state/provincial, and federal requirements.
Empty container: May contain explosive vapors. DO NOT cut, puncture or weld on or nearby. Incineration will cause container to burst violently.

14. Transport Information

14.1 U.S. Department of Transportation (DOT)

The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.
ORM-D Consumer Commodity.

14.2 Canadian Transportation of Dangerous Goods (TDG)

Not determined.

15. Regulatory Information (Selected Regulations)

15.1 U.S. Federal Regulations

- **OSHA Hazard Communication Standard 29CFR1910.1200**

This material is a "health hazard" and/or a "physical hazard" as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

- **SARA Title III: Section 311/312**

Fire hazard
Sudden release of pressure (explosion) hazard
Immediate health hazard
Delayed health hazard

- **SARA Title III Section 313 and 40 CFR Part 372**

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.
None required per SARA TITLE III SECTION 313.

- **TSCA Section 8(b) Inventory**

All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by us.

15.2 Canadian Regulations

- **Workplace Hazardous Materials Information System (WHMIS)**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR.
CLASS D, DIV 2B
CLASS B, DIV 5
CLASS A

- **Canadian Environmental Protection Act (CEPA)**

All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.

- **National Pollutant Release Inventory (NPRI)**

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory.
None required.

16. Other Information

CL (Cautionary Labeling): Products bearing the CL (Cautionary Labeling) Seal of The Art & Creative Materials Institute, Inc. (ACMI) are certified to be properly labeled in a program of toxicological evaluation by a medical expert. This program is reviewed by ACMI's Toxicological Advisory Board. These products are certified by ACMI to be labeled in accordance with the chronic hazard labeling standard, ASTM D-4236 and Federal Law, P.L. 100-695.

- **User's Responsibility**

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Educate and train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts to guard against hazards associated with use of this product and its ingredients.

- **Disclaimer**

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

CURRENT ISSUE: 07-DEC-06
PREVIOUS ISSUE: 13-FEB-06

MATERIAL SAFETY DATA SHEET

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Elmer's Products, Inc.
Emergency Phone Number:

1000 Kingsmill Parkway
Poison Control Center

Columbus, OH 43229
1-800-228-5635 ext. 022

For additional product information, access our website at www.elmers.com or call 1-888-435-6377. To place an order, call 1-800-848-9400.

SUBSTANCE: ELMER'S TEMPERA PAINTS

TRADE NAMES/SYNONYMS:
E200-2 ELMER'S BLACK TEMPERA PAINT; E200-5 ELMER'S BLUE TEMPERA PAINT; E200-7 ELMER'S BROWN TEMPERA PAINT; E200-4 ELMER'S GREEN TEMPERA PAINT; E200-8 ELMER'S MAGENTA TEMPERA PAINT; E200-9 ELMER'S ORANGE TEMPERA PAINT; E200-10 ELMER'S PEACH TEMPERA PAINT; E200-3 ELMER'S RED TEMPERA PAINT; E200-11 ELMER'S TURQUOISE TEMPERA PAINT; E200-12 ELMER'S VIOLET TEMPERA PAINT; E200-1 ELMER'S WHITE TEMPERA PAINT; E200-6 ELMER'S YELLOW TEMPERA PAINT

PRODUCT USE: paint/coating

CREATION DATE: May 08 2003
REVISION DATE: Sep 18 2003

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: NON-HAZARDOUS SUBSTANCE
CAS NUMBER: Not assigned.
PERCENTAGE: 100

SECTION 3 HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=1 FIRE=1 REACTIVITY=0

EMERGENCY OVERVIEW:
COLOR: various colors
PHYSICAL FORM: liquid
MAJOR HEALTH HAZARDS: No significant target effects reported.

POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: no information on significant adverse effects
LONG TERM EXPOSURE: no information on significant adverse effects
SKIN CONTACT:
SHORT TERM EXPOSURE: no information on significant adverse effects
LONG TERM EXPOSURE: no information on significant adverse effects
EYE CONTACT:
SHORT TERM EXPOSURE: no information on significant adverse effects
LONG TERM EXPOSURE: no information on significant adverse effects
INGESTION:
SHORT TERM EXPOSURE: no information on significant adverse effects
LONG TERM EXPOSURE: no information on significant adverse effects

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SECTION 4 FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial

respiration if not breathing. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

EYE CONTACT: Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

INGESTION: If a large amount is swallowed, get medical attention.

SECTION 5 FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Slight fire hazard.

EXTINGUISHING MEDIA: carbon dioxide, regular dry chemical, regular foam, water

FIRE FIGHTING: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

FLASH POINT: No data available.

HAZARDOUS COMBUSTION PRODUCTS:
Thermal decomposition products or combustion: oxides of carbon

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SECTION 6 ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:
Stop leak if possible without personal risk. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

SECTION 7 HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards. See original container for storage recommendations. Keep separated from incompatible substances.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:
ELMER'S TEMPERA PAINTS:
No occupational exposure limits established.

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: No respirator is required under normal conditions of use. Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: liquid
COLOR: various colors
ODOR: Not available
BOILING POINT: Not available
FREEZING POINT: Not available
VAPOR PRESSURE: Not available

VAPOR DENSITY: Not available
SPECIFIC GRAVITY: Not available
WATER SOLUBILITY: Not available
PH: Not available
VOLATILITY: Not available
ODOR THRESHOLD: Not available
EVAPORATION RATE: Not available
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

SECTION 10 STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

INCOMPATIBILITIES: oxidizing materials

HAZARDOUS DECOMPOSITION:
Thermal decomposition products or combustion: oxides of carbon

POLYMERIZATION: Will not polymerize.

SECTION 11 TOXICOLOGICAL INFORMATION

Not available

SECTION 12 ECOLOGICAL INFORMATION

Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations.

SECTION 14 TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION: No classification assigned.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS: No classification assigned.

SECTION 15 REGULATORY INFORMATION

U.S. REGULATIONS:
CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4): Not regulated.

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30): Not regulated.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40): Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):
ACUTE: No
CHRONIC: No
FIRE: No
REACTIVE: No
SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65): Not regulated.

OSHA PROCESS SAFETY (29CFR1910.119): Not regulated.

STATE REGULATIONS:
California Proposition 65: Not regulated.

CANADIAN REGULATIONS:
WHMIS CLASSIFICATION: Not determined.

NATIONAL INVENTORY STATUS:
U.S. INVENTORY (TSCA): One or more components of this product are not listed.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CANADA INVENTORY (DSL/NDSL): Not determined.

SECTION 16 OTHER INFORMATION

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SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

Safety Data Sheet:
Material Name: Elmer's School Glue
SDS ID: SDS-12
Issue Date: 2015-06-30
Revision: 1.3

Other Sections
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
Elmer's School Glue

Trade Names
Elmer's School Glue

Synonyms
US: E134; E208; E301; E304; E308; E330; E340; E1304; E1500; E4047; E513; E6134; EC1202; Canada: 30331; 60300; 60307; 60308; 60310; 60331; 60341; 50260; 50261

Product Use
adhesives

Restrictions on Use
None known.

Details of the supplier of the safety data sheet

Elmer's Products, Inc
460 Polaris Parkway, Suite 500
Westerville, OH 43082
USA
Phone:1-888-435-6377
Fax:1-800-741-6046
Email:comments@elmers.com

Emergency Phone Number:
Poison Control Center
1-888-516-2502

For additional product information, access our website at www.elmers.com. To place an order, call 1-800-848-9400.

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.
None needed according to classification criteria

GHS Label Elements

Symbol(s)
None needed according to classification criteria

Signal Word
None needed according to classification criteria

Hazard Statement(s)
None needed according to classification criteria

Precautionary Statement(s)

Prevention
None needed according to classification criteria

Response
None needed according to classification criteria

Storage
None needed according to classification criteria

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
NA	Non-hazardous substance	100

Section 4 - FIRST AID MEASURES

Inhalation
If adverse effects occur, remove to uncontaminated area. If discomfort persists, contact a physician.

Skin
If on skin, wash immediately with plenty of soap and water. Get medical attention if irritation develops.

Eyes
Remove contact lenses, if present and easy to do. IMMEDIATELY wash with large amounts of warm water, occasionally lifting upper and lower lids, until no evidence of chemical remains (at least 15-20 minutes). Get medical attention immediately.

Ingestion
Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious or convulsive person. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms/Effects

Acute
No information on significant adverse effects.

Delayed
No information on significant adverse effects.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media
carbon dioxide, regular dry chemical, regular foam, water

Unsuitable Extinguishing Media
None known.

Hazardous Combustion Products
oxides of carbon

Advice for firefighters
Slight fire hazard.

Fire Fighting Measures
Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Wear personal protective clothing and equipment. See Section 8 for personal protection information.

Methods and Materials for Containment and Cleaning Up
Stop leak if possible without personal risk. Absorb with earth, sand or other non-combustible material and transfer to container. Collect spilled material in appropriate container for disposal.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling
Use only with adequate ventilation. Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities
None needed according to classification criteria
Store in accordance with all current regulations and standards. See original container for storage recommendations. Keep separated from incompatible substances.

Incompatible Materials
oxidizing materials.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

ACGIH, NIOSH, EU, OSHA (US) and Mexico have not developed exposure limits for any of this product's components

Biological limit value
There are no biological limit values for any of this product's components.

Engineering Controls
Based on available information, additional ventilation is not required.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection
Eye protection not required under normal conditions.

Skin Protection
Protective clothing is not required under normal conditions.

Respiratory Protection
No respirator is required under normal conditions of use.

Glove Recommendations
Protective gloves are not required under normal conditions.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white liquid	**Physical State**	Liquid
Odor	mild odor	**Color**	white
Odor Threshold	Not available	**pH**	4.5 - 5.5
Melting Point	Not available	**Boiling Point**	100 °C
Freezing point	0 °C	**Evaporation Rate**	Not available
Boiling Point Range	Not available	**Flammability (solid, gas)**	Not flammable
Autoignition	Not available	**Flash Point**	Not available
Lower Explosive Limit	Not available	**Decomposition**	Not available
Upper Explosive Limit	Not available	**Vapor Pressure**	Not available
Vapor Density (air=1)	Not available	**Specific Gravity (water=1)**	1.03 +/- 0.01
Water Solubility	miscible	**Partition coefficient: n-octanol/water**	Not available
Viscosity	Not available	**Solubility (Other)**	Not available
Density	8.6 +/- 0.1	**Physical Form**	liquid

Section 10 - STABILITY AND REACTIVITY

Reactivity
No hazard expected.

Chemical Stability
Stable at normal temperatures and pressure.

Possibility of Hazardous Reactions
Will not polymerize.

Conditions to Avoid
Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials
strong oxidizing materials.

Hazardous decomposition products

Combustion
oxides of carbon

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation
No information on significant adverse effects.

Skin Contact
No information on significant adverse effects.

Eye Contact
No information on significant adverse effects.

Ingestion
No information on significant adverse effects.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and no selected endpoints have been identified

Immediate Effects
No information on significant adverse effects.

Delayed Effects
No information on significant adverse effects.

Irritation/Corrosivity Data
No information on significant adverse effects.

Respiratory Sensitization
No information available for the product.

Dermal Sensitization
No information available for the product.

Component Carcinogenicity
None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA

Germ Cell Mutagenicity
No information available for the product.

Tumorigenic Data
No data available

Reproductive Toxicity
No information available for the product.

Specific Target Organ Toxicity - Single Exposure
No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure
No target organs identified.

Aspiration hazard
No data available.

Medical Conditions Aggravated by Exposure
No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity
No LOLI ecotoxicity data are available for this product's components

Persistence and Degradability
No information available for the product.

Bioaccumulative Potential
No information available for the product.

Biodegradation
No information available for the product.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose in accordance with all applicable regulations.

Component Waste Numbers
The U.S. EPA has not published waste numbers for this product's components

Section 14 - TRANSPORT INFORMATION

US DOT Information:
UN/NA #: Not regulated.

TDG Information:
UN#: Not regulated.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations
None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.
SARA Section 311/312 (40 CFR 370 Subparts B and C)
Acute Health: No **Chronic Health:** No **Fire:** No **Pressure:** No **Reactivity:** No

U.S. State Regulations
None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA

Not listed under California Proposition 65

Canada Regulations
This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Canadian WHMIS Ingredient Disclosure List (IDL)
The components of this product are either not listed on the IDL or are present below the threshold limit listed on the IDL.
WHMIS Classification
Not a Controlled Product under Canada's Workplace Hazardous Material Information System.

Component Analysis - Inventory

U.S. Inventory (TSCA)
All the components of this substance are listed on or are exempt from the inventory.

Section 16 - OTHER INFORMATION

NFPA Ratings

Health: 1 Fire: 1 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes
New SDS: 09/09/2014

Key / Legend
ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:
Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

SAFETY DATA SHEET
CHARBONNEL ENCRE TAILLE DOUCE BLANC COUVRANT RS / ETCHING INK COVERING WHITE RS

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME: CHARBONNEL ENCRE TAILLE DOUCE BLANC COUVRANT RS / ETCHING INK COVERING WHITE RS

SUPPLIER:
ColArt International SA
5 Rue Rene Panhard
Z.I .Nord
72021 Le Mans Cedex 2
+33 2 43 83 83 00
Lefranc-Bourgeois@colart.fr

APPLICATION: Fine Art Painting

2 HAZARDS IDENTIFICATION

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CLASSIFICATION (1999/45): N;R50/53.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification (67/548)
Zinc oxide	215-222-5	1314-13-2	30-60%	N;R50/53.

The Full Text for all R-Phrases are Displayed in Section 16

4 FIRST-AID MEASURES

GENERAL INFORMATION

No recommendation given.

INGESTION

Get medical attention. NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS!

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.

6 ACCIDENTAL RELEASE MEASURES

SPILL CLEAN UP METHODS

Smaller quantities of residue may be collected by an absorbent.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Read and follow manufacturer's recommendations.

STORAGE PRECAUTIONS

Store at moderate temperatures in dry, well ventilated area.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

OTHER PROTECTION

No specific protective equipment noted, but may be required anyway.

HYGIENE MEASURES

When using do not eat, drink or smoke.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Coloured paste

COLOUR: White

ODOUR: Oil smell

RELATIVE DENSITY: 1.1-1.9 20°C

10 STABILITY AND REACTIVITY

STABILITY

No particular stability concerns.

11 TOXICOLOGICAL INFORMATION

GENERAL INFORMATION

No specific health warnings noted.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

The product contains a substance which is very toxic to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements.

14 TRANSPORT INFORMATION

PROPER SHIPPING NAME	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.		
PROPER SHIPPING NAME	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.		
UN NO. ROAD	3082	ADR CLASS	Class 9: Miscellaneous dangerous substances and articles.
ADR PACK GROUP	III	UN NO. SEA	3082
IMDG CLASS	9	IMDG PACK GR.	III
MARINE POLLUTANT		UN NO. AIR	3082



AIR CLASS	9	AIR PACK GR.	III

15 REGULATORY INFORMATION

LABELLING



Dangerous for the environment

RISK PHRASES

R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SAFETY PHRASES

S29	Do not empty into drains.
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

EU DIRECTIVES

Dangerous Substance Directive 67/548/EEC. Dangerous Preparations Directive 1999/45/EC. System of specific information relating to Dangerous Preparations. 2001/58/EC.

16 OTHER INFORMATION

DATE 16/11/2010

RISK PHRASES IN FULL

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

DISCLAIMER

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in a process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

SAFETY DATA SHEET

ENDUST (AEROSOL)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	ENDUST (AEROSOL)
Other means of identification	:	not applicable
Recommended use	:	Cleaning product
Restrictions on use	:	Reserved for industrial and professional use.
Product dilution information	:	Product is sold ready to use.
Company	:	Ecolab Inc. 370 N. Wabasha Street St. Paul, Minnesota USA 55102 1-800-352-5326
Emergency telephone	:	1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)
Issuing date	:	06/02/2014

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable aerosols	:	Category 2
Gases under pressure	:	Compressed gas
Skin sensitization	:	Category 1
Specific target organ systemic toxicity - single exposure	:	Category 3 (Central nervous system)

GHS Label element

Hazard pictograms :



Signal Word : Warning

Hazard Statements : Flammable aerosol.
Contains gas under pressure; may explode if heated.
May cause an allergic skin reaction.
May cause drowsiness or dizziness.

Precautionary Statements : **Prevention:**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. Intentional misuse by deliberate inhalation may be harmful or fatal.
Response:
IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. If skin irritation or rash occurs: Get medical advice/ attention.

Wash contaminated clothing before reuse.
Storage:
Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards : None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration (%)
white mineral oil, petroleum	8042-47-5	30 - 60
distillates (petroleum), hydrotreated light	64742-47-8	10 - 30
Aliphatic hydrocarbons	106-97-8	10 - 30
terpenes and terpenoids, sweet orange-oil	68647-72-3	5 - 10
propane	74-98-6	5 - 10

SECTION 4. FIRST AID MEASURES

In case of eye contact : Rinse with plenty of water.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Notes to physician : Treat symptomatically.

See toxicological information (Section 11)

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire fighting : Pressurized container: May burst if heated.
Flammable aerosols

Hazardous combustion products : Decomposition products may include the following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulfur oxides
Oxides of phosphorus

Special protective equipment : Use personal protective equipment.

for fire-fighters

Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Do not get in eyes, on skin, or on clothing. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. Contents under pressure. Do not puncture. Wash hands thoroughly after handling.

Conditions for safe storage : Keep in a cool, well-ventilated place. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

Storage temperature : 0 °C to 40 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Form of exposure	Permissible concentration	Basis
white mineral oil, petroleum	8042-47-5	TWA (Mist)	5 mg/m3	NIOSH REL
		STEL (Mist)	10 mg/m3	NIOSH REL
		TWA (Mist)	5 mg/m3	OSHA Z1
distillates (petroleum), hydrotreated light	64742-47-8	TWA	500 ppm 2,000 mg/m3	OSHA Z1
		TWA	200 mg/m3	ACGIH
Aliphatic hydrocarbons	106-97-8	TWA	800 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm	ACGIH
propane	74-98-6	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,800 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,800 mg/m3	OSHA Z1

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations

below occupational exposure standards.

Personal protective equipment

Eye protection	:	No special protective equipment required.
Hand protection	:	Wear the following personal protective equipment: Standard glove type. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	No special protective equipment required.
Respiratory protection	:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	aerosol
Color	:	white
Odor	:	Floral
pH	:	not applicable
Flash point	:	not applicable, Sustains combustion
Odor Threshold	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point and boiling range	:	< 35 °C
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapor pressure	:	no data available
Relative vapor density	:	no data available
Relative density	:	0.84 - 0.86
Water solubility	:	soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Autoignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, kinematic	:	no data available
Explosive properties	:	no data available
Oxidizing properties	:	no data available

Molecular weight	:	no data available
VOC	:	no data available
Heat of combustion	:	10.65 kJ/g

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	None known.
Incompatible materials	:	None known.
Hazardous decomposition products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulfur oxides Oxides of phosphorus

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Eye contact Skin contact

Potential Health Effects

Eyes	:	Health injuries are not known or expected under normal use.
Skin	:	May cause allergic skin reaction.
Ingestion	:	Health injuries are not known or expected under normal use.
Inhalation	:	Inhalation may cause central nervous system effects. Intentional misuse by deliberate inhalation may be harmful or fatal.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	No symptoms known or expected.
Skin contact	:	Redness, Irritation, Allergic reactions
Ingestion	:	No symptoms known or expected.
Inhalation	:	Dizziness, Drowsiness

Toxicity

Acute oral toxicity	:	no data available
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	no data available

Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available
Respiratory or skin sensitization	:	no data available
Carcinogenicity		
IARC		No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA		No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP		No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT-single exposure	:	no data available
STOT-repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Ingredients

Acute oral toxicity	:	white mineral oil, petroleum LD50 rat: > 5,000 mg/kg distillates (petroleum), hydrotreated light LD50 rat: > 5,000 mg/kg

Ingredients

Acute inhalation toxicity	:	Aliphatic hydrocarbons 4 h LC50 rat: 280000 ppm

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects	:	Toxic to aquatic life with long lasting effects.

Product

Toxicity to fish	:	no data available
Toxicity to daphnia and other aquatic invertebrates	:	no data available
Toxicity to algae	:	no data available

Ingredients

Toxicity to fish	:	white mineral oil, petroleum 96 h LC50 Fish: > 100 mg/l distillates (petroleum), hydrotreated light 96 h LC50: > 1,000 mg/l

Aliphatic hydrocarbons
96 h LC50 Fish: 22.03 mg/l

Ingredients

Toxicity to daphnia and other aquatic invertebrates : distillates (petroleum), hydrotreated light
72 h EC50: > 1,000 mg/l

Ingredients

Toxicity to algae : distillates (petroleum), hydrotreated light
48 h EC50: > 1,000 mg/l

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

UN number : 1950
Description of the goods : Aerosols
Class : 2.1
Environmentally hazardous : no

Sea transport (IMDG/IMO)

UN number : 1950
Description of the goods : AEROSOLS
Class : 2.1
Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards	:	Fire Hazard Acute Health Hazard Sudden Release of Pressure Hazard
SARA 302	:	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313	:	SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

1907/2006 (EU) :
not determined

Switzerland. New notified substances and declared preparations :
not determined

United States TSCA Inventory :
On TSCA Inventory

Canadian Domestic Substances List (DSL) :
All components of this product are on the Canadian DSL.

Australia Inventory of Chemical Substances (AICS) :
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemical Substances :
On the inventory, or in compliance with the inventory

Japan. ENCS - Existing and New Chemical Substances Inventory :
not determined

Japan. ISHL - Inventory of Chemical Substances (METI) :
not determined

Korea. Korean Existing Chemicals Inventory (KECI) :
On the inventory, or in compliance with the inventory

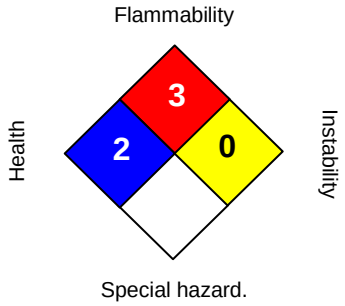
Philippines Inventory of Chemicals and Chemical Substances (PICCS) :
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances in China (IECSC) :
On the inventory, or in compliance with the inventory

ENDUST (AEROSOL)

SECTION 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	2*
FLAMMABILITY	3
PHYSICAL HAZARD	2

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Issuing date	:	06/02/2014
Version	:	1.0
Prepared by	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

96000
MEDICAL EMERGENCY ONLY, 24 HOUR SERVICE: 1-800-328-0026
Medical Calls from Outside of the USA: 612 292 4064 (USA)
PROFESSIONAL PRODUCTS ECOLAB INC.
370 WABASHA STREET NORTH
ST. PAUL MN 55102
Product Info: 1-800-247-5362
Date of Issue: January 24, 1997

1.0 IDENTIFICATION

1.1 Product Name: ENDUST FOR ELECTRONICS (AEROSOL)
1.2 Product Type: Aerosol Dusting Agent
1.3 Hazard Rating:
Health: 1
Fire: 3
Reactivity: 0

++ SARA 313 Toxic Chemicals, If Present, Are Preceded by "#" ++

2.0 HAZARDOUS COMPONENTS

	%	(mg/m3) PEL	TWA
2.1 2-Propanol (Isopropyl alcohol, IPA) 67-63-0	10-15	980 *ACGIH STEL = 1230	*
2.2 Isobutane 75-28-5	5-10	None	None
2.3 # Butoxyethanol (Skin) 111-76-2	1-3	240	121

3.0 PHYSICAL DATA

3.1 Appearance: Aerosol with citrus odor
3.2 Solubility in Water: Partial
3.3 Use Solution pH: Not Applicable

4.0 FIRE AND EXPLOSION DATA

4.1 Special Fire Hazards: Contents under pressure. Flammable.
4.2 Fire Fighting Methods: Water may be ineffective - water may be used to keep fire exposed containers cool.
4.3 Flash Point: >212 deg F (closed cup) on concentrate. Propellant extremely flammable (-117 deg F). To reduce flammability, shake well before using.
4.4 Flammable Limits -
Lower: Not determined
Upper: Not determined
4.5 Level I Aerosol (NFPA 30B-90)

5.0 REACTIVITY DATA

5.1 Stability: Stable under normal conditions of handling.
5.2 Conditions to Avoid: Do not spray near fire or open flame. Do not store above 120 deg F. Exposure to sunlight or other heat may cause bursting.

6.0 SPILL AND LEAK PROCEDURES

6.1 Remove or turn off all ignition sources. Ventilate. Avoid breathing vapors and remove with inert absorbent.
6.2 Do not puncture or incinerate container. Wrap empty container in newspaper and put in trash.

7.0 HEALTH HAZARD DATA

CAUTION
7.1 Effects of Overexposure to Concentrate:
Skin and Eyes: May cause irritation, depending upon degree of exposure.
If Swallowed: Harmful or fatal if swallowed.
If Inhaled: Deliberate inhalation can be harmful or fatal. Excessive airborne concentrations may cause breathing difficulties, dizziness or headaches.

8.0 FIRST AID

/8aerosol
IN CASE OF DELIBERATE INHALATION OF PRODUCT, CALL A PHYSICIAN OR THE 24-HOUR MEDICAL EMERGENCY NUMBER (800-328-0026) IMMEDIATELY

9.0 PROTECTIVE MEASURES

9.1 FOR CONCENTRATE:
Respiratory: Avoid breathing mists or vapors containing product.

10.0 ADDITIONAL INFORMATION/PRECAUTIONS

10.1 DOT Information: ORM-D (AIR).
10.2 Purpose of 01/24/97 issue: Edit without data changes.
KEEP OUT OF REACH OF CHILDREN

The above information is believed to be correct with respect to the formula used to manufacture the product. As data, standards and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES: Although preparer and owner have taken reasonable care in the preparation of this document, we extend no warranties and make no representation as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each user should make a determination as to the suitability of the information for their particular purpose(s). This MSDS is the most recent received from the product manufacturer or distributor.

COMPAS Code: 46410120

Material Safety Data Sheet

ENFORCER
Enforcer Products
A unit of Zep Inc.
P.O. Box 1060
Cartersville, GA 30120
1-888-805-HELP (4357)
www.enforcer.com

Section 1. Chemical Product and Company Identification

Product name **Enforcer Bugmax Home Pest Control**

Product code **EBM**

Date of issue **12/02/08** **Supersedes**

This product is a registered pesticide. EPA ID No. 40849-80

Emergency Telephone Numbers

For MSDS Information:
Compliance Services 404-352-1680

For Medical Emergency
(877) 541-2016 Toll Free - All Calls Recorded

For Transportation Emergency
CHEMTREC: (800) 424-9300 - All Calls Recorded
In the District of Columbia (202) 483-7616

Prepared By
Compliance Services
1420 Seaboard Industrial Blvd.
Atlanta, GA 30318

Section 2. Hazards Identification

Emergency overview

CAUTION !

MAY CAUSE SKIN IRRITATION.

*Hazard Determination System (HDS): Health, Flammability, Reactivity



NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

Acute Effects **Routes of Entry** Dermal contact. Eye contact. Ingestion.

Eyes May cause eye irritation. Inflammation of the eye is characterized by redness, watering and itching.

Skin May cause slight transient irritation. Skin inflammation is characterized by itching, scaling, or reddening.

Inhalation No known acute effects of this product resulting from inhalation.

Ingestion Ingestion may cause gastrointestinal irritation and diarrhea.

No known chronic effects from exposure.

Carcinogenicity Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

Name of Hazardous Ingredients	CAS number	% by Weight
Deltamethrin	52918-63-5	0.03

Section 4. First Aid Measures

Eye Contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Skin Contact Flush affected skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops.

Inhalation Inhalation not likely under normal use conditions. Move exposed person to fresh air.

Ingestion Do not induce vomiting unless directed to do so by medical personnel. Get medical attention immediately.

Section 5. Fire Fighting Measures

National Fire Protection Association (U.S.A.)



Flash Point Closed cup: >93°C (>199.4°F)

Flammable Limits Not available.

Flammability Non-flammable.

Fire hazard In a fire or if heated, a pressure increase will occur and the container may burst.

Fire-Fighting Procedures Use an extinguishing agent suitable for the surrounding fire. Do not release runoff from fire to sewers or waterways.

Section 6. Accidental Release Measures

Spill Clean up Put on appropriate personal protective equipment (see section 8). Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

Section 7. Handling and Storage

Handling Put on appropriate personal protective equipment (see section 8). Store and use away from heat, sparks, open flame or any other ignition source. Do not get in eyes or on skin or clothing. Do not ingest. Do not reuse container. Wash thoroughly after handling. Apply this product only as specified on the label.

Storage Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Protect from freezing. Keep container tightly closed and sealed until ready for use. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection

Product name	Exposure limits
Deltamethrin	**Manufacturer (United States).** STEL: 100 µg/m³ 15 minute(s). TWA: 45 µg/m³ 8 hour(s).

Personal Protective Equipment (PPE)



Eyes Recommended: Safety glasses.

Body Wear appropriate protective clothing to prevent skin contact. Recommended: Neoprene gloves. Rubber gloves. Nitrile gloves.

Respiratory No special ventilation requirements.

Section 9. Physical and Chemical Properties

Physical State Liquid. [Slightly Viscous liquid.]

pH Not available.

Boiling Point 100°C (212°F)

Specific Gravity 1

Solubility Soluble in the following materials: cold water and hot water.

Color Opaque.

Odor Characteristic. [Slight]

Vapor Pressure Not determined.

Vapor Density Not determined.

Evaporation Rate Not available.

VOC (Consumer) 2.99 (g/l). 0.02 lbs/gal (0.3%)

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Incompatibility Keep away from heat, sparks and flame.

Hazardous Polymerization Will not occur.

Hazardous Decomposition Products carbon oxides (CO, CO_2)

Section 11. Toxicological Information

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Deltamethrin	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>66.7 mg/kg	-

Section 12. Ecological Information

Environmental Effects This material is toxic to aquatic organisms. Avoid contact of spilled material with soil and prevent runoff entering surface waterways.

Aquatic Ecotoxicity

Not available.

Section 13. Disposal Considerations

Waste Information

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities for additional information.

Waste Stream Non-hazardous waste

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label
DOT Classification	None.	Not regulated.			
TDG Classification	Not regulated.	Not a TDG-controlled material.			
IMDG Class	Not determined.				

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.

PG* : Packing group

Section 15. Regulatory Information

U.S. Federal Regulations

SARA 313 toxic chemical notification and release reporting:

No products were found.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

All Components of this product are listed or exempt from listing on TSCA Inventory.

State Regulations

California Prop 65 No products were found.

Canada

WHMIS (Canada) Class D-1B: Material causing immediate and serious toxic effects (Toxic).

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**NOTE: Hazard Determination System (HDS) ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although these ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HDS ratings are to be used with a fully implemented program to relay the meanings of this scale.*

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Estes Model Rocket Engines**

PRODUCT NUMBER:

TRADE NAME: Estes Model Rocket Engines

GENERAL USE: Model Rocket Propulsion

CHEMICAL FAMILY: Insensitive Explosive (Class 1.4)

PRODUCT DESCRIPTION:

Kraft paper cylinder with light gray clay at ends, one end has a small orifice with black material inside. Sulfur odor.

MANUFACTURED FOR:

Estes-Cox Corp. d/b/a Estes Industries

ADDRESS (NUMBER, STREET, P.O. BOX)

P.O. Box 227, 1295 H Street

(CITY, STATE AND ZIP CODE) COUNTRY

Penrose. CO 81240 **USA**

DATE PREPARED: **January 7, 2011**

SUPERSEDES: **August 5, 2010**

TELEPHONE NUMBER FOR GENERAL INFORMATION

719-372-6565

CHEMTEL 24-HOUR EMERGENCY TELEPHONE NUMBER

ChemTel INC. **1-800-255-3924** North America Toll Free **01-813-248-0585** International

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! THIS DEVICE CONTAINS A FAST BURNING CHARGE. KEEP AWAY FROM FIRE AND HEAT SOURCES. SEVERE MECHANICAL IMPACT MAY DEFORM PRODUCT. Individual cartridges may ignite if the unit is exposed to extreme heat as seen with fire conditions. Oxides of Nitrogen, Carbon, and Sulfur may be formed. Keep out of the reach of young children and pets. Adult supervision is strongly encouraged when product is used, especially by young children. Product contents are harmful by ingestion. Ignition of product when confined may lead to an explosion.

POTENTIAL HEALTH EFFECTS

INHALATION:

Normal handling of the unused product poses no exposure hazards. When the product is used, particles and vapors may be generated which may cause temporary slight irritation to the respiratory tract; this is a rare occurrence when the product is used as directed..

SKIN:

Unlikely to cause irritation to skin. Particles from ignited product may cause thermal burns.

EYES:

Unlikely to cause irritation to eyes; In unusual cases, particulates from used product may cause irritation.

INGESTION:

Ingestion of product is highly unlikely. Components of product are harmful and will cause irritation to gastro-intestinal tract.

CARCINOGENICITY:

Product contains silica, which is considered carcinogenic by the State of California (Proposition 65).

SECTION 3 - HAZARDOUS INGREDIENTS

Hazardous Components	% (wt)	CAS #	EINECS #	EU Hazard Symbol(s)	EU RISK PHRASES (Full Text Sections 15 & 16)
Potassium nitrate	**60-80**	**7757-79-1**	**231-818-8**	**Xn, O**	**R8, R36/37/38**
Sulfur	**10-20**	**7704-34-9**	**231-722-6**	**F, Xi**	**R11, R36/37/38**
Charcoal	**10-20**	**16291-96-6**	**240-383-3**	**None**	**None**
Graphite	**NR**	**7782-42-5**	**231-955-3**	**None**	**None**

NOTES: This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS), and European Union Directives. Hazard symbols and risk phrases are based on maximum listed concentration of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS) or the European (GHS) directives and are considered trade secrets under US Federal Law (29CFR and 40CFR), Canadian Law (Health Canada Legislation), and European Union Directives.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: **Estes Model Rocket Engines**
PRODUCT NUMBER:

SECTION 4 - FIRST AID MEASURES

INHALATION:

If symptoms of lung irritation occur (coughing, wheezing or breathing difficulty), remove from exposure area to fresh air immediately. Get medical attention in the unusual event of severe distress.

EYES:

Remove contact lenses, then wash for 15 minutes with clean potable water lifting upper and lower lids occasionally. Seek medical attention if irritation persists.

SKIN:

Wash with plenty of soap and water. Seek medical attention if delayed dermatitis develops (a rare condition).

INGESTION:

Contact medical authorities immediately. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs naturally, have victim lean forward to avoid aspiration of regurgitant. Give 1-2 glasses of water to victim if victim is conscious and able to swallow and seek immediate medical assistance. Never give anything by mouth to an unconscious person. **Note to Physician: This product contains nitrates, which may produce methemoglobinemia. Methylene blue may be required for treatment. Treatment should be aimed at reducing methemoglobin levels, as well as providing respiratory and metabolic support. As product contains charcoal, gastric lavage may be of benefit within 30-60 minutes post-ingestion.**

SECTION 5 - FIRE FIGHTING MEASURES

GENERAL HAZARDS:

Flammability Classification: (defined by 29 CFR 1910.1200) Class 1.4 Explosive. Can rapidly burn or explode (if confined in metal or similar situations) under fire conditions. Individual devices will randomly burn and/or explode. Product will not mass explode if multiple devices are involved. Burning material may produce toxic and irritating vapors. See Emergency Response Guidebook for further information. Mechanical impacts or electrical discharges are highly unlikely to cause product to ignite.

EXTINGUISHING MEDIA:

Where large quantities are affected, flood area with water; if fire is already consuming product, incident command should base fire-fighting decisions on capabilities and total quantity of product. If no water is available, carbon dioxide, dry chemical or earth may be used

FIRE FIGHTING PROCEDURES:

In case of fire, use normal fire fighting equipment. Protection concerns must also address the potential of the physical characteristic of this product as explosive. Quarantine area for fires involving large quantities of product.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

If fire reaches a large quantity of product, consider a withdrawal of personnel to a safe distance. Evacuate all persons, including emergency responders from the area for at least 500 feet (1/10 mile) in all directions.

HAZARDOUS COMBUSTION PRODUCTS:

Carbon Monoxide, Carbon Dioxide, Nitrous Oxides, Sulfur Oxides

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Model rocket engines are devices in a solid state. Simply pick up and place in containers approved for storage and transport. Wipe up any dust with wet cloths. **IF PRODUCT IS DAMAGED, DO NOT USE PRODUCT; DISCARD IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. SEE SECTION 13.**

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

HANDLING: Product may burn/explode if exposed to extreme heat. Do not smoke while handling product. DO NOT ATTEMPT TO DISMANTLE PRODUCT!!
STORAGE: Avoid storage near extreme heat, ignition sources or open flame. Store at 32° - 140° F (0°-60° C). Store away from living quarters.
CONDITIONS TO AVOID: Heat/flame/sparks, Severe mechanical impact (which may deform product, rendering it unsafe for use).

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: **Estes Model Rocket Engines**
PRODUCT NUMBER:

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Hazardous Components	CAS #	ACGIH Exposure Limits	OSHA Exposure Limits
Potassium nitrate	7757-79-1	NE	NE
Sulfur	7704-34-9	15 mg/m3	15 mg/m3
Charcoal	16291-96-6	NE	NE
Graphite	7782-42-5	2 mg/m3	2.5 mg/m3 (respirable dust)

PERSONAL PROTECTION

RESPIRATORY PROTECTION:
A vapor respirator may be advisable or required under emergency conditions.

PROTECTIVE GLOVES:
None generally required.

EYE PROTECTION:
Always follow the National Association of Rocketry (NAR) Model Rocketry Safety Code and all applicable laws and regulations.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
Not required when product is used as directed by manufacturer.

WORK / HYGIENIC PRACTICES:
Avoid breathing fumes from ignition. Do not smoke while handling product; eating and drinking are also to be avoided.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

DESCRIPTION: Sulfur Odor - See Note for Appearance.	CONDITIONS TO AVOID: Not applicable.
pH Not applicable.	SPECIFIC GRAVITY (WATER = 1) Not applicable
MELTING POINT Not applicable.	SOLUBILITY IN WATER Insoluble - some components are soluble in water
FLASH POINT Not applicable.	VISCOSITY Not applicable
FLAMMABLE LIMITS LEL: None UEL: None	VAPOR DENSITY (AIR = 1) Not applicable.
AUTOIGNITION TEMPERATURE NR	EVAPORATION RATE (WATER = 1) Not applicable.

VOLATILE ORGANIC COMPOUND (VOC) INFORMATION
Not applicable.

NOTES: Appearance and Odor: Kraft paper cylinder with light gray clay at ends, one end has a small orifice with black material inside

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressure.	CONDITIONS TO AVOID: Extreme heat; extreme mechanical impacts.

INCOMPATIBILITY (MATERIALS TO AVOID):
Acids, Class A & B explosives, strong oxidizers.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:
Carbon Monoxide, Carbon Dioxide, Nitrous Oxides, Sulfur Oxides under fire conditions only.

HAZARDOUS POLYMERIZATION: Will not occur.	CONDITIONS TO AVOID: None related to polymerization.

SECTION 11 - TOXICOLOGICAL INFORMATION

Complete Product

Oral LD_{50}	Product contents are harmful; ingestion of used product is highly unlikely.
Dermal LD_{50}	Product is unlikely to cause skin irritation. Ignited particles may cause thermal burns.
Inhalation LC_{50}	Unused product is harmless. Vapors/particles from deployed product may be irritating.
Irritation	Not a skin or eye irritant in unused form. Particulates and vapors from ignited product are possibly irritating to eyes and respiratory system in unusual cases.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: **Estes Model Rocket Engines**
PRODUCT NUMBER:

SECTION 11 - TOXICOLOGICAL INFORMATION Continued

Product Components

Hazardous Components	CAS #	LD50 of Ingredient (Oral, Rat - unless otherwise specified)	LC50 of Ingredient (Inhalation, Rat - unless otherwise specified)
Potassium nitrate	**7757-79-1**	**Not Established**	**Not Established**
Graphite	**7782-42-5**	**Not Established**	**Not Established**
Charcoal	**16291-96-6**	**Not Established**	**Not Established**
Sulfur	**7704-34-9**	**> 8437 mg/kg**	**Not Established**

SECTION 12 - ECOLOGICAL INFORMATION

No data is available on this product, but both unused and used engines may be harmful if ingested by animals. Collection and careful disposal of spent engines is highly advisable; soak used engines in water until disintegration occurs, then discard with normal trash.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous. Damaged materials may pose a danger. To dispose of a small quantity of product, soak in water until the engine disintegrates, then dispose of remnants in an ordinary manner. For large quantities, incineration in a licensed facility is preferable.

SECTION 14 - TRANSPORT INFORMATION

DOMESTIC SHIPPING WITHIN THE USA

PROPER SHIPPING NAME: **Flammable solid, organic, n.o.s. (Model rocket kits containing motors with or without un-installed igniters), UN 1325, Div. 4.1, PG II (CARGO AIRCRAFT ONLY if shipped by air)**

DOT HAZARD CLASS / Pack Group: **Class 4.1 / PG II**

REFERENCE: **DOT SP-7887**

LABEL: **Flammable Solid or Explosives 1.4S**

HAZARD SYMBOLS: **See notes for correct symbols**



UN / NA IDENTIFICATION NUMBER: **UN1325**

NOTES: **Shipped via the United States Postal Service via Surface Mail Only as: Toy Propellant Devices, NA0323, Class 1.4S/ PG II for engines with ≤30 g of propellant. Engines with more than 30g of propellant may not be shipped by the USPS.**

INTERNATIONAL SHIPPING

PROPER SHIPPING NAME: **Articles, Pyrotechnic, UN 0432, Div. 1.4S, PG II (Engines with ≤30 g of propellant) Cartridges, Power Device, UN 0276, Div. 1.4C, PG II (Engines with >30 g of propellant)**

IMDG HAZARD CLASS / Pack Group: **Class 1.4S or 1.4C PG II (Catergory 05 - UN 0432; Category 06 - UN 0276) EmS: F-B, S-X**

IATA HAZARD CLASS / Pack Group: **Class 1.4S / PG II or 1.4C PG II (See Notes)**

RID/ADR HAZARD CLASS / Pack Group: **Class 1.4S / PG II or 1.4C PG II, EAC=1Y**

TDG (Canada) HAZARD CLASS / Pack Group: **Class 1.4S / PG II or 1.4C PG II**

REFERENCE: IMDG. IATA, RID/ADR, TDG

LABEL: **Explosive, Class 1.4 (C or S), CAO (1.4C only)**

HAZARD SYMBOLS: **See notes for correct symbols**



UN / NA IDENTIFICATION NUMBER: **UN 0432 or UN 0276**

NOTES: **Engines with >30g propellant (Class 1.4C) may not be shipped on a passenger aircraft; 75 kg is the maximum load per Cargo Only Aircraft (CAO). For engines with ≤30 g of propellant, 25kg is the maximum load for passenger aircraft, 100 kg is the maximum for CAO.**

Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: **Estes Model Rocket Engines**
PRODUCT NUMBER:

SECTION 15 - REGULATORY INFORMATION

TSCA (USA - Toxic Substance Control Act): **Components are listed under Section8b.**

SARA TITLE III (USA - Superfund Amendments and Reauthorization Act):

Acute Health:	**YES**	Chronic Health:	**NO**
Fire:	**YES**	Sudden Release of Pressure:*	**YES**
Reactive:	**NO**	* - Only if confined under fire conditions	

SARA 313 REPORTABLE INGREDIENTS: **None**

CERCLA (USA - Comprehensive Response Compensation and Liability Act): **Potassium Nitrate is CERCLA reportable.**

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: **WARNING: This product contains silica, a chemical known to the state of California to cause cancer.**

State Right To Know Laws: **This product contains chemicals listed on the RTK Laws of CA, FL, MA, MI, MN, NJ, PA, & RI.**

CPR (Canadian Controlled Products Regulations): **Exempt under WHMIS regulations as explosive.**

IDL (Canadian Ingredient Disclosure List): **Components are listed in Section 2.**

DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List): **Listed or exempt on both CDSL and NDSL.**

EINECS (European Inventory of Existing Commercial Chemical Substances): **Referenced**

WGK Water Quality Index: **NA for product.**

EUROPEAN (GHS) HAZARD SYMBOLS





EU RISK PHRASES

R2: Risk of explosion by shock, friction, fire or other sources of ignition.
R22: Harmful if swallowed.

EU SAFETY PHRASES

S1/2: Keep locked up and out of the reach of children.

SECTION 16 - OTHER INFORMATION

HMIS HAZARD RATINGS

0 = INSIGNIFICANT ,1 = SLIGHT
2 = MODERATE, 3 = HIGH
4 = EXTREME

HEALTH:	1
FLAMMABILITY:	3
PHYSICAL HAZARD:	1

Personal Protective Equipment: See Section 8

Legend:

ACGIH - American Congress of Government Industrial Hygienists , CAS - Chemical Abstracts Service
EINECS- European Inventory of Existing Commercial Chemical Substances
HMIS - Hazardous Materials Identification System, IARC - International Agency for Research on Cancer
NA - Not Available , ND - Not Determined, NE - Not Established, NR - Not Reported
NIOSH - National Institute for Occupational Safety and Health, NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration

Full R-Phrases (Not listed in Section 15): R8 Contact with combustible material may cause fire. R11 Highly Flammable. R36/37/38 Irritating to eyes, respiratory system and skin.

REVISION SUMMARY: Revised 1/4/2011 - LB.

MSDS Prepared by:
ChemTel Inc.
1305 North Florida Avenue
Tampa, Florida USA 33602-2902
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtelinc.com

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT IDENTIFICATION

The following products are pesticide products registered by the U.S. EPA. All products contain p-dichlorobenzene as the active ingredient. It is a violation of Federal Law to use these products in a manner not consistent with the product label.

Product Name	EPA Registration No.	Willert Item No.
Enoz Moth Cake	1475-7	125
Enoz Moth Cake Refill	1475-7	125R
Enoz Moth Cake Cedar Scented	1475-113	139
Enoz Moth-Tek Paper Covered Moth Ball Packets Lavender Scented	1475-143	219
Enoz Moth-Tek Paper Covered Moth Ball Packets Cedar Scented	1475-143	220
Enoz Mildew Cake	1475-113	492
Enoz Moth Blok	1475-7	493
Enoz Moth Bar Cedar Scented	1475-113	495
Enoz Moth Bar Potpourri	1475-113	496
Enoz Para Moth Balls (5 oz. bag)	1475-39	505P
Enoz Moth Sachettes Lavender Scented	1475-144	656
Enoz Plastic Hang Up Moth Case	1475-113	4023
Enoz Moth & Deodorant Cakes Perfumed Refills for Plastic Hang-Up Case	1475-113	4133
Enoz No Cling Odor Moth Cake	1475-40	C39
Enoz Para Moth Balls (5 oz.)	1475-39	E28
Enoz Para Moth Balls (10 oz.)	1475-39	E30
Enoz Moth Ice Crystals	1475-1	F39
Enoz Moth Bar Lavender	1475-113	496
Paradichlorobenzene Moth-Ice Crystals (Bulk)	1475-1	PARABC
Paradichlorobenzene (Bulk)	1475-21	PARAD
Reefer-Galler No Moth Closet Hanger	1475-157	1002
Reefer-Galler No Moth Refills	1475-157	1021
Reefer-Galler Snowhite Nuggets	1475-1	1123/1124
Reefer-Galler No Moth Hangerette	1475-7	1141
Reefer-Galler Moth-Tek Paper Covered Moth Ball Packets Cedar Scented	1475-143	1142
Reefer-Galler No Mildew Cake	1475-69	1210
Reefer-Galler Moth Cake	1475-113	1214
Reefer-Galler Old Fashioned Lavender Scented Moth Sachettes	1475-144	1412
Martha Stewart Everyday Paper-Covered Moth Ball Packets	1475-143-74082	MS590
Martha Stewart Everyday Hanging Moth Cakes	1475-113-74062	MS594
Martha Stewart Everyday Moth Ice Crystals	1475-1-74082	MS592
Martha Stewart Everyday Moth Bar	1475-113-74082	MS596
Martha Stewart Everyday Para Moth Balls	1475-39-74082	MS598

Willert Home Products
4044 Park Avenue
St. Louis, MO 63110

EMERGENCY TELEPHONE NUMBER: 314-772-2822 (8:30 AM to 4:30 PM CST)
CHEMTREC 800-424-9300

THE INFORMATION CONTAINED IN THIS MATERIAL SAFETY SHEET IS DIRECTED AT OCCUPATIONAL EXPOSURE AND MAY NOT BE APPLICABLE TO CONSUMER USE OF THE PRODUCTS.

SECTION 2: HAZARDOUS COMPONENT INFORMATION

Hazardous Ingredients	CAS Number	Wt. %
p-dichlorobenzene (1,4-dichlorobenzene)	106-46-7	95+

SECTION 3: HAZARDS IDENTIFICATION

Emergency Overview: White balls, blocks, crystals, nuggets or tablets. Some products may be incased in paper bags (packets) or plastic containers and some products contain fragrance. Harmful if swallowed or inhaled. Dust and vapors may cause eye and respiratory tract irritation. Flammable.

Potential Health Effects:

Relevant Routes of Exposure: Inhalation, Ingestion, Eye Contact, Skin Contact.

Acute Effects:

Ingestion: Symptoms may also include nausea, vomiting, diarrhea, and stomach distress.
Eyes: Vapors may cause irritation. Dust or particles can cause severe irritation.
Inhalation: Dust and vapors can cause respiratory tract irritation. Vapor concentrations of p-dichlorobenzene that exceed permissible exposure limits can cause central nervous system depression. Symptoms could include the dizziness, blurred vision, nausea, feeling of drunkenness, unconsciousness and even death.
Skin: Repeated or prolonged contact may cause a skin irritation.

Carcinogenicity: Listed by NTP and IARC as a carcinogen.

Reproductive Effects: None known.

Target Organs: Ocular, respiratory, dermal, liver, kidneys, central nervous (CNS).

Medical Conditions Aggravated By Exposure: Liver, kidney, chronic respiratory disease.

SECTION 4: FIRST AID PROCEDURES

First Aid Procedures:

EYES: Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Remove contact lenses, if present, after the first five minutes and continue rinsing the eye. Call a physician or poison control center immediately.

SKIN: Immediately flush skin with plenty of water while removing contaminated clothing and shoes. Wash clothing before reuse. If irritation occurs, get medical attention.

INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

INGESTION: Do not give anything by mouth to an unconscious person. Call poison control center or doctor immediately for treatment advice. Have person rinse the mouth with water. If able to swallow, have the person sip a glass of water. Do not induce vomiting unless told to do so by a poison control center or doctor.

NOTE TO PHYSICIAN: Treatment is mainly symptomatic and supportive.

SECTION 5: FIRE HAZARDS,

Unusual Fire and Explosion Hazards: Flammable solid, liquid and vapors.

Fire Fighting Procedures:

NIOSH approved positive pressure, self-contained breathing apparatus and full protective turn-out gear.

Evacuate personnel to an area upwind to avoid smoke and vapors.

Remove containers of this material if it can be done safely.

Use water to keep fire exposed containers cool.

Protective clothing and equipment must be decontaminated if contact with the material or vapors has occurred.

Extinguishing Media: All common extinguishing media are suitable.

Conditions to Avoid: Elevated temperatures.
Hazardous Combustion Products: May produce irritating and toxic smoke and fumes. The composition of the combustion products have not been determined.

Flash Point: 65° C (Cleveland Open Cup)

Flammability Limits: **Lower**: Not determined **Upper**: Not determined

Autoignition Temperature: Not determined.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Pre-Entry Spill Procedure:

Shut off source of spill if it is safe to do so.

Eliminate sources of ignition.

Review Section 3 - Hazards Identification and Section 8- Exposure Control/Personal Protection before proceeding with the clean up.

Clean Up and Containment:

Scoop or shovel spilled material into suitable labeled containers with a tight fitting lid.

Secure the drum cover and move the container to a safe holding area.

Check area for residual material and repeat clean up if detected.

Environmental Concerns: None known.

Treatment and Disposal:

Decontaminate or dispose of all protective clothing and equipment.

See Section 13 - Disposal Recommendations for disposal information.

Reporting Requirements:

The United States Environmental Protection Agency (USEPA) has established a Reportable Quantity (RQ) for release of this material. See Section 15.

Report all releases, which are likely to endanger the public health, harm the environment, or cause complaint to the appropriate State or Local officials.

SECTION 7: HANDLING AND STORAGE

General Measures:

Store at room temperature, in airtight containers and protect from light.

Do not generate dust or exposure to ignition source.

Keep away from heat, sparks, and flame.

Materials or Conditions to Avoid:

Contact with oxidizing and reducing agents.

Elevated temperatures.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

General Hygienic Practices:

Do not get on eyes, skin, or clothing.

Do not breathe vapors, dust or fumes.

Wash thoroughly after handling.

Recommended Exposure Limits:

p-dichlorobenzene: ACGIH TLV: 10 ppm (60 mg/m^3) 8-hr TWA A3*
*ACGIH has designated this component as an "A3" substance thereby including it among substances that are animal carcinogens with unknown relevance to man.

OSHA PEL: 75 ppm (450 mg/m^3) 8-hr TWA

Mexican OEL: 450 mg/m^3 8-hr TWA
Mexican OEL: 675 mg/m^3 15-minute STEL

Personal Protective Equipment:

Eyewear: Chemical goggles.

Skin: Gloves are required if there is a potential for skin contact. A plastic or Vitron polyvinyl alcohol provides a physical barrier is required. Use disposable spun polyolefin (e.g. Tyvek) coveralls or equivalent to protect against contact. Consult the glove and clothing manufacturers, suppliers and/or industrial hygienist for further information.

Respiratory Protection: Respiratory protection is required whenever air contamination (dust, mist, or vapors) is generated by the process. A NIOSH approved high efficiency toxic dust/mist/fume respirator is recommended.

Work Practices and Engineering Controls:

General room ventilation is adequate unless the process generates dust or fumes.

Work-clothing should be removed in a change room on site and laundered professionally.

Employees should shower and change into street clothes before leaving the facility.

Prevent the accumulation of dust in the work area by thorough periodic cleaning of the area.

Protective Measures During Repair and Maintenance: No special measures are required. Follow the recommendation for personal protective equipment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Balls, blocks, crystals, nuggets or tablets. (Some products may be incased in plastic containers.)
Color: White.
Odor: Pleasant characteristic odor (mothballs). Some products contain a fragrance.
Taste: Not determined.
pH: Not applicable.
Volatile (Wt. or Vol.), %: 100%.
Moisture Content, (Wt.) %: Not determined.
Solubility in Water: 0.08 g/l at 25^0 C
Solubility - other solvents: Soluble in ethanol, benzene.
. **Specific Gravity/Bulk Density**: Varies with product type.
Vapor Pressure: 0.59 mm Hg at 20^0 C; 11.5 mm Hg at 60^0 C
Vapor Density (air = 1): 5.1.
Evaporation Rate: p-dichlorobenzene sublimes at room temperature.
Boiling Point: 174^0 C
Melting Point: 53.5°C

SECTION 10: STABILITY AND REACTIVITY

General Stability Considerations: Stable at room temperature.

Incompatible Materials: Oxidizing and reducing agents.

Hazardous Decomposition Products: Not determined.

Hazardous Polymerization: Does not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

p-Dichlorobenzene: Acute Toxicity: Oral - rat LD_{50} = 2512 mg/kg; Oral - rabbit LD_{50} = 2812 mg/kg; Oral - mouse LD_{50} = 2950-3220 mg/kg; Oral – guinea pig LD_{50} = 7595 mg/kg; Dermal - rat LD_{50} = >8g/kg; Inhalation - cat 30 minute LCL_0 = 37 g/m^3; Oral guinea pig Intraperitoneal - mouse LDL_0 = 2800 mg/kg; Oral human LDL_0 = 857 mg/kg; Dermal - rabbit LD_{50} = >2 g/kg mg/kg.

Reproductive/Teratogenicity Effects: p-Dichlorobenzene has not been shown to cause birth defects (teratogenic) in laboratory animals.

Mutagenicity/Genotoxicity Information: -Dichlorobenzene has not been shown to be mutagenic.

Carcinogenicity and Chronic Toxicity: Two-year oral dosing studies with p-dichlorobenzene, by the National Toxicology program (NTP), indicated clear evidence for carcinogenicity in the livers of male and female mice and in the kidneys of male rats. The relevance of these studies to humans has not been determined.

SECTION 12: ECOLOGICAL INFORMATION

Environmental Fate: p-Dichlorobenzene: Soil absorption: log K_{oc} (Fullerton soil, 0.06% organic carbon) =850 ; log P_{oct} 3.39 at 20°C; Biodegradation: domestic sewage, Closed Bottle test, 28 day = 67% of ThOD.

Ecotoxicity: p-Dichlorobenzene: Grass shrimp (Palaemonetes pugio) 48 hour = 129 mg/L; earth worms (Eisenia Andrei) = 14 day LC_{50} = 12-347 ug/L; flathead minnow 48 hour LC_{50} = 34 mg/L; sheephead minnow 96 hour LC_{50} = 7.4 mg/L

SECTION 13: DISPOSAL RECOMMENDATIONS

Waste Disposal Method: Dispose of material, liners, and containers in accordance with all applicable federal, state, and local environmental regulations.

SECTION 14: TRANSPORTATION INFORMATION

The classifications provided in this section are for information purposes only. Apply the appropriate regulations to properly classify you shipment for transportation.

U.S. DOT Class: Environmentally Hazardous Substance, solid, n.o.s. (p-Dichlorobenzene), 9 UN3077, III*

U.S. DOT label: Class 9*

*Applies only to packages which contain 100 lbs. or more (RQ quantity, See Section 15).
Special Provisions: this material meets the definition of Marine Pollutant.

IATA: Environmentally Hazardous Substance, solid, n.o.s. (p-Dichlorobenzene), 9 UN3077, III*

IMDG Code: See DOT

SECTION 15: REGULATORY INFORMATION

FIFRA: These products are pesticides registered by the U.S. EPA. All products contain p-dichlorobenzene as the active ingredient. It is a violation of Federal Law to use these products in a manner not consistent with the product label.

SARA TITLE III: Section 302. Not listed as an Extremely Hazardous Substance.
Section 311, 312 - Acute Health Hazard. Chronic Health Hazard. Fire Hazard.
Section 313. 1,4-dichlorobenzene

CERCLA Hazardous Substance: Listed in Table 302.4 of 40 CFR Part 302 as a hazardous substance with a reportable quantity of 100 lbs.1,4-dichlorobenzene (Release of more than the Reportable Quantity to the environment in a 24 hour period requires notification to the National Response Center (800-424-8802 or 202-426-2675).

RCRA Hazardous Substance: Hazardous waste number: U072
Compound: p-dichlorobenzene

California Prop. 65 List: Listed (carcinogen)

Massachusetts Substance List: Listed.

New Jersey Right to Know Hazardous Substance List: Listed.

Pennsylvania Hazardous Substance List: Listed.

Canadian WHMIS List: Class D1B – Toxic Materials. Sensitization to product: None known. Reproductive toxicity: None known. Odor threshold: Not known. Product use: Urinal blocks, moth control.

SECTION 16: OTHER INFORMATION

HMIS RATINGS:

Health Hazard: 2
Flammability Hazard: 2
Reactivity Hazard: 0
Additional Information: C

Willert MSDS No. 2, Ver. 1
Date: 12-6-05
Supercedes: Not applicable

LIST OF ACRONYMS

ACGIH: American Conference of Governmental Industrial Hygiene

AIHA WEEL: American Industrial Hygienists Association - Workplace Environmental Exposure Level

ANSI: American National Standards Institute

C: Ceiling

California Prop. 65: California Safe Drinking Water and Toxic Enforcement Act (Prop 65)

Canadian WHMIS: Canadian Workplace Hazardous Materials Information System Ingredient Disclosure

CASRN: Chemical Abstracts Service Registry Number

CERCLA: Comprehensive Emergency Response, Compensation and Liability Act

DOT: U. S. Department of Transportation

HMIS: Hazardous Materials Identification System

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization

N/A: Not Applicable

NOR: Not Otherwise Regulated

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: OSHA Permissible Exposure Limit

RCRA: Resource Conservation and Recovery Act

RQ: Reportable Quantity

SARA: Superfund Amendment Reauthorization Act

STEL: Short-Term Exposure Limit

TLV: Threshold Limit Values (registered trademark of ACGIH)

TPQ: Threshold Planning Quantity

TSCA: Toxic Substances Control Act

TWA: Time Weighted Average

The information and recommendations contained in this Material Safety Data Sheet have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS was prepared. No warranty, guaranty, or representation is made as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in combination with other products, and determine its environmental regulatory compliance obligations under any applicable federal or state laws.

DO NOT DISTRIBUTE THIS PAGE

References – EPA Registered PDCB Products

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MATERIAL SAFETY DATA SHEET

REVISION DATE:	11/20/2008	**REVISION NUMBER:**	3
DATE PRINTED:	11/20/2008	**PREPARED BY:**	EH&S DEPARTMENT

1. CHEMICAL PRODUCT

PRODUCT NAME: **ENVIRO CARE® ENHANCER**

PRODUCT CODE: 119041

NFPA/HMIS HAZARD CODES(minimal=0; slight=1; moderate=2; serious=3; severe=4)

Health:	1/1	**Fire:**	0/0
Reactivity:	0/0	**Special/Protective Equipment:**	None/B

NAME OF THE MANUFACTURER:
Rochester Midland Corporation
333 Hollenbeck Street
Rochester, New York 14621

Information: 585-336-2200
Emergency Phone:
INFOTRAC: 1-800-535-5053
OUTSIDE US: 1-352-323-3500

2. HAZARDS IDENTIFICATION

EFFECTS FROM ACUTE EXPOSURE:

INGESTION: Low toxicity in small quantities.
SKIN CONTACT: No irritation or absorption expected.
INHALATION: Inhalation of spray mist may be irritating.
EYE CONTACT: May cause mild eye irritation.
CHRONIC EFFECTS: None expected in normal use.
EFFECTS/CARCINOGENICITY: None listed under OSHA, IARC, or NTP.
ROUTES OF ENTRY: Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION CAS#	%	ACGIH TLV	OSHA PELs
Propylene glycol 57-55-6	20 - 30	NA	NA

4. FIRST AID MEASURES

INGESTION: Rinse mouth with water many times. Never give anything by mouth to an unconcious person. Contact physician if irritation persists.
SKIN: Flush skin with large amounts of water. If irritation persists, get medical attention.
INHALATION: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.
EYES: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
NOTES TO PHYSICIAN: No specific antidote. Treatment based on sound judgment of physician and individual reactions of patient.

5. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (F): None to boiling **(C):** NE
METHOD: TCC

FLAMMABLE LIMITS IN AIR

- LOWER (%): 2.6%
- UPPER (%): 12.5%

SENSITIVITY TO MECHANICAL IMPACT(Y/N): NO
SENSITIVITY TO STATIC DISCHARGE: Sensitivity to static discharge is not expected.
SUITABLE EXTINGUISHING MEDIA: Alcohol foam. Carbon Dioxide, Dry Chemicals, Foam. Do not use a direct stream of water; product will float and can be reignited on surface of water.
FIRE FIGHTING PROCEDURES: Fire-fighters should wear self-contained breathing apparatus and full protective clothing when fighting chemical fires. Cool exposed containers with water spray.

6. ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES:
SMALL SPILLS: Pick up with absorbant material.
LARGE SPILLS: Dike to contain. Pick up with absorbant material. Put in suitable container for disposal. Flush remainder with water.

PERSONAL PRECAUTIONS: NA
ENVIRONMENTAL PRECAUTIONS: Do not contaminate water.
METHODS FOR CLEANING UP: NA

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Handle with care. Store in a dry location away from heat and direct sunlight. Wash thoroughly after handling. Keep container closed when not in use.
OTHER PRECAUTIONS: Do not reuse container. Empty containers may retain product residue, follow MSDS/label precautions even after container is emptied.
SPECIFIC USE(S): NA

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE EQUIPMENT:



EXPOSURE CONTROLS: Use in a well ventilated area.
RESPIRATORY PROTECTION: Not normally required. If product is used in a manner which creates dust or mist above recommended exposure limits, a NIOSH/MSHA approved respirator with dust/mist filter may be needed in the absence of proper environmental controls.
PROTECTIVE GLOVES: Chemical resistant gloves.
EYE PROTECTION: Safety Glasses. Goggles.
OTHER PERSONAL PROTECTION EQUIPMENT: None known.
VENTILATION: General mechanical and/or local exhaust as needed to meet exposure limits if mist in air.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear, colorless liquid. Mild odor.
BOILING POINT (F): NA **(C)** NA
SOLUBILITY IN WATER: NA
SPECIFIC GRAVITY: 0.995 - 1.035
VOC Content (%): 20 - 23 (EPA Method 24)
VOV Content (%): NE
PH: NA

10. STABILITY AND REACTIVITY

STABILITY DATA: STABLE
POLYMERIZATION: Will Not Occur.
HAZARDOUS DECOMPOSITION: Toxic fumes. Carbon Monoxide.
INCOMPATIBILITY (MATERIALS TO AVOID): Avoid contact with acidic, basic or oxidizing agents.
CONDITIONS/HAZARDS TO AVOID: Extreme heat, direct sunlight. High temperatures may cause decomposition.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: NE
EFFECTS OF CHRONIC EXPOSURE: NE
OTHER TOXIC EFFECTS: NE

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data at this time
CHEMICAL FATE INFORMATION: No data at this time.
MOBILITY: NA
PERSISTENCE/DEGRADABILITY: NA
BIOACCUMULATIVE POTENTIAL: NA
OTHER ADVERSE EFFECTS: NA

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Dispose in accordance with Federal, State and Local regulations.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/Receiving documents for up to date shipping information.

15. REGULATORY INFORMATION

PRODUCT COMPOSITION CAS#	%	TSCA:	EINECS:	Canada DSL:	CA PROP 65:
Propylene glycol 57-55-6	20 - 30	Listed	Listed	Listed	Not Listed

PRODUCT COMPOSITION CAS#	%	CERCLA:	SARA 302:	SARA 313:
Propylene glycol 57-55-6	20 - 30	Not Listed	Not Listed	Not Listed

PRODUCT COMPOSITION CAS#	%	Canada WHMIS:
Propylene glycol 57-55-6	20 - 30	Listed

None of the components of this material are included in the Massachusetts Substance List nor are present at or above reportable levels.
None of the components of this material are included in the New Jersey Substance List nor are present at or above reportable levels.
The following components of this material are included in the Pennsylvania Substance List and are present at or above reportable levels.

PRODUCT COMPOSITION CAS#	%	PARTK:
Propylene glycol 57-55-6	20 - 30	Listed

16. OTHER INFORMATION

This information was compiled from current, reliable sources and is believed to be correct. As data, and/or regulations change, and conditions of use and handling are beyond our control, no warranty, express or implied, is made as to completeness or continuing accuracy of this information.

***** END OF MSDS *****

MATERIAL SAFETY DATA SHEET
(ESSENTIALLY SIMILAR TO OSHA FORM 20, COMPLIES WITH 29CFR 1910:1200)

HAZARD RATING: HEALTH - 1, FIRE - 0, REACTIVITY - 0
MINIMAL - 0 SLIGHT - 1 MODERATE - 2 SERIOUS - 3 SEVERE - 4

*****SECTION I: GENERAL INFORMATION*****

MANUFACTURED FOR: BLUE STAR OF NEW JERSEY, INC
ADDRESS: 1553 DELSEA DRIVE
DEPTFORD, NJ 08096
TELEPHONE NUMBER: 856-848-4236
DATE ISSUED/REVISED: MARCH 29, 2007
EMERGENCY RESPONSE NUMBER: 800-255-3924
FORMULA NO.: C-74
PRODUCT NAME: ENVIRO-ANSWER
CHEMICAL FAMILY: ACID REPLACEMENT CLEANER

HAZARDOUS MATERIAL DESCRIPTION
(PROPER SHIPPING NAME, HAZARD CLASS, HAZARD ID NO. (49 CFR 172.101)
NONE

*****SECTION II: HAZARDOUS INGREDIENTS*****
AS LISTED IN EPA 40CFR PARTS 261 & 116 AND/OR MASS. DEQE CMR 670.00

CHEMICAL NAME	CAS NO.	% BY WEIGHT	HAZARD DATA
NONE			
OTHER INGREDIENTS:			
WATER	7732-18-5	>50	
UREA HYDROCHLORIDE	506-89-8	1-10	
SURFACTANT BLEND	PROP.	1-10	
XANTHAN GUM	11138-66-2	<1	
DYE	PROP.	<1	

*THIS SUBSTANCE IS A CHEMICAL SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND 40 CFR PART 372.

*****SECTION III: PHYSICAL DATA*****

BOILING POINT/RANGE (F): 212
SPECIFIC GRAVITY: 1.043 (WATER=1)
% VOLATILE BY VOLUME: N/A
EVAP. RATE (BUAC=1): COMP. TO WATER (SLOWER)
WEIGHT/GALLON: 8.69# (WATER=8.33#)
SOLUBILITY IN WATER: COMPLETE
VAPOR PRESSURE (MM/HG): COMP. TO WATER
PHYSICAL STATE: CLEAR, MODERATELY VISCOUS GREEN LIQUID
VAPOR DENSITY (AIR=1): COMP. TO WATER (HEAVIER)
ODOR: MILD

*****SECTION IV: FIRE AND EXPLOSION HAZARD DATA*****

FLASH POINT (METHOD USED): NONE
FLAMMABLE LIMITS: LEL: NA UEL: NA
FIRE EXTINGUISHING MEDIA: WATER FOG, FOAM, GAS (CO2/HALON), DRY CHEMICAL
SPECIAL FIRE FIGHTING PROCEDURES: NONE
UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

*****SECTION V: HEALTH HAZARD DATA*****

THRESHOLD LIMIT VALUE: NOT ESTABLISHED
PRIMARY ROUTES OF ENTRY: SKIN ABSORPTION
EFFECTS OF OVEREXPOSURE:
...ACUTE - MAY CAUSE SKIN AND EYE IRRITATION. HARMFUL IF SWALLOWED.
...CHRONIC - PROLONGED SKIN AND EYE CONTACT MAY CAUSE DERMATITIS AND CONJUNCTIVITIS.
EMERGENCY AND FIRST AID PROCEDURES:
...INHALATION - NO HAZARD.
...EYES - FLUSH THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, KEEPING LIDS APART. GET MEDICAL ATTENTION.
...SKIN - FLUSH THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES .REMOVE CLOTHING IF CONTAMINATED.
...INGESTION - DRINK LARGE QUANTITIES OF WATER. DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION.

*****SECTION VI: REACTIVITY DATA*****

STABILITY: STABLE
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID: EXTREME HEAT
MATERIALS TO AVOID: DO NOT MIX WITH OTHER CHEMICALS
HAZARDOUS DECOMPOSITION PRODUCTS: MAY PRODUCE TOXIC GASES UPON COMBUSTION

*****SECTION VII: SPILL OR LEAK PROCEDURES*****

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: RINSE WITH WATER OR ABSORB WITH FLOOR ABSORBENT, SAWDUST, OR RAGS.
WASTE DISPOSAL: FLUSH DOWN SANITARY SEWER SYSTEM OR PLACE IN SEALED CONTAINER AND
DISPOSE OF ACCORDING TO LOCAL REGULATIONS FOR HAZARDOUS WASTE.

*****SECTION VIII: SPECIAL PROTECTION INFORMATION*****

RESPIRATORY PROTECTION: NONE REQUIRED.
VENTILATION TYPE: LOCAL EXHAUST ADEQUATE.
PROTECTIVE GLOVES: IMPERVIOUS GLOVES RECOMMENDED.
EYE PROTECTION: GOGGLES/SAFETY GALLSES WITH SIDE SHIELDS RECOMMENDED.
OTHER PROTECTIVE EQUIPMENT: NONE.

*****SECTION IX: SPECIAL PRECAUTIONS*****

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE AT TEMPERATURE EXTREMES. KEEP FROM FREEZING. AVOID CONTACT WITH EYES AND SKIN. DO NOT TAKE INTERNALLY. WASH HANDS
THOROUGHLY AFTER USE.
OTHER PRECAUTIONS: KEEP OUT OF THE REACH OF CHILDREN.

Material Safety Data Sheet: ENVIROSAN ADVANCED

Supercedes Date 08/28/2001 **Issuing Date** 02/10/2009

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name ENVIROSAN ADVANCED
Product Code 5569
Information on Manufacturer
CHECK-MARK DIV. OF DM RESOURCES, INC.
1310 E. NORTHGATE DRIVE
IRVING, TEXAS 75062

Recommended Use Disinfectants and general biocidal products
Chemical Nature Alcoholic solution (aerosol)
Emergency Telephone Number
CHEMTREC ® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
Danger
Extremely flammable
Causes skin irritation
Causes eye irritation
May be harmful if absorbed through skin
Harmful if inhaled
May be harmful if swallowed

Color Light yellow **Physical State** Aerosol **Odor** Alcoholic

Potential Health Effects

Principle Route of Exposure	Skin contact, Eye contact, Inhalation.
Primary Routes of Entry	Inhalation, Ingestion, Skin Absorption.
Acute Effects	
Eyes	Causes eye irritation.
Skin	Causes skin irritation. The product may be absorbed through the skin.
Inhalation	May cause irritation of respiratory tract. Inhalation may cause central nervous system effects. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
Ingestion	May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.
Chronic Effects	Prolonged exposure may cause chronic effects. Liver injury may occur. Contains material that may adversely affect the developing fetus.
Target Organ Effects	Blood, Central nervous system, Liver, Reproductive System, Respiratory system, Heart, Skin, Eyes.
Aggravated Medical Conditions	Respiratory disorders. Skin disorders. Liver disorders. Neurological disorders.
Potential Environmental Effects	See Section 12 for additional Ecological information

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Butane	106-97-8
Ethyl alcohol	64-17-5
Propane	74-98-6
2-Phenylphenol	90-43-7

4. FIRST AID MEASURES

General Advice	Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist or gas.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes . Remove contact lenses. Call a physician or poison control center immediately.
Skin Contact	Take off all contaminated clothing immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician if symptoms occur.
Inhalation	Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention if symptoms occur.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point 57°F / 14°C **Method** Seta closed cup
Autoignition Temperature No information available
Flammability Limits in Air % **Upper** 19.0 **Lower** 3.3
Suitable Extinguishing Media
Foam. Dry chemical. Water spray. Carbon dioxide (CO2).
Specific Hazards Arising from the Chemical
Flame extension: >18 inches / >45 cm and Burnback: 6 inches / 15 cm . Solvent vapors are heavier than air and may spread along floors . Vapors may form explosive mixtures with air .
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Aerosol Level (NFPA 30B) - 2

NFPA	**Health**	2	**Flammability**	3	**Instability**	0
HMIS	**Health**	2	**Flammability**	3	**Instability**	0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Remove all sources of ignition. Ensure adequate ventilation. Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.

Environmental Precautions Do not flush into surface water or sanitary sewer system.

Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13)

Methods for Cleaning Up Pick up and transfer to properly labeled containers.

Neutralizing Agent Not applicable.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Do not puncture.

Storage Keep away from open flames, hot surfaces and sources of ignition.

Storage Temperature **Minimum** 35°F / 2°C **Maximum** 120°F / 49°C

Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Butane	TWA: 1000 ppm	no data available	TWA: 1900 mg/m^3 TWA: 800 ppm
Ethyl alcohol	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m^3	IDLH: 3300 ppm TWA: 1900 mg/m^3 TWA: 1000 ppm
Propane	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m^3	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m^3
2-Phenylphenol	No data available	no data available	no data available

Engineering Measures Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields.

Skin Protection Protective gloves.

Respiratory Protection Use NIOSH approved respiratory protection.

General Hygiene Considerations Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Aerosol	**Viscosity**	Non viscous
Color	Light yellow	**Odor**	Alcoholic
Appearance	Transparent	**pH**	Not applicable
Specific Gravity	0.82	**Bulk Density**	No information available
Evaporation Rate	30.55 (Butyl acetate=1)	**Percent Volatile (Volume)**	99.8
VOC Content (%)	91.1	**VOC Photoreactive (Y/N)**	Yes
VOC Content (g/l)	657	**Vapor Pressure**	497.4 mmHg @ 70 °F
Vapor Density	1.9	**Solubility**	Completely soluble
Boiling Point/Range	165°F / 74°C		

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions. Hazardous polymerization does not occur.

Conditions to Avoid Heat, flames, and sparks.

Incompatible Products Strong oxidizing agents.

Hazardous Decomposition Products Carbon oxides.

Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available

Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Butane	no data available	no data available	658 mg/L (Rat) 4 h	no data available	no data available
Ethyl alcohol	7060 mg/kg (Rat)	no data available	no data available	no data available	no data available
Propane	no data available	no data available	658 mg/L (Rat) 4 h	no data available	no data available
2-Phenylphenol	1049 mg/kg (Rat)	2000 mg/kg (Rat)	0.949 mg/L (Rat) 1 h	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Butane	no data available	no data available	no data available	no data available	CNS, liver, heart

Ethyl alcohol	no data available	no data available	no data available	no data available	respiratory system, skin, eyes, CNS, liver, blood, reproductive system
Propane	no data available	no data available	no data available	no data available	CNS, liver, heart
2-Phenylphenol	no data available	no data available	no data available	no data available	no data available

Carcinogenicity .

Component	ACGIH	IARC	NTP	OSHA	Other
Butane	not applicable	not applicable	not applicable	not applicable	not applicable
Ethyl alcohol	not applicable	Group 1 in alcoholic beverages	Known	X	not applicable
Propane	not applicable	not applicable	not applicable	not applicable	not applicable
2-Phenylphenol	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Butane	no data available	no data available	no data available	no data available	2.89
Ethyl alcohol	no data available	LC50= 12900 mg/L Oncorhynchus mykiss 96 h LC50= 14.2 mg/L Pimephales promelas 96 h	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	EC50 = 10800 mg/L 24 h EC50 = 9268 mg/L 48 h	-0.32
Propane	no data available	no data available	no data available	no data available	2.3
2-Phenylphenol	EC50= 0.85 mg/L Scenedesmus subspicatus 72 h	LC50= 5.99 mg/L Pimephales promelas 96 h LC50= 6 mg/L Lepomis macrochirus 96 h	EC50 = 2.05 mg/L 5 min	EC50 = 15 mg/L 48 h	3.18

Persistence and Degradability No information available
Bioaccumulation No information available
Mobility No information available

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations
Container Disposal Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

DOT DOT
Proper Shipping Name Consumer commodity
Hazard Class ORM-D
Description Consumer commodity ,ORM-D,

TDG
Proper shipping name Aerosols
Hazard Class 2.1
UN-No UN1950
Description AEROSOLS,2.1,UN1950 LTD QTY

ICAO
UN-No UN1950
Proper Shipping Name Aerosols
Hazard Class 2.1
Shipping Description Aerosols,UN1950 LTD QTY

IATA
UN-No UN1950
Proper Shipping Name Aerosols, flammable
Hazard Class 2.1
ERG Code 10L
Shipping Description UN1950,Aerosols, flammable,2.1 LTD QTY

IMDG/IMO
Proper Shipping Name Aerosols
Hazard Class 2.1
UN-No UN1950
EmS No. F-D, S-U
Shipping Description UN1950, Aerosols,2.1 LTD QTY

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies
U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372:

Component	CAS-No	Weight %	SARA 313 - Threshold Values
2-Phenylphenol	90-43-7	0.1-1	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	Yes	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Butane	Not applicable	Not applicable
Ethyl alcohol	Not applicable	Not applicable
Propane	Not applicable	Not applicable
2-Phenylphenol	Not applicable	Not applicable

Canada

WHMIS Hazard Class

Not applicable.

16. OTHER INFORMATION

Prepared By Dan Hollas
Supercedes Date 08/28/2001
Issuing Date 02/10/2009
Reason for Revision No information available
Glossary No information available
List of References No information available

CHECK-MARK DIV. OF DM RESOURCES, INC. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

HILLYARD
The Cleaning Resource®

SAFETY DATA SHEET

1. Identification

Product identifier **EP-22**

Other means of identification

SDS number 575N077A

Product code HIL00551

Recommended use Floor Finish

Recommended restrictions For Labeled Use Only

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name HILLYARD INDUSTRIES

Address 302 North Fourth St.
St. Joseph, MO 64501

Contact person Regulatory Affairs

Telephone number (816) 233-1321 (Ext. 8285)

Fax (816) 383-8485

E-mail regulatoryaffairs@hillyard.com

Emergency telephone # (800) 424-9300
(Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Use With Adequate Ventilation. Prolonged inhalation of vapor may cause slight irritation of nose, throat, and lungs. Keep container closed when not in use. Do not take internally. Observe good industrial hygiene practices.

Response If swallowed, induce vomiting immediately. Immediately consult medical personnel. If inhaled move to fresh air. If discomfort persists, get medical attention. Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law in compliance with applicable federal, state and local requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
2-(2-ethoxyethoxy)ethanol		111-90-0	3 - < 5
Tributoxyethyl Phosphate		78-51-3	1 - < 3
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses.

Ingestion Drink water as a precaution. Get medical attention if any discomfort continues.

Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Material can be slippery when wet. Follow precautions for safe handling described in this safety data sheet. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Avoid prolonged exposure. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
2-(2-ethoxyethoxy)ethanol (CAS 111-90-0)	TWA	140 mg/m3
		25 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes.

Skin protection

Hand protection For prolonged or repeated skin contact use suitable protective gloves.

Other None normally required. If unable to avoid prolonged or repeated contact with skin, wear impervious clothing.

Respiratory protection No personal respiratory protective equipment normally required.

Thermal hazards None known.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Milky emulsion

Physical state Liquid.

Form Liquid.

Color Milky white

Odor Non-objectional odor

Odor threshold Not available

pH 7 - 8

Melting point/freezing point Not applicable / Not available

Initial boiling point and boiling range > 200 °F (> 93.33 °C)

Flash point > 200.0 °F (> 93.3 °C) Tag Closed Cup

Evaporation rate < 1 (ethyl ether = 1)

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 17.5 mm Hg

Vapor density 1.1492 Air =1

Relative density 1.0244 at 77°F

Solubility(ies)

Solubility (water) Dispersible

Partition coefficient (n-octanol/water) Not available

Auto-ignition temperature Not available

Decomposition temperature Not available

Viscosity Not available

Other information

Density 8.56 lb/gal

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

Percent volatile	77.5 - 78.5 %
VOC	0 % CARB VOC 4.55 % EPA VOC

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	May be irritating to the skin.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Not known.

Components	Species	Test Results
Tributoxyethyl Phosphate (CAS 78-51-3)		
Acute		
Oral		
LD50	Rat	3000 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product		Species	Test Results
EP-22			
Aquatic			
Fish	LC50	Fish	587.9516 mg/l, 96 hours estimated

Components		Species	Test Results
2-(2-ethoxyethoxy)ethanol (CAS 111-90-0)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 10000 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-(2-ethoxyethoxy)ethanol	-0.54

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not contaminate ponds, waterways or ditches with chemical or used container.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Waste from normal product use may be sewered to a public owned treatment works (POTW) in compliance with applicable Federal, State, and local pretreatment requirements.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Triple rinse (or equivalent). Then offer clean, dry container for recycling or reconditioning.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List or Exempt.
This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Non-Domestic Substances List (NDSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 01-10-2015

Revision date 03-06-2017

Version # 02

Further information This product meets Green Seal™ Standard GS-40 based on effective performance and protective limits on VOCs and human & environmental toxicity. GreenSeal.org.

HMIS® ratings

Health: 1
Flammability: 0
Physical hazard: 0

Disclaimer

No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products.

Revision information This document has undergone significant changes and should be reviewed in its entirety.

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 426.63
Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Epoxy, Aqua Part A

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 1). Extremely flammable liquid and vapor (H224). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Sensitization, skin (Category 1). May cause an allergic skin reaction (H317). Avoid breathing mist, vapors or spray (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Epoxy resin	25085-99-8	Proprietary	Proprietary	<50%
Other nonhazardous solvents and fillers	None established	Proprietary	Proprietary	50%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313). **If on skin:** Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313). Wash contaminated clothing before reuse (P363).
If swallowed: Rinse mouth.

SECTION 5 — FIRE FIGHTING MEASURES

Noncombustible liquid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic Miscellaneous.
Keep lid tightly closed. Store in a cool, dry place. Use and dispense in a well-ventilated area.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Milky white liquid. Mild, glue-like odor.
Vapor is lighter than air.
Soluble: Water

Boiling point: >100 ^{o}C

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, acids, bases, and amines.
Shelf life: Good, if stored in cool, dry place.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritation, headache, dizziness, nausea.
Chronic effects: N.A.
Target organs: Skin and eyes.

ORL-RAT LD_{50}: >5000 mg/kg (for epoxy resin)
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: 20,000 mg/kg (or epoxy resin)
May cause allergic skin reaction in sensitized individuals.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #18b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 426.64
Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Epoxy, Aqua Part B

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing mist, vapors or spray (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Polyamine polymer	None established	Proprietary	Proprietary	<28%
Amorphous silicon dioxide	7631-86-9	SiO_2	60.08	<9%
Other nonhazardous solvents and fillers	Proprietary	Proprietary	Proprietary	Varies
A proprietary mixture				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Noncombustible liquid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain spill with sand or other inert absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic Miscellaneous.
Keep lid tightly closed. Store in a cool, dry place. Use and dispense in a well-ventilated area.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Light beige, yellowish, milky liquid. Mild, glue-like odor.
Vapor is lighter than air.
Soluble: Water

Boiling point: >100 ^{o}C

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritation, headache, dizziness, nausea.
Chronic effects: N.A.
Target organs: Skin, eyes, upper respiratory system.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #18a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

None listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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ATLAS MINERALS & CHEMICALS INC -- EPOXYBOND PLUMBER SEAL HARDENER PART B -- 8040-00N040843

========== Product Identification ==========

Product ID:EPOXYBOND PLUMBER SEAL HARDENER PART B
MSDS Date:04/10/1987
FSC:8040
NIIN:00N040843
Kit Part:Y
MSDS Number: BSGSQ
=== Responsible Party ===
Company Name:ATLAS MINERALS & CHEMICALS INC
Address:FARMINGTON RD
Box:0038
City:MERTZTOWN
State:PA
ZIP:19539-0038
Country:US
Info Phone Num:215-682-7171;215-682-7172
Emergency Phone Num:215-682-7171;215-682-7172
CAGE:04503
=== Contractor Identification ===
Company Name:ATLAS MINERALS & CHEMICAL INC
Address:FARMINGTON ROAD
Box:City:MERTZTOWN
State:PA
ZIP:19539-0038
Country:US
Phone:215-682-7171
CAGE:04503

========== Composition/Information on Ingredients ==========

Ingred Name:AMIDES FROM METHYL EPOXYHYDROXYOCTADECANOATE,
TETRAETHYLENEPENTAMINE AND VEGETABLE OIL FATTY ACIDS; (FATTY
AMIDOAMINE)
CAS:68443-08-3
Fraction by Wt: 15-20%

Ingred Name:TALC, CALIFORNIA (MICROTALC, TALCRON, CERCRON); (MAGNESIUM
SILICATE)
CAS:14801-96-6
Fraction by Wt: 10-20%
ACGIH TLV:20 MPPCF (MFR)

Ingred Name:CARBONIC ACID, CALCIUM SALT (1:1); (CALCIUM CARBONATE)
CAS:471-34-1
RTECS #:FF9335000
Fraction by Wt: 10-20%
OSHA PEL:15 MG/M3 TDUST
ACGIH TLV:10 MG/M3 TDUST

Ingred Name:CALCIUM CARBONATE; (NATURAL CALCITE)
CAS:1317-65-3
RTECS #:EV9580000
Fraction by Wt: 50-60%
Other REC Limits:TLV: 30 MPPCF (MF)
OSHA PEL:15 MG/M3 TDUST

ACGIH TLV:10 MG/M3 TDUST

========== Hazards Identification ==========

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:EYES/SKIN: CONTACT MAY CAUSE IRRITATION. INHAL: MAY RESULT IN IRRITATION TO THE RESPIRATORY TRACT AND MUCOUS TISSUE.
Explanation of Carcinogenicity:NOT RELEVANT
Effects of Overexposure:SEE HEALTH HAZARDS.
Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

========== First Aid Measures ==========

First Aid:EYES: FLUSH WITH CLEAR WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS GET MEDICAL ATTENTION. SKIN: WASH CONTACT AREA WITH MILD SOAP AND WATER. INGEST: IF CONSCIOUS HAVE VICTIM DRINK LARGE AMOUN TS OF WATER. INDUCE VOMITING. GET MEDICAL ATTENTION. INHAL: REMOVE TO FRESH AIR. SUPPORT BRTHG (GIVE O*2/ARTF RESP) .

========== Fire Fighting Measures ==========

Flash Point Method:COC
Flash Point:490F,254C
Extinguishing Media:CARBON DIOXIDE, FOAM, DRY CHEMICAL.
Fire Fighting Procedures:WEAR NIOSH/MSHA APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT .
Unusual Fire/Explosion Hazard:IGNITION CAUSES DECOMPOSITION WITH POSSIBLE FORMATION OF AMMONIA VAPORS AND OXIDES OF NITROGEN.

========== Accidental Release Measures ==========

Spill Release Procedures:SCRAPE OFF WITH SUITABLE TOOL & COLLECT IN APPROPRIATE CONTAINERS FOR DISPOSAL. FLUSH AREA WITH PLENTY OF WATER. KEEP OUT OF WATER SUPPLY.
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

========== Handling and Storage ==========

Handling and Storage Precautions:DO NOT TAKE INTERNALLY. FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.
Other Precautions:NONE SPECIFIED BY MANUFACTURER.

========== Exposure Controls/Personal Protection ==========

Respiratory Protection:USE NIOSH/MSHA APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN .
Ventilation:LOCAL: PROVIDE VENTILATION ADEQUATE TO KEEP EXPOSURE BELOW TLV.
Protective Gloves:PLASTIC OR RUBBER, IF DESIRED.
Eye Protection:ANSI APRV CHEMICAL WORKERS GOGGLES (FP N
Other Protective Equipment:NONE SPECIFIED BY MANUFACTURER.
Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.
Supplemental Safety and Health
NONE SPECIFIED BY MANUFACTURER.

========== Physical/Chemical Properties ==========

Boiling Pt:B.P. Text:>450F,>232C
Vapor Pres:VERY LOW
Vapor Density:HVR/AIR
Spec Gravity:2
Solubility in Water:PARTIALLY SOLUBLE

Appearance and Odor:STIFF PUTTY WITH SLIGHT AMMONIA ODOR
Percent Volatiles by Volume:0

========== Stability and Reactivity Data ==========

Stability Indicator/Materials to Avoid:YES
MINERAL ACIDS.
Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.
Hazardous Decomposition Products:CARBON MONOXIDE &/OR CARBON DIOXIDE.
OXIDES OF NITROGEN.

========== Disposal Considerations ==========

Waste Disposal Methods:DISPOSE IN ACCORDANCE WITH APPLICABLE LOCAL,
STATE AND FEDERAL ENVIRONMENTAL REGULATIONS.

Disclaimer (provided with this information by the compiling agencies):
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ATLAS MINERALS & CHEMICALS INC -- EPOXYBOND PLUMBER SEAL RESIN PART A -- 8040-00N040843

========== Product Identification ==========

Product ID:EPOXYBOND PLUMBER SEAL RESIN PART A
MSDS Date:04/10/1987
FSC:8040
NIIN:00N040843
Kit Part:Y
MSDS Number: BSGSP
=== Responsible Party ===
Company Name:ATLAS MINERALS & CHEMICALS INC
Address:FARMINGTON RD
Box:0038
City:MERTZTOWN
State:PA
ZIP:19539-0038
Country:US
Info Phone Num:215-682-7171;215-682-7172
Emergency Phone Num:215-682-7171;215-682-7172
CAGE:04503
=== Contractor Identification ===
Company Name:ATLAS MINERALS & CHEMICAL INC
Address:FARMINGTON ROAD
Box:City:MERTZTOWN
State:PA
ZIP:19539-0038
Country:US
Phone:215-682-7171
CAGE:04503

========== Composition/Information on Ingredients ==========

Ingred Name:BISPHENOL A DIGLYCIDL ETHER RESIN; (BISPHENOL A EPOXY
RESIN)
CAS:25068-38-6
RTECS #:SL6475000
Fraction by Wt: 20-25%

Ingred Name:STYRENE POLYMER; (POLYSTRENE RESIN)
CAS:9003-53-6
RTECS #:WL6475000
Fraction by Wt: 0-2%

Ingred Name:CALCIUM CARBONATE; (NATURAL CALCITE)
CAS:1317-65-3
RTECS #:EV9580000
Fraction by Wt: 65-75%
ACGIH TLV:30 MPPCF (MFR)

Ingred Name:SILICON DIOXIDE, AMORPHOUS
CAS:112945-52-5
RTECS #:VV7310000
Fraction by Wt: 2-5%
ACGIH TLV:10 MG/M3 (MFR)

========== Hazards Identification ==========

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:EYES/SKIN: CONTACT MAY CAUSE IRRITATION. INHAL: MAY RESULT IN IRRITATION TO THE RESPIRATORY TRACT AND MUCOUS TISSUES.
Explanation of Carcinogenicity:NOT RELEVANT
Effects of Overexposure:SEE HEALTH HAZARDS.
Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

========== First Aid Measures ==========

First Aid:EYES: FLUSH WITH CLEAR WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS GET MEDICAL ATTENTION. SKIN: WASH CONTACT AREA WITH MILD SOAP AND WATER. INGEST: DO NOT INDUCE VOMITING. GET MEDICAL ATTENT ION. INHAL: REMOVE TO FRESH AIR. SUPPORT BRTHG (GIVE O*2/ARTF RESP) .

========== Fire Fighting Measures ==========

Flash Point Method:COC
Flash Point:518F,270C
Extinguishing Media:CARBON DIOXIDE, FOAM, DRY CHEMICAL.
Fire Fighting Procedures:WEAR NIOSH/MSHA APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT . WATER MAY BE INEFFECIVE. COOL SURROUNDING AREA WITH WATER.
Unusual Fire/Explosion Hazard:NONE SPECIFIED BY MANUFACTURER.

========== Accidental Release Measures ==========

Spill Release Procedures:SCRAPE OFF WITH SUITABLE TOOL AND COLLECT IN APPROPRIATE CONTAINERS FOR DISPOSAL. FLUSH AREA WITH WATER. KEEP OUT OF WATER SUPPLY.
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

========== Handling and Storage ==========

Handling and Storage Precautions:STORE IN COOL DRY PLACE. DO NOT TAKE INTERNALLY. FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.
Other Precautions:NONE SPECIFIED BY MANUFACTURER.

========== Exposure Controls/Personal Protection ==========

Respiratory Protection:USE NIOSH/MSHA APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN .
Ventilation:LOCAL: PREFERABLE.
Protective Gloves:PLASTIC/RUBBER, IF DESIRED.
Eye Protection:ANSI APRV CHEMICAL WORKERS GOGGLES (FP N
Other Protective Equipment:NONE SPECIFIED BY MANUFACTURER.
Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.
Supplemental Safety and Health
NONE SPECIFIED BY MANUFACTURER.

========== Physical/Chemical Properties ==========

Boiling Pt:B.P. Text:>300F,>149C
Vapor Pres:MINIMAL
Vapor Density:HVR/AIR
Spec Gravity:2
Solubility in Water:INSOLUBLE
Appearance and Odor:COLORED STIFF PUTTY WITH CHARACTERISTIC MILD ODOR
Percent Volatiles by Volume:0

========== Stability and Reactivity Data ==========

Stability Indicator/Materials to Avoid:YES
MINERAL ACIDS, BASES, AMINES AND MERCAPTANS.
Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.
Hazardous Decomposition Products:ALDEHYDES, CARBON MONOXIDE &/OR CARBON DIOXIDE.

========== Disposal Considerations ==========

Waste Disposal Methods:DISPOSE IN ACCORDANCE WTIH APPLICABLE LOCAL, STATE AND FEDERAL ENVIRONMENTAL REGULATIONS.

Disclaimer (provided with this information by the compiling agencies):
This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 320.00
Revision Date: March 13, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Eriochrome Black T

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300 **Signal Word** **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Eriochrome Black T	1787-61-7	$C_{20}H_{12}N_3NaO_7S$	461.38	
Synonyms: EBT; Mordant black 11; C.I. 14645				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #9. Store with dyes, indicators and stains.
Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling. Will stain skin, clothing, and surfaces.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Brownish-black powder or crystals. Odor of new rubber.
Soluble: Hot water. Moderately in alcohol
Reddish-brown in solution.

An azo dye used in an EDTA titration. Blue to red in the presence of metals. Used in water hardness testing.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 17590 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (217-250-3).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 13, 2014

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MATERIAL SAFETY DATA SHEET

(SIMILAR TO OSHA FORM 174)

N.A.=Not Applicable
Not Est.=Not Established
Prop.=Proprietary

SECTION 1-MANUFACTURER/DISTRIBUTOR INFORMATION

Product Name: Esteem Carpet Extraction Cleaner
Supplier's Name: INDCO, Inc.
Supplier's Address: N. Railroad & Essex St., Gloucester City, NJ 08030
HMIS Hazard Code: Health:1 Flammability:0 Reactivity:0 Other:0
Chemical Family: Detergents
D.O.T. Shipping Name: N/A

Emergency Phone #: (856)456-6100
Chemical Name: Blended Detergent
Formula: N.A. Blended Product
Hazard Class: N/A **D.O.T. ID#:** N/A

SECTION 2-HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NO.	% Concentrate Range	Hazard Ratings (TLV/PEL)
None			

SECTION 3-PHYSICAL DATA

Boiling Point (F): 212°
Vapor Pressure: = To Water
Vapor Density: = To Water
Solubility In Water: Complete
Appearance: Clear Liquid
Odor: Giane™ Fresh
Specific Gravity: 1.07
Evaporation Rate: = To Water

SECTION 4-FIRE AND EXPLOSION DATA

Flash Point (F): None to boiling (TOC)
Flammable Limits: N.A.
Unusual Fire & Explosion Hazards: None

SECTION 5-HEALTH HAZARD DATA

Route(s) of Entry: Inhalation:No Skin:Yes Ingestion:Yes **Threshold Limit Value:** Not Est.
Effects of Overexposure: May cause skin and eye irritation. May be harmful if swallowed.
Emergency & First Aid Procedures: For Eyes: Flush with water for at least fifteen minutes. Get medical aid. **For Skin:** Flush thoroughly with water. If irritation persists get medical aid. **If Ingested:** Do not induce vomiting. Give milk, egg white, gelatin, or if none of these are available give large quantities of water. Get medical aid.
Conditions Aggravated by Exposure: None

Listed Carcinogen, Mutagen, Teratogen (Ingredient, Source, Amount): None

SECTION 6-REACTIVITY DATA

Stability: Stable
Conditions to Avoid: None
Incompatibility: Avoid Contact with Strong Acids and Oxidizers
Hazardous Decomposition Products: Carbon Oxides
Hazardous Polymerization: Will not occur.

SECTION 7-SPILL OR LEAK PROCEDURES

Steps to be taken if material is released or spilled: Recontainerize by mopping, wet vacuum, or suitable absorbent. Rinse remaining material to drains. Be cautious of slippery floors.
Waste disposal method: Follow local, state, and federal regulations.

SECTION 8-SPECIAL PROTECTION INFORMATION

Respiratory Protection: Not Required.
Ventilation: Not Required
Protective Gloves: Not Required.
Eye Protection: Not Required.
Other Protective Equipment: None

SECTION 9-SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Store between 40° and 120° F.
Other Precautions: Keep out of reach of children. For sale to, use and storage by service personnel only.

The information contained in this MSDS was obtained from current and reliable sources, however the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of this company, it is not responsible for loss, injury and expense arising out of the product's improper use. No warranty, expressed or inferred, regarding the product described in this MSDS shall be created or inferred by any statement in this MSDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

DATE PREPARED-10/06/03 By: G.C.

Ethyl Alcohol 70%

MSDS # 273.00

Section 1: Product and Company Identification

Ethyl Alcohol 70%

Synonyms/General Names: Ethanol, Grain alcohol
Product Use: For educational use only
Manufacturer: Columbus Chemical Industries, Inc., Columbus, WI 53925.

24 Hour Emergency Information Telephone Numbers

CHEMTREC (USA): 800-424-9300 **CANUTEC (Canada): 613-424-6666**

ScholAR Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

Section 2: Hazards Identification

Clear, colorless liquid, alcohol odor.

HMIS (0 to 4)

Health	**2**
Fire Hazard	**3**
Reactivity	**0**

WARNING! Flammable liquid and moderately toxic by ingestion.
Flammable liquid, keep away from all ignition sources.
Target organs: Eyes, Liver, Kidneys, Central Nervous System.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Section 3: Composition / Information on Ingredients

Ethyl Alcohol (64-17-5), 74-76%. Water (7732-18-5), 25-26%.

Section 4: First Aid Measures

Always seek professional medical attention after first aid measures are provided.

Eyes: Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.
Skin: Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.
Ingestion: Call Poison Control immediately. **Aspiration hazard**. Rinse mouth with cold water. Give victim 1-2 tbsp of activated charcoal mixed with 8 oz water.
Inhalation: Remove to fresh air. If not breathing, give artificial respiration.

Section 5: Fire Fighting Measures



Class IB Flammable Liquid. When heated to decomposition, emits acrid fumes
Protective equipment and precautions for firefighters: Use foam or dry chemical to extinguish fire. Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA). Cool container with water spray. Material is not sensitive to mechanical impact. Material is sensitive to static discharge.

Section 6: Accidental Release Measures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all ignition sources and ventilate area. Contain spill with sand or absorbent material and place material in a sealed bag or container for disposal. Wash spill area after pickup is complete. See Section 13 for disposal information.

Section 7: Handling and Storage Red

Handling: Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling.
Storage: Store in Flammable Area [Red Storage] with other flammable materials and away from any strong oxidizers. Store in a dedicated flammables cabinet. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials.

Section 8: Exposure Controls / Personal Protection

Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Use NIOSH-approved respirator with an acid/organic cartridge. Exposure guidelines: Ethyl Alcohol: OSHA PEL: 1900 mg/m^3 and ACGIH TLV: 1000 ppm, STEL: N/A.

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Section 9: Physical and Chemical Properties

Molecular formula	C_2H_5OH.	**Appearance**	Clear, colorless liquid.
Molecular weight	46.07.	**Odor**	Alcohol .
Specific Gravity	0.790 g/mL @ 20°C.	**Odor Threshold**	N/A.
Vapor Density (air=1)	1.59.	**Solubility**	Completely soluble in water.
Melting Point	-114°C.	**Evaporation rate**	3.3 *(Butyl acetate = 1).*
Boiling Point/Range	78.5°C.	**Partition Coefficient**	-0.32 *(log P_{OW}).*
Vapor Pressure (20°C)	59.3 mm Hg.	**pH**	N/A.
Flash Point:	17°C (63°F) CC.	**LEL**	3.3%.
Autoignition Temp.:	363°C (685°F).	**UEL**	19 %.

N/A = Not available or applicable

Section 10: Stability and Reactivity

Avoid heat and ignition sources.
Stability: Stable under normal conditions of use
Incompatibility: Strong oxidizing agents, acids.
Shelf life: Indefinite if stored properly.

Section 11: Toxicology Information

Acute Symptoms/Signs of exposure: ***Eyes***: Stinging pain, watering of eyes, inflammation of eyelids and conjunctivitis. ***Skin***: Insensitivity to pain, feel of coolness or cold, skin looks white and feels hard and cold. ***Ingestion***: Breath has sweet, organic odor, mental confusion, drowsiness, nausea, vomiting and headache. ***Inhalation***: Rapid irregular breathing, headache, fatigue, mental confusion, nausea and vomiting, giddiness and poor judgment, convulsions and death.
Chronic Effects: Repeated/prolonged skin contact may cause dryness or rashes.
Sensitization: none expected
Ethyl Alcohol: LD50 [oral, rat]; 7060 mg/kg; LC50 [rat]; 20,000 mg/l (10 hours); LD50 Dermal [rabbit]; 20 mg/24H MOD
Material has not been found to be a carcinogen nor produce genetic, reproductive, or developmental effects.

Section 12: Ecological Information

Ecotoxicity (aquatic and terrestrial): Ecological impact has not been determined.

Section 13: Disposal Considerations

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Small amounts of this material may be suitable for sanitary sewer or trash disposal.

Section 14: Transport Information

DOT Shipping Name:	Ethanol.	**Canada TDG:**	Ethanol.
DOT Hazard Class:	3, pg II.	**Hazard Class:**	3, pg II **.**
Identification Number:	UN1170.	**UN Number:**	UN1170.

Section 15: Regulatory Information

EINECS: Listed (200-578-6).
TSCA: All components are listed or are exempt.
WHMIS Canada: Not WHMIS controlled.
California Proposition 65: Not listed.

The product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16: Other Information

Current Issue Date: January 23, 2009
Disclaimer: Scholar Chemistry and Columbus Chemical Industries, Inc., ("S&C") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because S&C has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. ***S&C makes no warranty, expressed or implied, including (without limitation) warranties with respect to the completeness or continuing accuracy of the information contained herein or with respect to fitness for any particular use.***
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SAFETY DATA SHEET **SDS No.:** EE0076 **FLAMMABLE STORAGE CODE RED**

Section 1 Chemical Product and Company Information

ward's science
5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300
For laboratory use only.
Not for drug, food or household use.

Product	**ETHYL ALCOHOL, DENATURED, 95% SOLUTION**
Synonyms	Ethanol, Denatured, 95%

Section 2 Hazards Identification

Signal word: DANGER
Pictograms: GHS02 / GHS07 / GHS08 / GHS06
Target organs: Eyes, Central nervous system, Liver, Kidneys.



GHS Classification:
Flammable liquid (Category 2)
Acute toxicity, inhalation (Category 3)
Skin irritation (Category 2)
Eye irritation (Category 2B)
STOT-SE (Category 2)
STOT-SE (Category 3)

GHS Label information: **Hazard statement:**
H225: Highly flammable liquid and vapour.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H331: Toxic if inhaled.
H336: May cause drowsiness or dizziness.
H371: May cause damage to organs.

Precautionary statement:
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P260: Do not breathe mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312: Call a POISON CENTER or doctor if you feel unwell.
P332+P313: If skin irritation occurs: Get medical attention.
P337+P313: If eye irritation persists: Get medical attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Ethyl alcohol	64-17-5	85.9%	200-578-6
Water	7732-18-5	5.0%	231-791-2
Isopropyl alcohol (denaturant)	67-63-0	4.8%	200-661-7
Methanol (denaturant)	67-56-1	4.3%	200-659-6

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL. IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Ethanol	STEL: 1000 ppm / 1880 mg/m^3(A3)	TWA: 1000 ppm / 1900 mg/m^3	TWA: 1000 ppm / 1900 mg/m^3

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Clear, colorless liquid.
Odor: Mild characteristic odor.
Odor threshold: Data not available.
pH: Data not available.
Melting / Freezing point: -114°C (-173°F)*
Boiling point: 78°C (163-174°F)*
Flash point: 13°C (55°F) TCC

Evaporation rate (Butyl acetate **= 1):** 4.1*
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: 3.3%(V) / 19%(V)*
Vapor pressure (mm Hg): 44.6 mm @ 20°C*
Vapor density (Air = 1): 1.59*
Relative density (Specific gravity): 0.794°C @ 60°F*
Solubility(ies): Soluble in water.

Partition coefficient: (n-octanol / water): Low Pow: -.32*
Auto-ignition temperature: 363°C (685°F)
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: Mixture
Molecular weight: Mixture

*[Pure Ethanol]

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Strong oxidizers, inorganic acids and halogens.

Hazardous decomposition products: Oxides of carbon.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 7060 mg/kg ; Inhalation-rat LC50: 124.7 mg/l/4hours [Ethanol]
Skin corrosion/irritation: Skin-rabbit - Slight irritant.
Serious eye damage/irritation: Eyes-rabbit - Severe irritant.
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC classified: Group 3: Not classifiable as to its carcinogenicity to humans. [Isopropanol]
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: Inhalation may cause dizziness, drowsiness, nausea, vomiting, inability to concentrate and irritation of the throat.
Ingestion: Ingestion causes dizziness, drowsiness, decreased reaction, euphoria, nausea, vomiting, staggering gait and coma.
Skin: Contact with skin causes irritation defatting on prolonged contact.
Eyes: Contact with eyes may cause blindness.
Signs and symptoms of exposure: See Potential health effects above.
Additional information: RTECS #: KQ6300000 [Ethanol]

Section 12 Ecological Information

Toxicity to fish: Oncorhynchus mykiss (fish, fresh water), LC50 = 11,200 mg/l/24 hours [Ethanol]
Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacia), EC50 = 10,800 mg/l/24 hours [Ethanol, 99.8% pure]
Toxicity to algae: Chlorella pyrenoidosa (Algae), EC50 = 9,310 mg/l/growth rate [Ethanol, absolute]
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information

UN/NA number: UN1170
Shipping name: Ethanol
Hazard class: 3
Packing group: II
Reportable Quantity: 5,000 lbs (2270 kg)
Marine pollutant: No
Exceptions: Limited quantity equal to or less than 1 L
ERG Guide # 127

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Ethanol	Listed	Not listed	D001	Listed	Not listed	B2; D2B
Methanol	Listed	5,000 lbs.	U154	Listed	Not listed	B2; D1B; D2A; D2B
Isopropanol	Listed	Not listed	Not listed	Listed	Not listed	B2; D2B

Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: September 12, 2013 **Supercedes:** February 23, 2011

FICHE TECHNIQUE DE SÛRETÉ **SDS No.:** EE0076 **INFLAMMABLE CODE D'ENTREPOSAGE ROUGE**

Section 1 L'information de produit chimique et de compagnie

5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

CHEMTREC 24 Numéros De Téléphone
De Secours D'Heure (800) 424-9300
Pour l'usage de laboratoire seulement.
Pas pour l'usage de drogue, de nourriture
ou de ménage.

Produit	**ALCOOL ÉTHYLIQUE, DÉNATURÉ, 95% SOLUTION**
Synonymes	Éthanol, Dénaturé, 95%

Section 2 Identification De Risques

Mention d'avertissement: DANGER
Pictogrammes: GHS02 / GHS07 / GHS08 / GHS06
Les organes cibles: Les yeux, le système nerveux central, le foie et les reins.



Classification par le GHS:
Liquide inflammable (Catégorie 2)
Acute toxicity, inhalation (Catégorie 3)
Skin irritation (Catégorie 2)
Eye irritation (Catégorie 2B)
STOT-SE (Catégorie 2)
STOT-SE (Catégorie 3)

Renseignements sur l'étiquette GHS: Mention de danger:
H225: Liquide et vapeurs très inflammables.
H315: Provoque une irritation cutanée.
H319: Provoque une sévère irritation des yeux.
H331: Toxique par inhalation.
H336: Peut provoquer somnolence ou des vertiges.
H371: Risque présumé d'effets graves pour les organes.

Déclarations de précaution:
P210: Tenir à l'écart la chaleur/des étincelles/des flammes nues/des surfaces chaudes. Ne pas fumer.
P240: Mise à la terre/liaison équipotentielle du récipient et du matériel de réception.
P241: Utiliser du matériel électrique/de ventilation/d'éclairage antidéflagrant.
P242: Ne pas utiliser d'outils produisant des étincelles.
P243: Prendre des mesures de précaution contre les décharges électrostatiques.
P260: Ne pas respirer les brouillards/vapeurs/aérosols.
P264: Se laver les mains soigneusement après manipulation.
P271: Utiliser seulement en plein air ou dans un endroit bien ventilé.
P280: Porter des gants de protection / des vêtements de protection / un équipement de protection des yeux / du visage.
P305+P351+P338: EN CAS DE CONTACT AVEC LES YEUX: Rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.
P303+P361+P353: EN CAS DE CONTACT AVEC LA PEAU (ou les cheveux): Enlever immédiatement tout vêtement souillé ou éclaboussé. Rincer la peau à l'eau/ se doucher.
P304+P340: EN CAS D'INHALATION: Transporter la personne à l'extérieur et la maintenir dans une position où elle peut confortablement respirer.
P312: Appeler un CENTRE ANTIPOISON ou un médecin en cas de malaise.
P332+P313: En cas d'irritation cutanée: Obtenir des soins médicaux.
P337+P313: Si l'irritation oculaire persiste: Obtenir des soins médicaux.
P362+P364: Enlever les vêtements contaminés et les laver avant réutilisation.
P403+P233: Stocker dans un endroit bien ventilé. Maintenir le récipient fermé de manière étanche.
P501: Éliminer le contenu / récipient dans une agence agréée d'élimination chimique conformément à la réglementation locale / régionale / nationale.

CA Prop 65 - Ce produit ne contient pas de produits chimiques connus à l'État de Californie pour causer le cancer, des malformations congénitales, ou toute autre atteinte à la reproduction.

Section 3 Composition / Information Sur Des Ingrédients

Nommé Chimique	# CAS	%	EINECS
Alcool éthylique	64-17-5	85,9%	200-578-6
L'eau	7732-18-5	5,0%	231-791-2
Alcool isopropylique	67-63-0	4,8%	200-661-7
Méthanol	67-56-1	4,3%	200-659-6

Section 4 Mesures De Premiers Soins

INGESTION: PEUT ÊTRE NOCIF EN CAS D'INGESTION. Appeler un médecin ou un centre antipoison immédiatement. Provoquer le vomissement seulement si elle est informée par le personnel compétent médicaux. Ne jamais rien donner par la bouche à une personne inconsciente.

INHALATION: PEUT ÊTRE NOCIF EN CAS D'INHALATION. IRRITE LES VOIES RESPIRATOIRES. Sortir au grand air. Si elle ne respire pas, pratiquer la respiration artificielle. Si la respiration est difficile, donner de l'oxygène. Obtenir des soins médicaux.

CONTACT AVEC LES YEUX: CAUSE L'IRRITATION DES YEUX. Vérifier et enlever les lentilles de contact. Rincer abondamment à l'eau pendant au moins 15 minutes, en soulevant les paupières inférieures et supérieures de temps en temps. Obtenez une attention médicale immédiate.

ABSORPTION PAR LA PEAU: PEUT ÊTRE NOCIF EN CAS D'ABSORPTION PAR LA PEAU. CAUSER UNE IRRITATION DE LA PEAU. Enlever les vêtements contaminés. Rincer soigneusement avec du savon doux et d'eau. En cas d'irritation, consulter un médecin.

Section 5 Mesures De Lutte Contre l'Incendie

Moyens d'extinction: Dioxyde de carbone, produit chimique sec, du sable sec, mousse anti-alcool.

Actions de protection pour les sapeurs-pompiers: En cas d'incendie, porter un appareil respiratoire NIOSH / MSHA approuvé autonome et un équipement complet de protection. Utiliser un jet d'eau pour maintenir incendie refroidir les conteneurs exposés.

Dangers spécifiques: En cas d'incendie, des gaz irritants et très toxiques peuvent être générés par la décomposition thermique ou la combustion. Les vapeurs formées de ce produit sont plus lourdes que l'air et peuvent voyager le long de la terre à une source d'ignition et voyagez dos immédiatement. La flamme peut ne pas être évidente en jour.

Section 6 Mesures De Déchargement Accidentel

Précautions personnelles: Évacuer le personnel vers la zone sûre. Utiliser un équipement de protection personnelle comme indiqué dans la Section 8. Assurer une ventilation adéquate.

Précautions environnementales: Éviter tout ruissellement vers les égouts pluviaux et les fossés qui aboutissent aux voies navigables.

Confinement et de nettoyage: Absorbez avec le matériel sec inerte, balayez ou nettoyez à l'aspirateur vers le haut et placez dans un récipient approprié pour la disposition appropriée. Laver la zone de déversement avec du savon et de l'eau.

Section 7 Manipulation Et Stockage

Précautions pour la manutention en toute sécurité: Lire l'étiquette sur le contenant avant d'utiliser. Ne pas porter de lentilles cornéennes lorsque vous travaillez avec des produits chimiques. Tenir hors de portée des enfants. Éviter tout contact avec les yeux, la peau et les vêtements. Ne pas inhaler les vapeurs, les embruns ou le brouillard. Utiliser avec une ventilation adéquate. Éviter l'ingestion. Bien se laver après la manipulation. Retirer et laver les vêtements avant de les réutiliser.

Conditions de stockage: Stocker dans un endroit frais, sec et bien aéré, loin des substances incompatibles. Subsistance loin des sources d'allumage.

Section 8 Commandes D'Exposition / Protection Personnelle

Limites d'exposition:

Nommé Chimique	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Éthanol	STEL: 1000 ppm / 1880 mg/m^3(A3)	TWA: 1000 ppm / 1900 mg/m^3	TWA: 1000 ppm / 1900 mg/m^3

Contrôles d'ingénierie: Les installations d'entreposage ou d'utilisation de ce matériel doit être équipé d'une douche oculaire et une douche de sécurité et le matériel d'extinction d'incendie. Le personnel doit porter des lunettes de sécurité, des lunettes, ou un écran facial, une blouse de laboratoire ou tablier, des gants protecteurs appropriés. Utiliser une ventilation adéquate pour maintenir les concentrations atmosphériques faible.
Protection respiratoire: Aucun ne devrait être nécessaire dans le laboratoire normal manipulant aux températures ambiantes. En cas de les conditions brumeux, travaillez dans le capot de vapeur ou portez un respirateur de NIOSH/MSHA-approved.

Section 9 Propriétés Physiques Et Chimiques

Apparence: Clair, liquide incolore.
Odeur: Odeur caractéristique douce.
Seuil de l'odeur: Données non disponibles.
pH: Données non disponibles.
Point de fusion / congélation: -114°C (-173°F)*
Point d'ébullition: 78°C (163-174°F)*
Point d'éclair: 13°C (55°F) TCC

Taux d'évaporation (Acetate de butylique = 1): 4.1*
Inflammabilité (solide / gaz): Données non disponibles.
Limites d'explosivité: Bas / Max: 3.3%(V) / 19%(V)*
Pression de vapeur (mm Hg): 44.6 mm @ 20°C*
Densité de vapeur (Air = 1): 1.59*
Densité relative (gravité spécifique): 0.794°C @ 60°F*
Solubilité (s): Soluble dans l'eau.

Coefficient de partage: (n-octanol / eau): Low Pow: -.32*
Auto-inflammation: 363°C (685°F)
Température de décomposition: Données non disponibles.
Viscosité: Données non disponibles.
Formule moléculaire: Mélange
Poids moléculaire: Mélange

*[L'éthanol pur]

Section 10 Stabilité Et Réactivité

Stabilité chimique: Stable
Polymérisation dangereuse: N'aura pas lieu.
Conditions à éviter: Les températures excessives, la chaleur, étincelles, flamme nue et d'autres sources d'allumage.

Matières incompatibles: Comburantes fortes, acides inorganiques et l'halogènes.

Produits dangereux de décomposition: Oxydes de carbones.

Section 11 L'Information Toxicologique

Toxicité aiguë: Oral-rat LD50: 7060 mg/kg ; Inhalation-rat LC50: 124.7 mg/l/4 heurs [Éthanol]
La corrosion de la peau et l'irritation: Peau de lapin - Légèrement irritant.
Des lésions oculaires graves / irritation: Yeux-lapin - Irritant sévère.
Respiratoire ou sensibilisation de la peau: Données non disponibles
Mutagénicité des cellules germinales: Donnée s non disponibles
Cancérogène: Données non disponibles
NTP: Aucun composant de ce produit présent à des niveaux supérieurs ou égaux à 0,1% n'a été identifié comme cancérigène reconnu ou présumé par NTP.
IARC classés: Group 3: L'agent est inclassable quant à sa cancérogénicité pour l'homme. [Isopropanol]
OSHA: Aucun composant de ce produit présent à des niveaux supérieurs ou égaux à 0,1% n'a été identifié comme cancérigène ni comme cancérigène possible par OSHA.
Reproductive toxicity: Données non disponibles
STOT-exposition unique: La substance ou le mélange est classé comme toxique pour certains organes cibles, exposition unique, catégorie 3 avec des effets narcotiques.
STOT-une exposition répétée: Données non disponibles
Risque d'aspiration: Données non disponibles
Effets d'une surexposition:
Inhalation: L'inhalation peut causer des étourdissements, somnolence, nausées, vomissements, incapacité à se concentrer et l'irritation de la gorge.
Ingestion: L'ingestion provoque des étourdissements, la somnolence, la réaction a diminué, l'euphorie, des nausées, des vomissements, démarche titubante et le coma.
Peau: Contact avec la peau cause une irritation délipidation au contact prolongé.
Yeux: Contact avec les yeux peut causer la cécité.
Les signes et les symptômes de l'exposition: Voir les effets sanitaires potentiels ci-dessus.
Informations complémentaires: RTECS #: KQ6300000 [Éthanol]

Section 12 L'Information Écologique

Toxicité pour les poissons: Oncorhynchus mykiss (fish, fresh water), LC50 = 11,200 mg/l/24 hours [Éthanol]
Toxicité pour les daphnies et autres invertébrés aquatiques: Daphnia magna (Crustacia), EC50 = 10,800 mg/l/24 hours [Éthanol, 99.8% pure]
Toxicité pour les algues: Chlorella pyrenoidosa (Algae), EC50 = 9,310 mg/l/growth rate [Éthanol, absolute]
Persistance et dégradabilité: Pas de données disponible
Potentiel de bioaccumulation: Pas de données disponible
Mobilité dans le sol: Pas de données disponibles
Évaluation PBT et vPvB: Pas de données disponibles
Autres effets indésirables: Un danger pour l'environnement ne peut pas être exclu dans l'éventualité d'une manipulation ou d'élimination.

Section 13 Considérations De Disposition

Ces lignes directrices sont destinées à l'élimination de la disposition d'un catalogue de taille seules les quantités. Les règlements fédéraux peuvent s'appliquer aux contenants vides. Des réglementations nationales et / ou local peut être différent. Éliminer conformément à toutes les réglementations locales, provinciales et fédérales ou d'un contrat avec une agence élimination des produits chimiques sous licence.

Section 14 L'Information De Transport

Numéro UN / NA: UN1170
Nom d'expédition: Éthanol
Classe de danger: 3
Groupe d'emballage: II
Quantité à déclarer: 5,000 lbs. (2270 kg)
Polluant marin: No
Exceptions: Quantité limitée égale à ou moins de 1 L
ERG Guide #: 127

Section 15 L'Information De Normalisation

Un produit chimique est considéré comme inscrit si le numéro CAS pour la forme anhydre est sur la liste d'inventaire.

Composant	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	Classification SIMDUT
Éthanol	Listed	Not listed	D001	Listed	Not listed	B2; D2B
Méthanol	Listed	5,000 lbs.	U154	Listed	Not listed	B2; D1B; D2A; D2B
Isopropanol	Listed	Not listed	Not listed	Listed	Not listed	B2; D2B

Section 16 L'Information Additionnelle

Les informations contenues dans ce document sont fournis sans garantie d'aucune sorte. Les employeurs devraient considérer cette information seulement comme complément à d'autres informations recueillies par eux et doivent prendre des décisions indépendantes de la pertinence et l'exhaustivité de l'information de toutes les sources afin d'assurer une utilisation correcte de ces matériaux et de la sécurité et la santé des employés. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Date de révision: 12 septembre, 2013 **Remplace:** 23 février, 2011

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 326.00
Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Ethyl Alcohol, Denatured

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 2). Highly flammable liquid and vapor (H225). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing mist, vapors or spray (P261).

Hazard class: Specific target organ toxicity, single exposure (Category 1). Causes damage to organs (H370). Addition of denaturant makes the product poisonous. Cannot be made nonpoisonous.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Ethyl alcohol	64-17-5	C_2H_5OH	46.07	80-86%
Isopropyl alcohol	67-63-0	C_3H_8O	60.10	9%
Methyl alcohol	67-56-1	CH_3OH	32.04	4-5%
Methyl isobutyl ketone	108-10-1	$C_6H_{12}O$	100.16	1%
Water	7732-18-5	H_2O	18.00	5%
Synonym: Ethanol				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Call a POISON CENTER or physician (P307+P311).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351 +P338). **If eye irritation persists:** Get medical advice or attention (P337+P313). **If on skin (or hair):** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell (P302+P301+P312).

SECTION 5 — FIRE FIGHTING MEASURES

Class IB flammable liquid due to ethyl alcohol content.
Flash point: 21 °C
When heated, releases flammable fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA CODE
H-2
F-3
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides. Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor™ can.
Keep container tightly closed and cool (P233+P235). Use explosion-proof electrical and ventilating equipment (P241). Take precautionary measures against static discharge (P243).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).
Exposure guidelines: (as ethyl alcohol) PEL 1000 ppm (OSHA), Ceiling 1000 ppm (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear liquid. Strong alcohol odor.
Soluble: Miscible with water and many organic solvents.

Boiling point: 78 °C
Melting point: -144 °C
Specific gravity: 0.7893

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with oxidizing agents, peroxides, acids, acid chlorides, acid anhydrides, alkali metals, ammonia, moisture, heat, open flame, or any source of ignition.
Shelf life: Excellent, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye irritation, nausea, dizziness, headache.
Chronic effects: Liver damage, reproductive, teratogenic effects, carcinogen.
Target organs: Eyes, skin, central nervous system, liver, reproductive system.

ORL-RAT LD_{50}: 7060 mg/kg (as ethyl alcohol)
IHL-RAT LC_{50}: 20,000 ppm/10H (as ethyl alcohol)
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Ethyl alcohol solution. Hazard class: 3, Flammable liquid. UN number: UN1170.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-578-6), RCRA code D001.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 325.00
Revision Date: July 14, 2015

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Ethyl Acetate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300 **Signal Word** **DANGER**

Pictograms





SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 2). Highly flammable liquid and vapor (H225). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Eye irritation (Category 2A). Causes serious eye irritation (H319).

Hazard class: Specific target organ toxicity, single exposure; Narcotic effects (Category 3). May cause drowsiness or dizziness (H336). Avoid breathing mist, vapors or spray (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Ethyl acetate	141-78-6	$CH_3COOC_2H_5$	88.11	
Synonym: Acetic acid, ethyl ester				

SECTION 4 — FIRST AID MEASURES

Call POISON CENTER or physician if you feel unwell (P312).
If inhaled: Call a POISON CENTER or physician if you feel unwell (P304+P312).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Class 1B flammable liquid.
Flash point: -4 °C Flammable limits: Lower: 2.0% Upper: 11.5% Autoignition Temperature: 426 °C
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA CODE
H-1
F-3
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #3. Store with hydrocarbons, oils, esters and aldehydes.
Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor™ can.
Moisture sensitive material. Keep container tightly closed (P233). Keep cool (P235). Ground or bond container and receiving equipment (P240). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).
Exposure guidelines: PEL/TLV 400 ppm (OSHA/ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Sweet odor.
Odor threshold: 3.9 ppm
Soluble: Chloroform, alcohol, and ether. Slightly in water.
Vapor pressure: 93.2 mm Hg at 25 ºC

Boiling point: 77 ^{o}C
Melting point: -83 ^{o}C
Specific gravity: 0.902
Vapor Density: 3.04
Vapor pressure: 76 mm Hg

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with oxidizers, bases, acids, moisture, and heat.
Shelf life: Poor, moisture sensitive. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, nausea, headache, vomiting.
Chronic effects: Anemia.
Target organs: Liver, kidneys, central nervous system, blood.

ORL-RAT LD_{50}: 5620 mg/kg
IHL-RAT LC_{50}: 45 g/m^3/2 hour
SKN-RBT LD_{50}: 720 g/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #18a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Ethyl acetate. Hazard class: 3, Flammable Liquid. UN number: UN1173.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (205-500-4), RCRA code U112.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: July 14, 2015

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FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 326.00
Revision Date: March 8, 2001

Section 1 — Chemical Product and Company Identification

Ethyl Alcohol

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Ethyl Alcohol
Synonym: ethanol
CAS#: 64-17-5

Section 3 — Hazards Identification

Clear liquid; strong alcohol odor.
Toxic by ingestion and inhalation. Body tissue irritant. Avoid all body tissue contact. Denatured with isopropanol and methanol. Not for human consumption.
Flammable liquid.

FLINN AT-A-GLANCE
Health-3
Flammability-3
Reactivity-1
Exposure-1
Storage-3

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Rinse out mouth, give 1 to 2 cups of water or milk, induce vomiting. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Class IB Flammable liquid.
Flash Point: 48 F Upper: 24.5% Lower: 3.3% Autoignition Temperature: 683 F
Fire Fighting Instructions: Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

NFPA CODE
H-0
F-3
R-0

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area. Remove all ignition sources and ventilate area. Contain spill with sand and absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides.
Use and dispense in a hood. Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor can.

Section 8 — Exposure Controls , Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits. Always wear a NIOSH-approved respirator with proper cartridges or a positive pressure, air-supplied respirator when handling this material in emergency situations (spill or fire).
Exposure guidelines: TWA 1000 ppm (OSHA)

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Section 9 — Physical and Chemical Properties

Clear liquid; strong alcohol odor.
Solubility: Miscible with water and many organic solvents.
Formula: C2H5OH
Formula Weight: 46.07

Specific Gravity: .785
Melting Point: -130 C
Boiling Point: 78 C

Section 10 — Stability and Reactivity

Avoid contact with oxidizing agents, peroxides, acids, acid chlorides, acid anhydrides, and alkali metals, ammonia, moisture, heat, open flame or any source of ignition.
Shelf life: Excellent, if stored safely.

Section 11 — Toxicological Information

Acute effects: Poison, irritant, nausea, dizziness and headache
Chronic effects: N.A.
Target organs: Eyes, liver, kidneys, nerves

ORL-RAT LD50: 7060 mg/Kg
IHL-RAT LC50: 20000 ppm/10H
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #26b is one option.

Section 14 — Transport Information

Shipping Name: Ethyl alcohol
Hazard Class: 3, Flammable liquid
UN Number: UN1170

N/A = Not applicable

Section 15 — Regulatory Information

TSCA-listed, EINECS-listed (200-578-6), RCRA code D001.

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

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Material Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Ethylene Glycol
OTHER/GENERIC NAMES: Glycol; 1, 2-Ethanediol
PRODUCT USE: Industrial
MANUFACTURER: Honeywell/GEM3
101 Columbia Road
Morristown, New Jersey 07962-1053

FOR MORE INFORMATION CALL:
(Monday-Friday, 8:00am-5:00pm)
1-800-279-9998

IN CASE OF EMERGENCY CALL:
(24 Hours/Day, 7 Days/Week)
1-800-707-4555 or Chemtrec 1-800-424-9300
International: 1-703-527-3887

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS NUMBER	WEIGHT %
Ethylene Glycol	107-21-1	100%

Trace impurities and additional material names not listed above may also appear in Section 15 toward the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Harmful or fatal if swallowed. May be harmful if inhaled or absorbed. May cause damage to kidneys, liver, and central nervous system.

POTENTIAL HEALTH HAZARDS

Harmful if swallowed (100 ml of 100% Ethylene Glycol can be fatal). Causes abdominal pain, dizziness, lumbar pain, nausea, vomiting, diarrhea. May be harmful if inhaled or absorbed. May cause liver and central nervous system damage and possibly fatal kidney damage. Irritating to skin, eyes, and mucous membranes.

Ingredients found on one of the OSHA designated carcinogen lists are listed below.

INGREDIENT NAME	NTP STATUS	IARC STATUS	OSHA LIST
No ingredients listed in this section.			

4. FIRST AID MEASURES

SKIN: Wash thoroughly with soap and water.
EYES: Immediately flush thoroughly with large amounts of water.
INHALATION: Remove person to fresh air; give artificial respiration if breathing has stopped.
INGESTION: If person is conscious, give water and induce vomiting immediately as directed by medical personnel.
ADVICE TO PHYSICIAN: Treat symptomatically.

MATERIAL SAFETY DATA SHEET

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: 232° F
FLASH POINT METHOD: Closed Cup
AUTOIGNITION TEMPERATURE: 410°C (770°F)
UPPER FLAME LIMIT (volume % in air): 15.3
LOWER FLAME LIMIT (volume % in air): 3.2
FLAME PROPAGATION RATE (solids): N/A
OSHA FLAMMABILITY CLASS: N/A

EXTINGUISHING MEDIA:
Water spray, dry chemical, foam, $C0_2$.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Thermal decomposition produces acrid fumes.

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:
Wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE:
Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under Exposure/Personal Protection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Take up and containerize for proper disposal as described under Disposal. Comply with Federal, State, and local regulations on reporting releases. Refer to Regulatory Information for reportable quantity and other regulatory data.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

7. HANDLING AND STORAGE

NORMAL HANDLING & STORAGE RECOMMENDATIONS :(Always wear recommended personal protective equipment.) Keep container closed and protected against physical damage. Store in a cool area away from ignition sources and oxidizers. Do not breathe vapor. Do not get in eyes, on skin, or on clothing. Retained residue may make empty containers hazardous.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: (Always wear recommended personal protective equipment.)
Material should be handled or transferred in an approved fume hood or with adequate ventilation.

PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION:
Protective gloves (Natural rubber, PVC, or equivalent) should be worn to prevent skin contact.

EYE PROTECTION:
Safety glasses with side shields or chemical goggles should be worn at all times.

ADDITIONAL RECOMMENDATIONS:
Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Arrange for neutralization supplies and equipment and abundant running water.

EXPOSURE GUIDELINES

INGREDIENT NAME	ACGIH TLV	OSHA PEL	OTHER LIMIT
Ethylene Glycol	50 ppm/127 mg/m^3 CL	50 ppm/125 mg/m^3 CL	

* = Limit established by Honeywell International, Inc.
** = Workplace Environmental Exposure Level (AIHA).
*** = Biological Exposure Index (ACGIH).

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Colorless	
PHYSICAL STATE:	Liquid	
MOLECULAR WEIGHT:	62.07	
CHEMICAL FORMULA:	$HOCH_2CH_2OH$	
ODOR:	Odorless	
SPECIFIC GRAVITY (water = 1.0):	1.113	
SOLUBILITY IN WATER (weight %):	Miscible	
pH:	N/A	
BOILING POINT:	197° C	
MELTING POINT:	-12° C	
VAPOR PRESSURE:	0.08 20° C	
VAPOR DENSITY (air = 1.0):	2.1	
EVAPORATION RATE:	0.01	**COMPARED TO:** BuAc = 1
% VOLATILES:	N/A	
FLASH POINT:	N/A	

(Flash point method and additional flammability data are found in Section 5.)

10. STABILITY AND REACTIVITY

NORMALLY STABLE? (CONDITIONS TO AVOID):
Yes; Extreme heat; open flames; sparks
INCOMPATIBILITIES:
Chromium trioxide; potassium permanganate; silver peroxide.
HAZARDOUS DECOMPOSITION PRODUCTS:
CO_x
HAZARDOUS POLYMERIZATION:
Does not occur

MATERIAL SAFETY DATA SHEET

11. TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS:
ihl-hmn TCLo:10000 mg/m^3
orl-hmn LDLo:398 mg/kg
orl-rat LD50:4700 mg/kg

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:
N/A

OTHER DATA:
Tests on laboratory animals indicate Ethylene Glycol may produce adverse mutagenic and reproductive effects. Cited in Registry of Toxic Effects of Substances (RTECS).

12. ECOLOGICAL INFORMATION

No data available.

13. DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded? No
If yes, the RCRA ID number is:

OTHER DISPOSAL CONSIDERATIONS: Observe all Federal, State, and Local Environmental regulations.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

US DOT PROPER SHIPPING NAME: Not-Regulated
US DOT HAZARD CLASS: N/A
US DOT ID NUMBER: N/A

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: Yes
OTHER TSCA ISSUES: None

MATERIAL SAFETY DATA SHEET

SARA TITLE III/CERCLA
"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

INGREDIENT NAME	SARA/CERCLA RQ (lb)	SARA EHS TPQ (lb)
Ethylene Glycol	5000 lb (as 100%)	

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS:

SARA 313 TOXIC CHEMICALS:
The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2.

INGREDIENT NAME	COMMENT
Ethylene Glycol	De Minimis Concentration 1.0

STATE RIGHT-TO-KNOW
In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

INGREDIENT NAME	WEIGHT %	COMMENT
No ingredients listed in this section.		

ADDITIONAL REGULATORY INFORMATION: N/A
WHMIS CLASSIFICATION (CANADA): N/A
FOREIGN INVENTORY STATUS: N/A

16. OTHER INFORMATION

CURRENT ISSUE DATE: October 2, 2003
PREVIOUS ISSUE DATE: September 8, 1999
CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:
Converted to ANSI 16-section format.

OTHER INFORMATION: Honeywell MAKES NO WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THIS MATERIAL OR THE USE OF THIS PRODUCT OTHER THAN INDICATED ON THE LABEL. BUYER ASSUMES ALL RISK OF USE AND/OR HANDLING OF THIS MATERIAL WHEN SUCH USE AND/OR HANDLING IS CONTRARY TO LABEL INSTRUCTIONS

NFPA Hazard Ratings:
Health: 1
Flammability:1
Reactivity: 0
Special Hazards:

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Name	Phone Number			CHEMTREC
Nu-Calgon Wholesaler, Inc.	(314) 469-7000 / (800) 554-5499			(800) 424-9300
Street Address	**City**	**State**	**Postal Code**	**Last Update**
2008 Altom Court	St. Louis	MO	63146-4151	12/26/07
Product Name	**Product Number**	**Product Use**		**EPA Registration #**
Evap Pow'R C	4168	Evaporator Coil Cleaner		N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	% By Wt.	CAS Number	TLV	PEL
2-Butoxyethanol (SARA Section 313)	5-10%	111-76-2	25ppm (ACGIH TWA) ; Skin*	25ppm (OHSA PEL) ; Skin*
Sodium Xylene Sulfonate	5-10%	1300-72-7	None Established	None Established
Nonionic Surfactant	1-5%	68551-13-3	None Established	None Established

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: Detergent with solvent. Do not get in eyes, on skin or clothing. Avoid breathing spray or mist. Use only with adequate personal protection equipment.

Potential Health Effects

Eyes: Prolonged or repeated contact with eyes may cause irritation and reddening.

Skin: Prolonged or repeated contact with skin may cause irritation, reddening, drying of the skin. Contains a material that can absorb through the skin, prolonged or widespread contact may result in the absorption of potentially harmful amounts of material.

Ingestion: Ingestion may cause nausea, vomiting, mucosal irritation. Ingestion of significant quantities may also result in headaches, dizziness, incoordination,general weakness and possibly red blood cell hemolysis.

Inhalation: Inhalation of generated mists or spray may cause irritation of mouth, throat, stomach, and respiratory tract.

Chronic Exposure: Contains material which penetrates skin readily. Ingestion, prolonged or widespread contact may result in the absorption of potentially harmful amounts. One of the ingredients (2-butoxyethanol) has caused red blood cell hemolysis as well as kidney and liver injury in lab animals

Carcinogenicity: None

Medical Conditions Aggravated be Exposure: An existing dermatitis ; respiratory illnesses.

SECTION 4 – FIRST AID MEASURES

Eyes: Flush eyes with water for at least 30 minutes and call a physician immediately. Speed of action is essential.

Skin: Remove contaminated clothing. Wash with large amounts of soap and water. If irritation persists, continue washing. Consult a physician in the case of any prolonged irritation

Ingestion: Do not induce vomiting. Immediately give large quantities of water or (preferably) milk and call a physician. Speed of action is essential.

Inhalation: Remove to fresh air. Start artificial respiration if necessary. Oxygen may be administered. Call a physician.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: None to Boiling °F

Autoignition Temp: N/A°C/N/A°F

Hazardous Products of Combustion: Burning may produce oxides of carbon and other substances.

Flammable Limits in Air: N/A

Extinguishing Media: This product is non-combustible. Water Spray (Fog), Dry Chemical, CO2 or Foam may be used where product is stored.

Fire and Explosion Hazards: None

Special Firefighting Procedures: Do not enter confined fire-spaces without protective clothing and self-contained air supply.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Before attempting clean up, refer to personal protection information. Do not touch or walk through spilled material. Stop leak if you can without risk. Dike ahead of large spills to prevent run-off. Mop, pump or take up with sand or other inert absorbent and reclaim into containers for reuse, recycle or proper disposal. Flush small spills or residue to drain.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: No special requirements if product is handled according to good manufacturing practices. Wash thoroughly after handling. Do not get in eyes, on skin or clothing. Sprays and generated mists can be irritating. Use only according to dilution instructions and with adequate protective clothing.

Storage Requirements: Keep container closed when not in use. Wash thoroughly after handling. D.O.T. Classification: Not Regulated

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Specific use conditions (spraying/confined spaces) where regulatory limits for 2-butoxyethanol are exceeded, may require local exhaust ventilation to prevent release of mist &/or vapors into work environment. If ventilation in not adequate, use NIOSH/MSHA approved respirator.

Eye Protection: Safety Glasses

Protective Clothing: Impervious protective clothing appropriate to minimize contact (ie: rubber boots, apron, faceshield) where sprayback/misting conditions exist. Rubber protective gloves.

Exposure Guidelines: 2-butoxyethanol TLV = 25ppm. Eye wash station and safety shower in handling area.

Specific Engineering Controls (such as ventilation, enclosed process): Insure adequate ventilation to control 2-butoxyethanol airborne concentration below TLV of 25ppm. Eye wash station and safety shower in handling area.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Clear Liquid	**Freezing Point:** 0°C/32°F	**% Volatile by Weight:** ~91%
Color: Green	**Vapor Density [air =1]:** Not Determined	**Evaporation Rate:** (vs. H2O): About the same
Odor: Characteristic Odor	**Vapor Pressure:** Not Determined	**Specific Gravity:** (H20=1.0): 1.02 (+/-0.005)
Boiling Point: 100°C/212°F	**Solubility in Water:** Complete	**pH (concentrate):** 8.0 (+/- 0.5)

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable

Hazardous Polymerization: None

Incompatibilities: Strong acids/oxidizers. Do not mix with chlorinated detergents (bleach).

Reactive Conditions to avoid: Do not mix with chlorinated detergents (bleach) or any other chemicals.

Decomposition Products: Burning may produce oxides of carbon and other substances.

SECTION 11 – TOXICOLOGICAL INFORMATION

Hazardous Ingredients	CAS #	EINECS #	LD 50 of Ingredient (Specify Species)	LC50 of Ingredient (Specify Species)
2-Butoxyethanol (Section 313)	111-76-2	No Data.	2.68ml/kg (Oral; Rat)	450ppm (Rat)
Sodium Xylene Sulfonate	1300-72-7	No Data.	4000 mg/kg (Oral; Rat)	N/A
Nonionic Surfactant	68551-13-3	No Data.	2.7 g/kg (Oral; Rat)	N/A

SECTION 12 – ECOLOGICAL INFORMATION

Hazardous Ingredients	Aquatic Toxicity Data
2-Butoxyethanol (Section 313)	>1000mg/l (48hr) - Daphnia. 1700mg/l (96hr) - Fathead Minnow
Sodium Xylene Sulfonate	N/A
Nonionic Surfactant	N/A

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in an approved waste facility according to Federal, State and local regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: No Data.

Purview	Proper Shipping Name	UN Number	Packing Group	Hazard Class
DOT (Land)	Not Regulated			
IMO (Water)	No Data.			
ICAO (Air)	No Data.			

SECTION 15 – REGULATIORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	Class D - Division 2B - Eye and Skin Irritant
SARA Title III: (Superfund Amendments & Reauthorization Act)	Contains Glycol Ether listed at 5-10% by weight.
OSHA: (Occupational Safety & Health Administration)	OSHA Hazardous - Acute and Chronic Health Hazard
TSCA: (Toxic Substance Control Act)	All ingredients are TSCA registered.
VOC: (volatile Organic Compounds)	5.3% by weight
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	All ingredients are listed on the DSL.
CERCLA: (Comprehensive Response Compensation & Liability Act)	N/A
IDL: (Canadian Ingredient Disclosure List)	Ethylene glycol monobutyl ether is listed. Other ingredients are below IDL disclosure level.
NFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health = 1* Flammability = 0 Reactivity = 1

SECTION 16 – OTHER INFORMATION

Contains 2-butoxyethanol - which penetrates skin readily. Ingestion, prolonged or widespread contact may result in the absorption of potentially harmful amounts. 2-butoxyethanol has caused red blood cell hemolysis as well as kidney and liver injury in lab animals.

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herin.

HILLYARD
The Cleaning Resource®

SAFETY DATA SHEET

1. Identification

Product identifier **EXPLORER**

Other means of identification

SDS number 567N-98D

Product code HIL00534

Recommended use Floor Finish

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Manufacturer

Company name HILLYARD INDUSTRIES

Address 302 North Fourth St.
St. Joseph, MO 64501

Contact person Regulatory Affairs

Telephone number (816) 233-1321 (Ext. 8285)

Fax (816) 383-8485

E-mail regulatoryaffairs@hillyard.com

Emergency telephone # (800) 424-9300
(Only in the event of chemical emergency involving a spill, leak, fire, exposure, or accident involving chemicals.)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Hazardous to the aquatic environment, acute hazard Category 3

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement Harmful to aquatic life.

Precautionary statement

Prevention Avoid release to the environment.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law in compliance with applicable federal, state and local requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
2-(2-ethoxyethoxy)ethanol		111-90-0	3 - < 5
Dipropylene glycol monomethyl ether		34590-94-8	3 - < 5

Chemical name	Common name and synonyms	CAS number	%
Tributoxyethyl Phosphate		78-51-3	1 - < 3
Other components below reportable levels			80 - < 90

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses.

Ingestion Drink water as a precaution. Get medical attention if any discomfort continues.

Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. Follow precautions for safe handling described in this safety data sheet. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Dipropylene glycol monomethyl ether (CAS 34590-94-8)	PEL	600 mg/m3
		100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Dipropylene glycol monomethyl ether (CAS 34590-94-8)	STEL	150 ppm
	TWA	100 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Dipropylene glycol monomethyl ether (CAS 34590-94-8)	STEL	900 mg/m3
		150 ppm
	TWA	600 mg/m3
		100 ppm

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
2-(2-ethoxyethoxy)ethanol (CAS 111-90-0)	TWA	140 mg/m3
		25 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.

US - Tennessee OELs: Skin designation

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Not normally needed.

Skin protection

Hand protection Not normally needed.

Other Not normally needed.

Respiratory protection No personal respiratory protective equipment normally required.

Thermal hazards Not applicable.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance White emulsion

Physical state	Liquid.
Form	Liquid.
Color	White
Odor	non-objectionable odor
Odor threshold	Not available
pH	8 - 9
Melting point/freezing point	Not applicable / Not available
Initial boiling point and boiling range	> 200 °F (> 93.33 °C)
Flash point	> 220.0 °F (> 104.4 °C) Tag Closed Cup
Evaporation rate	< 1 (ethyl ether = 1)
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	17.2 mm Hg
Vapor density	1.5 AIR=1
Relative density	1.04 at 77°F
Solubility(ies)	
Solubility (water)	Dispersable
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Density	8.64 lb/gal

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact	May be irritating to the skin.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
EXPLORER		
Acute		
Dermal		
LD50	Rabbit	32039.7773 mg/kg estimated
Oral		
LD50	Guinea pig	50167.2227 mg/kg estimated
	Mouse	218.6046 g/kg estimated
	Rat	38563.332 mg/kg estimated

Components	Species	Test Results
2-(2-ethoxyethoxy)ethanol (CAS 111-90-0)		
Acute		
Dermal		
LD50	Rabbit	8476 mg/kg
	Rat	6000 mg/kg
Oral		
LD50	Mouse	6.58 g/kg
	Rat	1920 mg/kg
Dipropylene glycol monomethyl ether (CAS 34590-94-8)		
Acute		
Dermal		
LD50	Rabbit	9.5 g/kg
Oral		
LD50	Rat	5.35 g/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Harmful to aquatic life.

Product		Species	Test Results
EXPLORER			
Aquatic			
Crustacea	EC50	Daphnia	121.7373 mg/l, 48 hours estimated
Fish	LC50	Fish	348.8947 mg/l, 96 hours estimated

Components		Species	Test Results
2-(2-ethoxyethoxy)ethanol (CAS 111-90-0)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 10000 mg/l, 96 hours
Tributoxyethyl Phosphate (CAS 78-51-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	10.4 - 12 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-(2-ethoxyethoxy)ethanol	-0.54
Tributoxyethyl Phosphate	3.75

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)
Not listed.

US. Massachusetts RTK - Substance List
Dipropylene glycol monomethyl ether (CAS 34590-94-8)

US. New Jersey Worker and Community Right-to-Know Act
Dipropylene glycol monomethyl ether (CAS 34590-94-8)

US. Pennsylvania Worker and Community Right-to-Know Law
Dipropylene glycol monomethyl ether (CAS 34590-94-8)

US. Rhode Island RTK
Not regulated.

US. California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 01-22-2015

Version # 01

HMIS® ratings
Health: 0
Flammability: 0
Physical hazard: 0

Disclaimer
No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products.

Newell Rubbermaid Brands That Matter | Office Products Group

MATERIAL SAFETY DATA SHEET

MSDS # 81860

Section One: Identification

Newell-Rubbermaid (Sanford LP)
2707 Butterfield Road
Oak Brook, IL 60523 USA
800-323-0749 or 630-481-2000

EMERGENCY MEDICAL NUMBER:
888-786-0972

Product Name: Expo White Board (Care) Cleaner, Expo White Board (Care) Cleaning Wipes,

Colors: Not applicable

NewellRubbermaid, Inc (Sanford L.P.) is a member of The Art and Creative Materials Institute, Inc. This product is certified by the Institute to be labeled in accordance with the voluntary chronic hazard labeling standard ASTM D-4236 and is labeled with the AP Non Toxic Seal. Products bearing the AP Approved Product Seal of The Art and Creative Materials Institute, Inc. are certified in a program of toxicological evaluation by a medical expert, subject to review by the Institute Toxicology Advisory Board, to contain no materials in sufficient quantities to be toxic or injurious to humans, or to cause acute toxicity or chronic health problems.

Section Two: Hazard Identification

Not Hazardous under normal use conditions. Contact with eyes may cause irritation

Section Three: Hazardous Ingredients

Water, Propylene glycol n-Butyl ether (5131-66-8)

Section Four: First Aid Measures

Inhalation:	Remove source of irritation. If symptoms persist seek medical attention
Skin Contact:	Wash with soap and water. If irritation persists seek medical attention.
Eye Contact:	Rinse eyes with water, if irritation persists seek medical attention.
Ingestion:	If symptoms occur seek medical attention.

Section Five: Fire Fighting Measures

Flash Point:	N/A
Extinguishing Media:	Water, dry chemical, alcohol foam or carbon dioxide. Water spray may be used to keep exposed material cool.
Fire and Explosion Hazards:	Combustion/fires produce smoke consisting of carbon dioxide, carbon monoxide, and other potentially toxic gases.

Section Six: Accidental Release Measures

In Case of Spill or Accidental Release: Wipe up with absorbent material.

Section Seven: Handling and Storage

Recommended Storage Conditions: Keep container closed when not in use.

Section Eight: Exposure Controls and Personal Protection

Eye Protection:	None under normal use conditions.
Clothing:	None under normal use conditions.
Respirator:	None under normal use conditions.

Section Nine: Physical and Chemical Properties

Form:	Liquid	Color:	Colorless
Odor:	Mild	Boiling Point:	N/D
Solubility in Water:	Soluble	Specific Gravity:	N/D
Melting/Freezing Point:	N/D	Evaporation Rate:	Not Applicable
Auto Ignition Temperature:	N/A	Flash Point:	Not Applicable
pH:	6-8	Vapor Pressure:	Not Applicable
VOC:	Not Applicable		

Section Ten: Stability and Reactivity

Stability:	Stable under ordinary conditions of use and storage
Conditions to Avoid:	Strong oxidizing agents
Incompatibility with Other Materials:	Acids and oxidizers
Decomposition:	May produce carbon monoxide, carbon dioxide, nitrogen oxides and irritating fumes
Polymerization:	Polymerization cannot occur

Section Eleven: Toxicological Information

See Section Two: Hazard Identification for any hazards

Section Twelve: Ecological Information

Environmental Fate:	No information found
Environmental Toxicity:	This material is not expected to be toxic to aquatic life
Chemical Fate	Material is readily biodegradable

Section Thirteen: Disposal Considerations

Dispose in accordance with Federal, State and Local Regulations

Section Fourteen: Transport Information

Domestic (Land, DOT), International (Water, IMO), International (Air, ICAO, IATA)

DOT:	Not Regulated
IATA:	Not available
IMO:	Not available

Section Fifteen: Regulatory Information

TSCA and DSL:	The product listed on this Material Safety Data Sheet is not listed on the Toxic Substances Control Act Inventory or Domestic Substance List. All ingredients used to manufacture this product are listed on the TSCA and DSL Inventories.

Section Sixteen: Other Information

HMIS Code	
Health	1
Flammability	0
Reactivity	0
Personal Protection	NA

0=Minimal / 4 = Extreme

NewellRubbermaid, Inc (Sanford L.P) has been advised by Counsel that the OSHA Hazard Communication Standard and the Health Canada Workplace Hazardous Materials Information Standard do not apply to the product described in this Material Safety Data Sheet. The reasons for the exemptions are contained in 29 CFR 1910.1200(b)(6)(ix) as amended Sept 14, 2009 per the Code of Federal Regulations and also Canadian Hazardous Products Act part 12 section (f) as amended June 1, 2009. The information contained in this MSDS is forwarded to you for your information, but is not meant to imply that the product is covered by nor is this MSDS meant to comply with all requirements of the hazard communication standards

Reference Product Images



MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 0 Flammability = 0 Reactivity = 0
HMIS RATING: Health = / 0 Flammability = 0 Reactivity = 0

SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (538N-36A)

Manufacturer's Name: HILLYARD INDUSTRIES **Product Name: EXTRACTION pH RINSE**
Address: 302 North Fourth Street **Date Prepared:** August 24, 2007
St. Joseph, MO 64501 **Prepared by:** Regulatory Affairs Department
Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.) **Other information calls:** (816) 233-1321 (Ext. 8285)
http://www.hillyard.com

SECTION II -- INGREDIENTS/IDENTITY INFORMATION

Components

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	N/A	N/A	N/A	---
Anionic Polymer	N.J. Trade Secret Registry #58-2380661-5019	N/A	N/A	N/A	---

VOC = 0% (concentrate)

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 202ºF **Specific Gravity (H_2O = 1):** 25ºC = 1.01 & 39ºC = 1.01
Vapor Pressure (mm Hg.): 17.6 **Percent Volatile by Volume (%):** 96
Vapor Density (AIR = 1): 0.6 **Evaporation Rate (ethyl ether = 1):** slower than 1
Solubility in Water: complete **Appearance and Odor:** Clear, colorless liquid; non-objectionable odor
PH (concentrate): 2.6

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: None (T.C.C.) **Flammable Limits:** LEL = N/A UEL = N/A
Extinguishing Media: N/A
Special Fire Fighting Procedures: None
Unusual Fire and Explosion Hazards: None

SECTION V -- PHYSICAL HAZARDS

Stability: Stable **Conditions to Avoid:** N/A
Incompatibility (Materials to Avoid): None known
Hazardous Decomposition Products or Byproducts: Oxides of carbon and sulfur may be formed during thermal decomposition.
Hazardous Polymerization: Will not occur **Conditions to Avoid:** N/A

SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? No Skin? No Ingestion? No

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Test showed that per the Federal Hazardous Substance Act this concentrated product was not considered to be a primary skin irritant nor a primary eye irritant; however, the concentrate might induce slight irritation in some sensitive individuals. The product was not orally toxic at 5 g/kg when tested and it was not toxic by inhalation at 212 mg./liter when tested according to the U.S. Federal Hazardous Substance Act Regulations. 2. None known

SECTION VI -- HEALTH HAZARD DATA continued
Chemical listed as Carcinogen or Potential Carcinogen:
National Toxicology Program = No **I.A.R.C. Monographs =** No **OSHA =** No
This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.
Signs and Symptoms of Exposure: None known
Medical Conditions Generally Aggravated by Exposure: None known
Emergency and First Aid Procedures: N/A

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE
Steps To Be Taken In Case Material Is Released Or Spilled: Pick up with mop or wet vac and wash away with water.
Waste Disposal Method: If this product as supplied becomes a waste, it doe snot meet the criteria of a hazardous waste as defined by under the U.S. EPA Resource Conservation and Recovery Act (RCRA) 40CFR261. Large spills should be picked up with wet vac or absorbent material and incineration. Dispose of liquid per local, state and federal regulations.
Precautions To Be Taken In Handling And Storing: Freezing of product may rupture container. Product shelf life is best retained by storage at 45-100°F temperatures.
Other Precautions . This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR Part 372.

SECTION VIII -- CONTROL MEASURES
Respiratory Protection (Specify Type): None required
Ventilation: N/A
Local Exhaust = N/A **Mechanical (General) =** N/A **Special =** N/A **Other =** N/A
Protective Gloves: None required **Eye Protection:** N/A
Other Protective Clothing or Equipment: None required
Work / Hygienic Practices: Rinse concentrated Neutralizer off skin and clothing with water.

SECTION IX -- TRANSPORTATION INFORMATION
Applicable regulations: 49 CFR = no; **IMCO =** no; **IATA =** no
Proper shipping name: Cleaning compound
UN No.: not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable
Labels required: not required **DOT Exception:** not applicable
EPA Hazardous waste number / code: not listed
Hazardous waste characteristics:
Ignitability = not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.
The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.
THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

E E ZIMMERMAN -- E-Z PAINT THINNER
MATERIAL SAFETY DATA SHEET
NSN: 801000N029889
Manufacturer's CAGE: ZMMER
Part No. Indicator: A
Part Number/Trade Name: E-Z PAINT THINNER

General Information

Company's Name: E E ZIMMERMAN CO
Company's P. O. Box: 11254
Company's City: PITTSBURGH
Company's State: PA
Company's Country: US
Company's Zip Code: 15238
Company's Emerg Ph #: 412-963-0949;800-424-9300(CHEMTREC)
Company's Info Ph #: 412-963-0949
Record No. For Safety Entry: 001
Tot Safety Entries This Stk#: 001
Status: SMJ
Date MSDS Prepared: 28JUL89
Safety Data Review Date: 19SEP95
MSDS Serial Number: BPPVB
Hazard Characteristic Code: F4

Ingredients/Identity Information

Proprietary: NO
Ingredient: STODDARD SOLVENT
Ingredient Sequence Number: 01
Percent: 100
NIOSH (RTECS) Number: WJ8925000
CAS Number: 8052-41-3
OSHA PEL: 500 PPM
ACGIH TLV: 100 PPM; 9293

Physical/Chemical Characteristics

Appearance And Odor: COLORLESS LOW VISCOSITY LIQUID; MILD PETROLEUM ODOR.
Boiling Point: >310F,>154C
Melting Point: N/A
Vapor Pressure (MM Hg/70 F): 3 @ 20C
Vapor Density (Air=1): 4.85
Specific Gravity: 0.77 (H2O=1)
Evaporation Rate And Ref: 0.2 (N-BUTYL ACETATE=1)
Solubility In Water: 0% @ 20C
Percent Volatiles By Volume: 100 WT
pH: N/A

Fire and Explosion Hazard Data

Flash Point: 101F,38C
Flash Point Method: TCC
Lower Explosive Limit: 1%
Upper Explosive Limit: 7%
Extinguishing Media: DRY CHEMICAL, WATER FOG, CO2 OR FOAM.
Special Fire Fighting Proc: WEAR NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT (FP N). CLSD CONTRS EXPOSED TO FIRE MAY BE COOLED W/ WATER. DO NOT USE WATER EXCEPT AS FOG.
Unusual Fire And Expl Hazrds: AVOID ALL IGNITION SOURCES SUCH AS FLAMES & SPARKS.

Reactivity Data

Stability: YES

Cond To Avoid (Stability): NONE SPECIFIED BY MANUFACTURER.
Materials To Avoid: STRONG OXIDIZERS SUCH AS HYDROGEN PEROXIDE, BROMINE & CHROMIC ACID.
Hazardous Decomp Products: CO & CO2 FROM BURNING.
Hazardous Poly Occur: NO
Conditions To Avoid (Poly): NOT RELEVANT

Health Hazard Data

LD50-LC50 Mixture: NONE SPECIFIED BY MANUFACTURER.
Route Of Entry - Inhalation: YES
Route Of Entry - Skin: NO
Route Of Entry - Ingestion: YES
IRRITATION. INGEST:NAUSEA & VOMITING. LARGE AMOUNTS, IF RETAINED, LEAD TO SYMPTOMS OF CENTRAL NERVOUS SYSTEM DEPRESSION.
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: NOT RELEVANT.
Signs/Symptoms Of Overexp: SEE HEALTH HAZARDS.
Med Cond Aggravated By Exp: PRE-EXISTING EYE, SKIN & RESPIRATORY DISORDERS.
Emergency/First Aid Proc: EYES:IMMEDIATELY FLUSH W/LARGE QUANTITIES OF WATER FOR AT LEAST 15 MINS & CALL MD. SKIN:REMOVE EXCESS W/CLOTH OR PAPER. WASH THOROUGHLY W/SOAP & WATER. INHAL:REMOVE VICTIM TO FRESH AIR. CALL MD. INGEST:CALL MD IMMEDIATELY. DO NOT INDUCE VOMITING (VOMITING MAY CAUSE ASPIRATION INTO LUNGS RESULTING IN CHEMICAL PNEUMONIA).

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: AVOID ALL IGNIT SOURCES SUCH AS FLAMES/ SPARKS. ENSURE GOOD VENT. IF VOL IS SIGNIFICANT, TRANSFER INTO CONTRS FOR DISP. SEAL CONTRS TIGHTLY. ABSORB ON INERT INGRED SUCH AS EARTH/SAND/ VERMICULITE. SWEEP UP/DISPOSE OF ACCORDING TO FED, STATE & LOC REG
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.
Waste Disposal Method: DISPOSE OF IN ACCORDANCE W/ALL APPLICABLE FEDERAL, STATE & LOCAL REGULATIONS.
Precautions-Handling/Storing: AVOID ALL IGNIT SOURCES SUCH AS FLAMES & SPARKS. DO NOT HANDLE OR STORE AT TEMPS OVER 100F (MAX STOR TEMP).
Other Precautions: CAUTION! COMBUST MIX. CONTAINS STODDARD SOLV, A HYDROCARBON SOLV USEFUL FOR PARTS CLEANING BATHS. USE WHEREVER STODDARD SOLV OR MINERAL SPIRIT IS RECOM. IF USED AS PAINT THINNER, SLOWER DRYING TIME WOULD RSLT. USE ADEQ VENT TO (SUPP DATA)

Control Measures

Respiratory Protection: USE NIOSH/MSHA APPROVED RESPIRATOR W/ORGANIC VAPOR CARTRIDGE IF VAPOR CONCENTRATION EXCEEDS PEL.
Ventilation: LOCAL IF NECESSARY TO MAINTAIN ALLOWABLE PEL OR TLV.
Protective Gloves: NEOPRENE TYPE GLOVES.
Eye Protection: CHEMICAL WORKERS GOGGLES (FP N).
Other Protective Equipment: NONE.
Work Hygienic Practices: NONE SPECIFIED BY MANUFACTURER.
Suppl. Safety & Health Data: OTHER PREC:ENSURE THAT FUMES DO NOT COME IN CONTACT W/SOURCES OF IGNITION SUCH AS FLAMES & SPARKS. AVOID PRLNGD BREATHING OF MIST OR VAPORS & PRLNGD/RPTD SKIN CONTACT.

Transportation Data

Trans Data Review Date: 93014
DOT PSN Code: JZF
DOT Proper Shipping Name: NAPHTHA,
DOT Class: 3
DOT ID Number: UN1256
DOT Pack Group: III

DOT Label: FLAMMABLE LIQUID
IMO PSN Code: KJG
IMO Proper Shipping Name: NAPHTHA, SOLVENT
IMO Regulations Page Number: 3368
IMO UN Number: 1256
IMO UN Class: 3.3
IATA PSN Code: RNY
IATA UN ID Number: 1256
IATA Proper Shipping Name: NAPHTHA
IATA UN Class: 3
IATA Label: FLAMMABLE LIQUID
AFI PSN Code: SXH
AFI Prop. Shipping Name: PAINT OR PAINT RELATED MATERIAL
AFI Class: 3
AFI ID Number: UN1263
AFI Pack Group: III

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Disposal Data

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Label Data

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Label Required: YES
Technical Review Date: 18AUG92
Label Status: G
Common Name: E-Z PAINT THINNER
Chronic Hazard: NO
Signal Word: WARNING!
Acute Health Hazard-Slight: X
Contact Hazard-Slight: X
Fire Hazard-Moderate: X
Reactivity Hazard-None: X
Special Hazard Precautions: COMBUSTIBLE. KEEP AWAY FROM HEAT AND OPEN FLAME. ACUTE:INHALATION CAN CAUSE IRRITATION OF NOSE AND THROAT, DIZZINESS. SWALLOWING CAN CAUSE NAUSEA AND VOMITING. CAN CAUSE EYE AND SKIN IRRITATION. CHRONIC:NONE SPECIFIED BY MANUFACTURER.
Protect Eye: Y
Protect Skin: Y
Protect Respiratory: Y
Label Name: E E ZIMMERMAN CO
Label P.O. Box: 11254
Label City: PITTSBURGH
Label State: PA
Label Zip Code: 15238
Label Country: US
Label Emergency Number: 412-963-0949;800-424-9300(CHEMTREC)

FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 801.10
Revision Date: April 2, 2001

Section 1 — Chemical Product and Company Identification

Super-Sorb

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Super-sorb
Synonym: oil-dri, calcium aluminum silicate
CAS#: None established

Section 3 — Hazards Identification

Tan, odorless granules.
Dust may be irritating. Substance not considered hazardous. However, not all health aspects of this substance have been thoroughly investigated.

FLINN AT-A-GLANCE
Health-0
Flammability-0
Reactivity-0
Exposure-0
Storage-0

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give large quantities of water. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non flammable solid.

NFPA CODE
None established

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic Miscellaneous or with spill control materials.

Section 8 — Exposure Controls , Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.

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Section 9 — Physical and Chemical Properties

Tan, odorless granules.
Solubility: Insoluble to slightly soluble in water.

Specific Gravity: 2.20

Section 10 — Stability and Reactivity

If you are absorbing a spill this material will not neutralize the spill. It only absorbs the spill. All hazards remain. Avoid contact with vegetable oil and turpentine.
Shelf Life: Good.

Section 11 — Toxicological Information

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD50: N.A.
IHL-RAT LC50: N.A.
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #26a is one option.

Section 14 — Transport Information

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A

N/A = Not applicable

Section 15 — Regulatory Information

Not listed.

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

FLINN SCIENTIFIC INC.
"Your Safer Source for Science Supplies"

Flinn MSDS Prevent Chemical Accidents

flinn@flinnsci.com www.flinnsci.com
P.O. Box 219 Batavia IL 60510
(800) 452-1261 Fax (866) 452-1436

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FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 716.00
Revision Date: March 12, 2001

Section 1 — Chemical Product and Company Identification

Sodium Carbonate

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Sodium carbonate, anhydrous
Synonym: soda ash
CAS#: 497-19-8

Section 3 — Hazards Identification

White, odorless crystals or powder.
Slightly toxic by ingestion. Irritating to body tissues. Avoid all body tissue contact.

FLINN AT-A-GLANCE
Health-1
Flammability-0
Reactivity-0
Exposure-1
Storage-1

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give no more than 1-2 cups of water for dilution. Do not induce vomiting. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non flammable solid.
When heated to decomposition, emits toxic fumes of Na2O.
Fire Fighting Instructions: Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive mode.

NFPA CODE
None established

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.
Store in a cool dry place. Deliquescent, store in Flinn Chem-Saf Bag. Keep container tightly closed.

Section 8 — Exposure Controls , Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.
Use exhaust ventilation to keep airborne concentrations low.

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Section 9 — Physical and Chemical Properties

White, odorless crystals or powder.
Soluble in water and glycerol; not in alcohol. Hygroscopic.
Formula: Na2CO3
Formula Weight: 105.99

Specific Gravity: 2.53
Melting Point: 851 C

Section 10 — Stability and Reactivity

Avoid contact with acids, aluminum. Reacts vigorously with fluorine.
Shelf Life: Hygroscopic, keep tightly closed.

Section 11 — Toxicological Information

Acute effects: Irritant
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD50: 4090 mg/kg
IHL-RAT LC50: 2300 mg/m3/2H
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #26a is one option.

Section 14 — Transport Information

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A

N/A = Not applicable

Section 15 — Regulatory Information

TSCA-listed, EINECS-listed (207-838-8).

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

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Flinn MSDS Prevent Chemical Accidents

flinn@flinnsci.com www.flinnsci.com
P.O. Box 219 Batavia IL 60510
(800) 452-1261 Fax (866) 452-1436

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FLINN SCIENTIFIC, INC.
Material Safety Data Sheet (MSDS)

MSDS #: 537.10
Revision Date: October 19, 2011

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Neutralizer

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Sodium carbonate (497-19-8) 50% and Calcium hydroxide (1305-62-0) 50%.

CAS#: None established

SECTION 3 — HAZARDS IDENTIFICATION

Fine white powder.
Irritant to skin, eyes, and mucous membranes. Avoid inhaling dust.

FLINN AT-A-GLANCE
Health-1
Flammability-0
Reactivity-1
Exposure-1
Storage-0
0 is low hazard, 3 is high hazard

SECTION 4 — FIRST AID MEASURES

Call a physician and seek medical attention for further treatment, observation, and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped, give artificial respiration immediately.
Eye or External: Immediately flush with fresh water for at least 15 minutes.
Internal: Do NOT induce vomiting. Rinse mouth. Give large quantities of water for dilution. Call a physician or poison control at once.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solid.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from the area. Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Store with spill control materials.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and a chemical-resistant apron.

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SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Fine white powder.
Mixture of calcium hydroxide and sodium carbonate.
Used to neutralize acid spills.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good, if stored properly

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply, before proceeding.
Flinn Suggested Disposal Method #10 is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated
Hazard class: NA
UN number: N/A
N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Material Safety Data Sheet (MSDS)

MSDS #: 678.00
Revision Date: September 28, 2011

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sand

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Sand

CAS#: 14808-60-7

SECTION 3 — HAZARDS IDENTIFICATION

Colorless or tan-colored crystals. Odorless.
Substance is not considered hazardous.

FLINN AT-A-GLANCE
Health-0
Flammability-0
Reactivity-0
Exposure-0
Storage-0
0 is low hazard, 3 is high hazard

SECTION 4 — FIRST AID MEASURES

Call a physician and seek medical attention for further treatment, observation, and support after first aid.
Eye: Immediately flush with fresh water for at least 15 minutes.
Internal: Rinse mouth. Give large quantities of water for dilution.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic Miscellaneous.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron.

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SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless or tan-colored crystals. Odorless.
Usually the major constituent is SiO_2 (silicon dioxide).

Boiling point: 2950 °C
Melting point: 1470 °C
Specific gravity: 2.6

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply, before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated
Hazard class: N/A
UN number: N/A
N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

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MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS, And European Community Standards

PART I *What is the material and what do I need to know in an emergency?*

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): **PVC SOLVENT CEMENT:**

204 HD CLEAR 205 REG. CLEAR 206 HD GRAY 209 INDUSTRIAL
215 ALL TEMP 216 GRAY 1600 218 CLEAR 1600 220 TRANSITION
E-100 Regular Body for PVC, Medium Body for PVC, Heavy Body for PVC

CHEMICAL NAME/CLASS: Polyvinyl Chloride / Solvent Mixture
PRODUCT USE: Solvent Cement for PVC Material
SUPPLIER/MANUFACTURER'S NAME: Cookson Electronics
U.S. BUSINESS PHONE: 1-800-327-8460; 1-561-844-0241
U.S. ADDRESS: 1661 Old Dixie Highway
Riviera Beach, FL 33404
U.S. EMERGENCY PHONE: CHEMTREC:
1-800-424-9300 (U.S. and Canada)
1-703-527-3887 (International)
DATE OF PREPARATION: Jan. 30, 2004

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	EINECS #	% w/w	EXPOSURE LIMITS IN AIR					
				ACGIH		OSHA			
				TLV ppm	STEL ppm	PEL ppm	STEL ppm	IDLH ppm	OTHER
Tetrahydrofuran	109-99-9	203-726-8	20-85	200	250	200	250 (vacated 1989 PEL)	2000 (based on LEL)	NIOSH REL: TWA = 200 STEL = 250 DFG MAK: 50
Methyl Ethyl Ketone	78-93-3	201-159-0	1-30	200	300	200	300 (vacated 1989 PEL)	3000	NIOSH REL: TWA = 200 STEL = 300 DFG MAK: 200
Polyvinyl Chloride Resin	9002-86-2	206-625-7	< 25	NE	NE	NE	NE	NE	Carcinogen: IARC-3;
Cyclohexanone	108-94-1	203-631-1	0-10	25, skin, A3 (confirmed Animal Carcinogen with Unknown Relevance to Humans)	NE	50 25 (vacated 1989 PEL)	NE	700	NIOSH REL: TWA = 25, Skin DFG MAK: Danger of Cutaneous Absorption Carcinogen: IARC-3; MAK-B

NE = Not Established. C = Ceiling Limit. See Section 16 for Definitions of Terms Used.

2. COMPOSITION and INFORMATION ON INGREDIENTS (Continued)

CHEMICAL NAME	CAS #	EINECS #	% w/w	EXPOSURE LIMITS IN AIR					
				ACGIH		OSHA		IDLH	OTHER
				TLV ppm	STEL ppm	PEL ppm	STEL ppm	ppm	
Silicon Dioxide (exposure limits are for silica-amorphous diatomaceous earth)	112945-52-5	Unlisted	Balance	For CAS # 61790-53-2 (uncalcined) 10 mg/m³(Inhalable particulate) 3 mg/m³ (Respirable particulate)	NE	20 mppcf or 80 mg/m³ / % SiO_2 6 mg/m³ (vacated 1989 PEL)		3000 mg/m³	NIOSH REL: 6 mg/m³ DFG MAK: 4 mg/m³ (CAS # 61790-53-2) Carcinogen: IARC-3 (CAS # 61790-53-2)

NE = Not Established. C = Ceiling Limit. See Section 16 for Definitions of Terms Used.
NOTE: All WHMIS and EC required information is included. It is located in appropriate sections based on the ANSI Z400.1-1993 format.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This is a an extremely flammable liquid with an ether-like odor. This product comes in a variety of colors. Inhalation overexposures to the vapors of this product can cause central-nervous system effects (e.g., dizziness, drowsiness, nausea, and headaches). This product can be mildly to severely irritating to the eyes, skin, and other contaminated tissue. Vapors of this product are heavier than air and may travel to a source of ignition and flashback to a leak or open container. Tetrahydrofuran, a component of this product, is known to form explosive peroxides under certain circumstances. Emergency responders must wear the proper personal protective equipment (and have appropriate fire protection) suitable for the situation to which they are responding.

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of occupational overexposure are inhalation and contact with skin and eyes. The symptoms of overexposure to this product, via route of exposure, are as follows:

INHALATION: Inhalation of vapors, mists, or sprays of this product can be irritating to the nose, throat, mucous membranes, and other tissues of the respiratory system. Symptoms of overexposure can include coughing, sneezing, and shortness of breath. Additionally, the components of this product are central nervous system depressants. Symptoms of over-exposure can include drowsiness, dizziness, fatigue, headache, nausea, and general anesthetic effects. Inhalation of high concentrations of this product (as may occur in a poorly-ventilated area) may be fatal. Based on clinical studies involving test animals, Cyclohexanone and Tetrahydrofuran, components of this product, may cause liver and kidney damage after long-term inhalation overexposures.

This product must be used with adequate ventilation. Mechanical exhaust may be needed. Ensure exposure to vapors is minimized by use of appropriate engineering controls, work practices, and personal protective equipment, as described in the remainder of this document.

CONTACT WITH SKIN or EYES: Contact with this product can be irritating to contaminated skin and eyes. Vapors of this product can redden and irritate the eyes. If the eyes are contaminated with splashes, sprays or mists of this product, reddening, tearing, and corneal opacity can occur. The liquid can be mildly to severely irritating to contaminated skin (depending on duration of exposure). Prolonged or repeated skin over-exposures can lead to dermatitis.

HAZARDOUS MATERIAL INFORMATION SYSTEM

HEALTH	(BLUE)	2
FLAMMABILITY	(RED)	3
REACTIVITY	(YELLOW)	1
PROTECTIVE EQUIPMENT		C/D

EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		

For routine applications.

See Section 16 for Definition of Ratings

SKIN ABSORPTION: Skin absorption is a potential route of overexposure for Cyclohexanone (a component of this product). Symptoms of such exposure can include those described under “Inhalation” and “Contact With Skin and Eyes”.

3. HAZARD IDENTIFICATION (Continued)

INGESTION: Ingestion is not anticipated to be a significant route of occupational overexposure for this product. If ingestion occurs, refer to Section 4 (First-Aid Measures) and get medical help immediately. If ingestion of this product does occur, symptoms of such over-exposure can include nausea, vomiting, and other symptoms described for "Inhalation". Ingestion can also lead to liver and kidney damage. Ingestion of this product may be fatal.

INJECTION: Injection is not anticipated to be a significant route of over-exposure for this product. If injection does occur (i.e. through a puncture by an object contaminated with the product), local irritation and swelling can occur. Additional symptoms may include those described for "Inhalation".

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in **Lay Terms**.

ACUTE: Over-exposures to this product can be irritating to the eyes, skin, and mucous membranes, and can also cause central-nervous system effects (dizziness, drowsiness, nausea and headaches). Ingestion of this product, or inhalation of high concentrations of this product's vapors, may be fatal.

CHRONIC: Prolonged or repeated skin exposures can lead to dermatitis (dryness, reddening and irritation of the skin). Tetrahydrofuran, a component of this product, may cause liver and kidney damage after long-term inhalation overexposures. There is limited evidence from animal studies that Methyl Ethyl Ketone, a component of this product, is a reproductive toxin. Refer to Section 11 (Toxicological Information) for additional information. A report from the National Toxicology Program (NTP) has suggested that exposure of mice and rats to Tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetimes caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. No evidence of tumors was seen in female rats or male mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. The NTP, IARC, or OSHA does not list THF as a carcinogen. One THF vendor (DuPont) has recommended a reduction in the "acceptable exposure limit" from 200 ppm to 25 ppm, 8 and 12 hour time weighted average and a STEL of 75 ppm.

TARGET ORGANS: Acute: Skin, eyes, respiratory system, central nervous system. **Chronic:** Liver, kidneys.

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

SKIN EXPOSURE: If this product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual must seek medical attention if any adverse effect occurs.

EYE EXPOSURE: If this product's liquid or vapors enter the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. The contaminated individual must seek immediate medical attention.

INHALATION: If vapors, mists, or sprays of this product are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.

INGESTION: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. The contaminated individual should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

The contaminated individual must be taken for medical attention, especially if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take a copy of label and MSDS to health professional with victim.

5. FIRE-FIGHTING MEASURES

The following information is variable, depending on the blend. The following information is for Tetrahydrofuran, the main solvent component of this product.

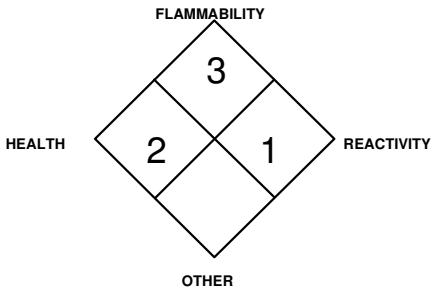
FLASH POINT: -17°C (4.1°F)
AUTOIGNITION TEMPERATURE: 321°C (610°F)
FLAMMABLE LIMITS (in air by volume): Lower (LEL): 1.8%
Upper (UEL): 11.8%

The following information is for the product.

FIRE EXTINGUISHING MATERIALS:

Water Spray: YES (for cooling only)
Foam: YES
Halon: YES
Carbon Dioxide: YES
Dry Chemical: YES
Other: Any "B" Class.

NFPA RATING



See Section 16 for Definition of Ratings

5. FIRE-FIGHTING MEASURES (Continued)

UNUSUAL FIRE AND EXPLOSION HAZARDS: This is a Class I-B Flammable Liquid. When involved in a fire, this material may ignite and produce irritating vapors and toxic gases (e.g., carbon monoxide, carbon dioxide). This material will readily ignite at room temperature. The vapors are heavier than air and may travel to a source of ignition, and flash back to a leak or open container. Tetrahydrofuran can form potentially explosive peroxides; closed containers contaminated with peroxides can rupture violently in the heat of a fire.

Explosion Sensitivity to Mechanical Impact: Not sensitive.
Explosion Sensitivity to Static Discharge: The vapors of this product can be ignited by static electrical energy.

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. If it is safe to do so, allow small fires involving this product to burn-out, while protecting exposures. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. If necessary, rinse contaminated equipment thoroughly before returning such equipment to service.

6. ACCIDENTAL RELEASE MEASURES

RELEASE RESPONSE: In case of a spill, clear the affected area and protect people. Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used.

Small releases (e.g., 1-pint) must be cleaned-up by personnel wearing gloves, goggles, and appropriate eye protection. Face shields must be worn if splashes or sprays of this product may be generated. In the event of a non-incidental release (e.g., five, 1-gallon containers leaking simultaneously in a poorly-ventilated area), the minimum Personal Protective Equipment should be **Level B: triple-gloves (rubber gloves and nitrile gloves, over latex gloves), chemically resistant suit and boots, hard-hat, and Self-Contained Breathing Apparatus.** Level B should always be used during responses in which the oxygen level is below 19.5% or unknown.

Eliminate all sources of ignition before spill clean-up begins. Use non-sparking tools. Absorb spilled liquid with activated carbon, polypads or other suitable absorbent materials. Monitor the area for combustible vapors and the level of oxygen. Monitoring must indicate less than 10 % of the LEL (see Section 5, Fire-Fighting Measures) and greater than 19.5% Oxygen is in the atmosphere before personnel are permitted in the area without Level B Protection. Place all spill residue in an appropriate container and seal. Dispose of in accordance with U.S. Federal, State, or local procedures, the applicable standards of Canada and its Provinces, or the appropriate requirements of European Community member States (see Section 13, Disposal Considerations).

PART III *How can I prevent hazardous situations from occurring?*

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors or mists generated by this product. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Containers of this product must be properly labeled. If this mixture is used in other types of containers, only use portable containers approved for flammable liquids. Post “NO SMOKING” signs, where appropriate in storage and use areas. Use non-sparking tools. Bond and ground during transfer of material. Store containers of the product in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers, or in a diked area, as appropriate. Store containers away from incompatible chemicals. Keep container tightly closed when not in use. Storage areas should be made of fire-resistant materials. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Refer to NFPA 30, Flammable and Combustible Liquids Code for additional information on storage. Empty containers may contain residual flammable liquid or vapors. Therefore, empty containers should be handled with care. Do not expose ”empty” containers to welding touches, or any other source of ignition.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation. Mechanical exhaust may be needed. Emergency eye-wash/safety showers: where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye-wash fountain/safety shower within the work area for emergency use.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

RESPIRATORY PROTECTION: Respiratory protection is not generally needed when using this product. Maintain airborne contaminant concentrations below guidelines listed in Section 2 (Composition, Information on Ingredients). If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134 or applicable State regulations. Use supplied air respiration protection if oxygen levels are below 19.5% or are unknown. Respiratory protection guidelines for Tetrahydrofuran (a component of this product) are provided on the following page.

NIOSH/OSHA RECOMMENDATIONS FOR TETRAHYDROFURAN CONCENTRATIONS IN AIR:

UP TO 2000 ppm: Supplied Air Respirator (SAR) operated in a continuous-flow mode, full-facepiece chemical cartridge respirator with organic vapor cartridge(s), gas mask with organic vapor canister, powered air-purifying respirator with organic vapor cartridge(s), full-facepiece Self-Contained Breathing Apparatus (SCBA), or full-facepiece SAR.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS: Positive pressure, full-facepiece SCBA or positive pressure, full-facepiece SAR with an auxiliary positive pressure SCBA.

ESCAPE: Gas mask with organic vapor canister or escape-type SCBA.

NOTE: The IDLH concentration for Tetrahydrofuran is 2000 ppm. This value is based on the lower explosive limit (LEL). Respiratory protection equipment may not be adequate for fire situations.

EYE PROTECTION: Splash goggles or safety glasses. Face shield should be worn when working in situations in which splashes or sprays can be generated.

HAND PROTECTION: Wear gloves for routine industrial use to protect hands from contact. For long exposures, or unusual contact, such as spill cleanup, chemical resistant gloves may be required. See section 6.

BODY PROTECTION: Use body protection appropriate for task (e.g., Apron or Tyvek suit).

9. PHYSICAL and CHEMICAL PROPERTIES

For Tetrahydrofuran (the main solvent component of this product):

RELATIVE VAPOR DENSITY (air = 1): 2.5
EVAPORATION RATE (nBuAc = 1): 8-14.5
SPECIFIC GRAVITY (water = 1): Approximately 0.91
FREEZING/MELTING POINT: -1.8.5°C (-16°F)
SOLUBILITY IN WATER @ 25°C: 30%
BOILING POINT: 66°C (151°F)
VAPOR PRESSURE, mm Hg @ 20°C: 129
pH: Not established.
ODOR THRESHOLD: 2.48–3.47 ppm
COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT): 0.46

For this product:

ODOR THRESHOLD: Not applicable.
FORM: Liquid.
COLOR: Variable color.
ODOR: Ethereal.
VISCOSITY: Not available.
FLASH POINT: -17°C (4.1°F) (Tetrahydrofuran)

HOW TO DETECT THIS SUBSTANCE (warning properties): The color and odor of the product may be distinctive properties of this product.

10. STABILITY and REACTIVITY

STABILITY: Stable.

Note: Tetrahydrofuran, a component of this product, can form potentially explosive peroxide compounds when exposed to light or air. Though this product contains inhibitors to prevent peroxide formation, care should be used when storing this product, or handling old containers of this material.

DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, silicon and chloride compounds.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product will not be compatible with strong oxidizers, lithium aluminum hydride, and alkaline earth hydroxides.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid exposure or contact to extreme temperatures, sources of ignition, incompatible chemicals.

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The specific toxicology data available for components greater than 1% in concentration are as follows.

CYCLOHEXANONE:
Eye effects-Human 75 ppm
Skin-Rabbit, adult 500 mg open Mild irritation effects
Eye effects-Rabbit, adult 4740 µg Severe irritation effects

CYCLOHEXANONE (continued):
Microsomal Mutageniticity Assay-Salmonella typhimurium 20 µL/L
Mutation in Microorganisms-Bacillus subtilis 200 µL/L
Sister Chromatid Exchange-Hamster: ovary 7500 µL/L

CYCLOHEXANONE (continued):
Oral-Mouse TDLo: 11 g/kg (female 8-12D post): Reproductive effects
Inhalation-Human TCLo: 75 ppm: NOSE, Eye effects, Pulmonary system effects
Inhalation-Rat LC_{50}: 8000 ppm/4 hours

CYCLOHEXANONE (continued):
Oral-Rat LD_{50}: 1535 mg/kg
Oral-Mouse LD_{50}: 1400 mg/kg
Subcutaneous-Rat LD50: 2170 mg/kg
Intraperitoneal-Mouse LD_{50}: 1350 mg/kg
Subcutaneous-Mouse LDLo: 1300 mg/kg
Intravenous-Dog, adult LDLo 630 mg/kg Oral-Rabbit, adult LDLo: 1600 mg/kg
Skin-Rabbit, adult LD50: 948 mg/kg
TCLo - Inhalation - rat: 105 mg/m3/4 hours: female 1-20 day(s) after conception: Reproductive - Fertility - pre-implantation mortality
TDLo - Oral - mouse: 11 gm/kg: female 8-12 day(s) after conception: Reproductive - Effects on Newborn - growth statistics (e.g.%, reduced weight gain)
Mutation in microorganisms: Bacteria - Salmonella typhimurium: 20 uL/
Mutation in microorganisms - Bacteria - Bacillus subtilis 200 uL/L
Cytogenetic analysis: Human Leukocyte: 100 umol/L
Cytogenetic analysis: Human Lymphocyte: 5 ug/L
Sister chromatid exchange: Rodent - hamster Ovary: 7500 uL/L
Mutation in mammalian somatic: Rodent - hamster Ovary: 7500 uL/L

METHYL ETHYL KETONE:
Eye effects-Human 350 ppm
Skin-Rabbit, adult 500 mg/24 hours; Moderate irritation effects
Skin-Rabbit, adult 402 mg/24 hours; Mild irritation effects
Skin-Rabbit, adult 13,780 mg/24H open Mild irritation effects
Eye effects-Rabbit, adult 80 mg
Intraperitoneal-Mouse LD_{50}: 616 mg/kg
Skin-Rabbit, adult LD_{50}: 6450 mg/kg

METHYL ETHYL KETONE (continued):
Sex Chromosome Loss and Nondisjunction - Saccharomyces cerevisiae; 33,800 ppm
Inhalation-Rat TCLo: 1000 ppm/(6-15D preg):Teratogenic effects
Inhalation-Human TCLo: 100 ppm/ 5 minutes: Irritant effects
Oral-Rat LD_{50}: 2737 mg/kg
Inhalation-Rat LC_{50}: 23,500 mg/m3/8 hours;
Intraperitoneal-Rat LD50: 607 mg/kg
Oral-Mouse LD_{50}: 4050 mg/kg
Inhalation-Mouse LC_{50}: 40 g/m3/2 hours
Intraperitoneal-Guinea Pig, adult LDLo: 2 g/kg
Inhalation-Unspecified effects LC_{50}: 38 g/m3
Inhalation-Rat TCLo: 5000 ppm/6H/90 days - Intermittent
TDLo - Subcutaneous - cat: 55500 mg/kg/37 weeks - Intermittent: Reproductive - Tumorigenic effects - other reproductive system tumors
TCLo - Inhalation - rat: 3000 ppm/7 hours: female 6-15 day(s) after conception: Reproductive - Specific Developmental Abnormalities - craniofacial (including nose and tongue) , urogenital system , homeostasis
TCLo - Inhalation - rat: 1000 ppm/7 hours: female 6-15 day(s) after conception: Reproductive - Effects on Embryo or Fetus - fetotoxicity (except death, e.g., stunted fetus) Reproductive - Specific Developmental Abnormalities - musculoskeletal system
TCLo - Inhalation - mouse: 3000 ppm/7H: female 6-15 day(s) after conception: Reproductive - Effects on Embryo or Fetus - fetotoxicity

POLYVINYL CHLORIDE RESIN:
Oral-Rat TDLo: 210 g/kg/30 weeks - Continuous: Equivocal tumorigenic agent
Implant-Rat TDLo: 7 5 mg/kg: Equivocal tumorigenic agent

SILICON DIOXIDE:
Unscheduled DNA Synthesis-Rat-Intratracheal 120 mg/kg
Body Fluid Assay-Rat: lung 120 mg/kg
Inhalation-Rat TCLo: 50 mg/m3/6 hours/2 years - Intermittent:
Oral-Rat LD_{50}: 3160 mg/kg
Intraperitoneal-Rat LDLo: 50 mg/kg
Intravenous-Rat LD_{50} :15 mg/kg
Intratracheal-Rat LDLo: 10 mg/kg
Intraperitoneal-Guinea Pig, adult LDLo: 120 mg/kg

TETRAHYDROFURAN:
Mutation in Microorganisms-Escherichia coli 1 mol/L
Inhalation-Human TCLo: 25,000 ppm: Central nervous system effects
Oral-Rat LD_{50}: 1650 mg/kg.
Inhalation-Rat LC_{50}: 21,000 ppm/3H
Intraperitoneal-Rat LD_{50}: 2900 mg/kg
Inhalation-Mouse LCLo: 24,000 mg/m3/2 hours
Intraperitoneal-Mouse LD_{50}: 1900 mg/kg
Intraperitoneal-Guinea Pig, adult LDLo: 500 mg/kg
Inhalation-Rat TCLo: 5000 ppm/6 hours/91 days - Intermittent
TCLo - Inhalation - rat: 5000 ppm/6H: female 6-19 day(s) after conception: Reproductive - Effects on Embryo or Fetus - fetotoxicity
TCLo - Inhalation - mouse: 1800 ppm/6H: female 6-17 day(s) after conception: Reproductive - Fertility - post-implantation mortality
Mutation in microorganisms: Bacteria - Escherichia coli: 1 umol/L

SUSPECTED CANCER AGENT: Components of this products are listed as follows:

CYCLOHEXANONE:
IARC-3: Not Classifiable as a Human Carcinogen.
MAK-B: Justifiably suspected of Having Carcinogenic Potential.

METHYL ETHYL KETONE:
EPA-D: Not Classifiable as to Human Carcinogenicity.

POLYVINYL CHLORIDE RESIN:
IARC-3: Not Classifiable as a Human Carcinogen.

SILICON DIOXIDE:
IARC-3: Not Classifiable as a Human Carcinogen.

This product's components are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, and CAL/OSHA and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: This product is expected to mildly to severely irritate the skin and eyes.

SENSITIZATION TO THE PRODUCT: No component of this product is known to be a sensitizer with prolonged or repeated use.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

11. TOXICOLOGICAL INFORMATION (Continued)

Mutagenicity: This product is not reported to produce mutagenic effects in humans. Human mutation data are available for Cyclohexanone (a component of this product); these data were obtained on specific human tissues exposed to relatively high doses. Animal mutation data are available for Methyl Ethyl Ketone, Silicon Dioxide, and Tetrahydrofuran (components of this product); these data were obtained during clinical studies on specific animal tissues or micro-organisms exposed to high doses of these compounds.

Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.

Teratogenicity: This product is not reported to cause teratogenic effects in humans. Three animal studies involving Methyl Ethyl Ketone (a component of this product) have shown fetotoxicity (skeletal anomalies) at doses which did not produce significant maternal toxicity.

Reproductive Toxicity: This product is not reported to cause reproductive effects in humans. Reproductive toxicity data are available for Methyl Ethyl Ketone and Tetrahydrofuran (a component of this product); these data were obtained from clinical studies on test animals exposed to relatively high doses.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

ACGIH BIOLOGICAL EXPOSURE INDICES: Currently, there are ACGIH Biological Exposure Indices (BEIs) associated with components of this product, as follows:

CHEMICAL DETERMINANT	SAMPLING TIME	BEI
METHYL ETHYL KETONE (MEK) • MEK in urine	• End of shift	• 2 mg/L
TETRAHYDROFURAN (Intended) • Tetrahydrofuran in urine	• End of shift	• 8 mg/L

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Preexisting respiratory problems, dermatitis, and other skin disorders, as well as conditions involving the "Target Organs" (see Section 3, Hazard Identification) can be aggravated by exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure. If necessary, review for brain and central nervous system effects and conduct pulmonary function test. Other tests for lung, kidney, and liver effects may also prove useful.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: The components of this product will biodegrade into other organic compounds. Environmental data are available for components of this product, as follows:

CYCLOHEXANONE: K_{OC} - 0.81. Water Solubility 23,000 mg/L. Cyclohexanone is not rapidly volatilized from water, except for fast moving streams or very shallow ponds. Significant soil leaching occurs, contributing to ground water contamination. Biodegradation and photolysis occur in water. Rapid atmospheric degradation occurs via photolysis, with a half-life of about 1 to 5 days.

METHYL ETHYL KETONE: Log Kow = 0.29. Water Solubility = 239,000 mg/L. Methyl Ethyl Ketone is rapidly volatilized from water and undergoes slow biodegradation. It undergoes moderate atmospheric photodegradation.

TETRAHYDROFURAN: Water Solubility = 30% (25°C). Tetrahydrofuran is significantly biodegraded in standard tests. This compound is not expected to bioconcentrate in fish significantly.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: This product can be harmful or fatal to contaminated plant or animal life, especially if released in large quantities into the environment. Refer to Section 11 (Toxicological Information) for information regarding the effect of this product's components on test animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE: This product can be harmful or fatal to contaminated aquatic plant or animal life, especially if released in large quantity in a body of water. The following aquatic toxicity data are available for the components of this product:

CYCLOHEXANONE:
LC_{50} (*Pimephales promelas* fathead minnow) 527 mg/L 96 hours
EC_0 (bacteria Pseudomonas putida) 16 hours = 180 mg/L)
EC_0 (algae *Microcystis aeruginosa*) 8 days = 52 mg/L
EC_0 (green algae *Scenedesmus quadricauda*) 7 days = 370 mg/L
EC_0 (protozoa *Entosiphon sulcatum*) 72 hours = 545 mg/L
EC_0 (protozoa *Uronema parduczi* Chatton-Lwoff) = 280 mg/L
EC_0 (bacteria *Pseudomonas fluorescens*) 16 hours = 180 mg/L (pH = 7
EC_0 (Chilomonas paramecium Ehrenberg) 48 hours = 573 mg/L
EC_0 (*Daphnia magna* Straus) 24 hours = 526 mg/L
EC_{50} (*Daphnia magna* Straus) 24 hours = 820 mg/L
EC_{100} (*Daphnia magna* Straus) 24 hours = 1,240 mg/L
EC_0 (*Daphnia magna*) 24 hours = 540 mg/L
EC_{50} (*Daphnia magna*) 24 hours = 800 mg/L
EC_{100} (*Daphnia magna*) 24 hours = 1,540 mg/L
LC_{50} (fathead minnow) 96 hours = 526; 618; 630 mg/L
LC_{50} (*Leuciscus idus*) 24 hours = 538 mg/L
LC_{50} (*Leuciscus idus*) 96 hours = 536; 539; 752 mg/L

METHYL ETHYL KETONE:
EC_0 (*Scenedesmus quadricauda*, green algae) = 4300 mg/L/ 8 days

METHYL ETHYL KETONE (continued):
EC_0 (*Entosiphon sulcatum*, protozoa) = 190 mg/L/ 72 hours
EC_0 (*Uronema parduczi* Chatton-Lwoff, protozoa) = 2830 mg/L
EC_0 (*Pseudomonas putida*, bacteria) = 1150 mg/L/ 16 hours
LC_{50} (*Pimephales promelas*, fathead minnow) = 3200 mg/L/96 hour
LD_0 (*Pseudomonas*, bacteria) = 2,500 mg/L
LD_0 (*Scenedesmus*, algae) = 12,500 mg/L
LD_0 (*Colpoda*, protozoa) = 5,000 mg/L
LC_{50} (mosquito fish) = 5,600 mg/L/ 24□96 hours
LC_{50} (bluegill) = 5,640□1,690 mg/L/ 24□96 hours
LC_{50} (goldfish) = 5,000 mg/L/ 24 hours

TETRAHYDROFURAN:
Growth Inhibition (*Microcystis*, blue algea) = 225 mg/L
Toxicity Threshold (Cell Multiplication Inhibit System test):
(*Uronema parduczi* Chatton-Lwoff, protozoa) = 858 mg/L
LC_{50} (silver/golden orfe) = 2820–2930 mg/L
LC_{50} (fathead minnow) = 2160 mg/L/ 96 hours
LC_{50} (carp) = 4400 mg/L/ 48 hours
LC_{50} (goldfish) = 2400 mg/L/ 48 hours

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada and its Provinces, as well as those applicable to the EC Member States. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

U.S. EPA WASTE NUMBER: D001 (Characteristic/Ignitability)

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME:	FLAMMABLE LIQUID, NOS (acetone, tetrahydrofuran, methyl ethyl ketone, cyclohexanone)
HAZARD CLASS NUMBER and DESCRIPTION:	3 (Flammable Liquid)
UN IDENTIFICATION NUMBER:	UN 1993
PACKING GROUP:	II
DOT LABEL(S) REQUIRED:	Flammable Liquid

NOTE: Shipments of containers holding 1-liter or less in volume qualify for a “Limited Quantity” exception. Refer to 49 CFR 173.150 for additional information.

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER, 1996: 128

MARINE POLLUTANT: No component of this product is designated as a Marine Pollutant by the DOT (per 49 CFR 172.101, Appendix B).

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS. Use the above information for the preparation of Canadian Shipments.

IMO DESIGNATION: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS BY THE INTERNATIONAL MARITIME ORGANIZATION

PROPER SHIPPING NAME:	FLAMMABLE LIQUID, NOS (acetone, tetrahydrofuran, methyl ethyl ketone, cyclohexanone)
HAZARD CLASS NUMBER and DESCRIPTION:	3.2 (Flammable Liquid; Intermediate Flash Point)
UN IDENTIFICATION NUMBER:	UN 1993
PACKING GROUP:	II
LABEL(S) REQUIRED:	Flammable Liquid
IMDG CODE:	3230

MARINE POLLUTANT: This product is not designated by the IMO to be a Marine Pollutant.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This material is not considered by the United Nations Economic Commission for Europe to be dangerous goods. Additional information is as follows:

Substance Identification No.:	1993
Name of Substance:	FLAMMABLE LIQUID, NOS (acetone, tetrahydrofuran, methyl ethyl ketone, cyclohexanone)
Hazard Identification No. (Description):	33
Label:	Flammable Liquid
Class and Item Number:	3, 5°, (c)

15. REGULATORY INFORMATION

ADDITIONAL UNITED STATES REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, and are listed as follows:

CHEMICAL NAME	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Cyclohexanone	No	Yes	Yes
Methyl Ethyl Ketone	No	Yes	Yes
Tetrahydrofuran	No	Yes	No

U.S. SARA THRESHOLD PLANNING QUANTITY: Not applicable.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Cyclohexanone = 5000 lb.; Methyl Ethyl Ketone: 5000 lb.; Tetrahydrofuran = 1000 lb.

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

U.S. STATE REGULATORY INFORMATION: Components of this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

California - Permissible Exposure Limits for Chemical Contaminants: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Florida - Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Illinois - Toxic Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Kansas - Section 302/313 List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Massachusetts - Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Michigan - Critical Materials Register: No.

Minnesota - List of Hazardous Substances: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Missouri - Employer Information/Toxic Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

New Jersey - Right to Know Hazardous Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

North Dakota - List of Hazardous Chemicals, Reportable Quantities: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Pennsylvania - Hazardous Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Rhode Island - Hazardous Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Texas - Hazardous Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

West Virginia - Hazardous Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Wisconsin - Toxic and Hazardous Substances: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

CALIFORNIA, SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): This product may contain trace constituents, such as vinyl chloride, present in one of the product's components. Under common usage, exposures to these trace constituents at levels exceeding the "no significant risk level" (NSRL) would not occur. Users are expected to follow normal PPE and ventilation guidelines such as those in section 8 and other portions of this MSDS.

VOC Information: This product emits volatile organic compounds (VOC's) during use and cure. Users should determine if local regulations regarding use of VOC containing products exist in their area and if this product complies

ANSI STANDARD LABELING (Z129.1): **DANGER!** EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. MAY BE HARMFUL IF INHALED. MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS. MAY CAUSE SKIN AND EYE IRRITATION. ASPIRATION HAZARD - CAN CAUSE LIFE-THREATENING LUNG DAMAGE IF SWALLOWED. MAY CAUSE REPRODUCTIVE EFFECTS, BASED ON ANIMAL TESTS. Keep away from heat, sparks, and flame. Avoid breathing vapor or mists. Avoid contact with skin or clothing. Use only with adequate ventilation. Keep container closed. Wash thoroughly after handling. The recommended storage temperature is 21-32 °C (70-90 °F). Recommended maximum shelf-life for unopened containers is 2 years. **FIRST AID:** In case of contact, immediately flush skin or eyes for at least 15 minutes. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **IN CASE OF FIRE:** Use fog, foam, dry chemical or CO_2. Liquid will float and may re-ignite on the surface of water. **IN CASE OF SPILL**: Absorb spill with inert material (e.g. activated carbon) then place in suitable container. Refer to Material Safety Data Sheet for additional information on this product.

ADDITIONAL CANADIAN REGULATIONS:

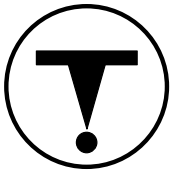
CANADIAN DSL/NDSL INVENTORY STATUS: The components of this product are on the DSL Inventory.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LIST: The components of this product are not on the CEPA Priorities Substances List.

CANADIAN WHMIS SYMBOLS: **Class B2**: Flammable Liquid
Class D2A/B: Materials Causing Other Toxic Effects

15. REGULATORY INFORMATION (Continued)

EUROPEAN COMMUNITY INFORMATION:

EUROPEAN COMMUNITY INFORMATION FOR PRODUCT:

EC LABELING AND CLASSIFICATION: Based on the information on the product's components and an assessment of the physical and health hazards associated with the material, the following assignments have been made (per council directive 67/548/EEC)

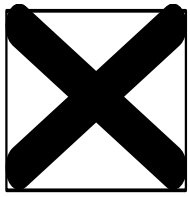
EC CLASSIFICATION: Highly flammable. Irritant. [F;Xi]

EC RISK PHRASES: Highly flammable. May form explosive peroxides. Irritating to eyes and respiratory system. [R:11-19-36/37]

EC LABELING AND CLASSIFICATION (CONTINUED):

EC SAFETY PHRASES: Keep out of reach of children.* Keep away from sources of ignition - No smoking. Do not empty into drains. Do not breathe vapors. Avoid contact with the eyes. Take precautionary measures against static discharges. [S:(2-)*16-23-25-29-33] *This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.

EUROPEAN COMMUNITY ANNEX II HAZARD SYMBOLS:

EUROPEAN COMMUNITY INFORMATION FOR CONSTITUENTS: The following information is available for primary constituents in the components of this product.

CYCLOHEXANONE:

EC CLASSIFICATION: Flammable. Harmful. [F; Xn]

EC RISK PHRASES: Flammable. Harmful by inhalation. [R;10-20].

EC SAFETY PHRASES: Keep out of reach of children.* Avoid contact with the eyes. [S:(2-)* 25]. **This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.*

EC COMMENTS: CONCENTRATION GREATER THAN OR EQUAL TO 25%: Harmful. Harmful by inhalation. [Xn; R20]. This product contains less than this concentration; therefore, this risk has been omitted.

METHYL ETHYL KETONE:

EC CLASSIFICATION: Highly flammable. Irritant. [F; Xi]

EC RISK PHRASES: Highly flammable. Irritating to the eyes and respiratory system. [R: 11-36/37].

EC SAFETY PHRASES: Keep out of reach of children.* Keep container in a well-ventilated place. Keep away from sources of ignition. No smoking. Avoid contact with the eyes. Take precautionary measures against static discharges. [S: (2-)*9-16-25-33].

EC COMMENTS: **This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.*

POLYVINYL CHLORIDE: An official classification for this substance has not been published in Commission Directives 93/72/EEC, 94/69/EC, and 96/54/EC.

SILICON DIOXIDE: An official classification for this substance has not been published in Commission Directives 93/72/EEC, 94/69/EC, and 96/54/EC.

TETRAHYDROFURAN:

EC CLASSIFICATION: Highly flammable. Irritant. [F;Xi]

EC RISK PHRASES: Highly flammable. May form explosive peroxides. Irritating to eyes and respiratory system. [R:11-19-36/37]

EC SAFETY PHRASES: Keep out of reach of children.* Keep away from sources of ignition - No smoking. Do not empty into drains. Take precautionary measures against static discharges. [S:(2-)*16-29-33] *This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.

EC COMMENTS :

CONCENTRATIONS GREATER THAN OR EQUAL TO 25 PERCENT: Irritant. Irritating to eyes and respiratory system. [Xi; R36/37]

16. OTHER INFORMATION

PREPARED BY: CHEMICAL SAFETY ASSOCIATES, Inc.
9163 Chesapeake Drive, San Diego, CA 92123-1002
619/565-0302

EDITED/UPDATED BY: Michael Cudahy, Technical Manager, Cookson Electronics

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The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Cookson assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Cookson assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching.

EXPOSURE LIMITS IN AIR:
ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits.
TLV - Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average **(TWA)**, the 15-minute Short Term Exposure Limit, and the instantaneous Ceiling Level **(C)**. Skin absorption effects must also be considered.
OSHA - U.S. Occupational Safety and Health Administration.
PEL - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order.
IDLH - Immediately Dangerous to Life and Health **-** This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. **The DFG - MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. **O**ccupational **S**afety and **H**ealth **A**dministration (**OSHA**). NIOSH issues exposure guidelines called **R**ecommended **E**xposure **L**evels (**REL**s). When no exposure guidelines are established, an entry of **NE** is made for reference.

HAZARD RATINGS:
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: Health Hazard: **0** (minimal acute or chronic exposure hazard); **1** (slight acute or chronic exposure hazard); **2** (moderate acute or significant chronic exposure hazard); **3** (severe acute exposure hazard; onetime overexposure can result in permanent injury and may be fatal); **4** (extreme acute exposure hazard; onetime overexposure can be fatal). Flammability Hazard: **0** (minimal hazard); **1** (materials that require substantial pre-heating before burning); **2** (combustible liquid or solids; liquids with a flash point of 38-93°C [100-200°F]); **3** (Class IB and IC flammable liquids with flash points below 38°C [100°F]); **4** (Class IA flammable liquids with flash points below 23°C [73°F] and boiling points below 38°C [100°F]. Reactivity Hazard: **0** (normally stable); 1 (material that can become unstable at elevated temperatures or which can react slightly with water); **2** (materials that are unstable but do not detonate or which can react violently with water); **3** (materials that can detonate when initiated or which can react explosively with water); **4** (materials that can detonate at normal temperatures or pressures).
NATIONAL FIRE PROTECTION ASSOCIATION: Health Hazard: **0** (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); **1** (materials that on exposure under fire conditions could cause irritation or minor residual injury); **2** (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); **3** (materials that can on short exposure could cause serious temporary or residual injury); **4** (materials that under very short exposure could cause death or major residual injury). Flammability Hazard and Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System". **FLAMMABILITY LIMITS IN AIR**:
Much of the information related to fire and explosion is derived from the National Fire Protection Association (**NFPA**). Flash Point - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.**TOXICOLOGICAL INFORMATION:Human and Animal Toxicology:** Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD_{50}** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC_{50}** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m^3** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information: BEI** - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV. **Ecological Information:** EC is the effect concentration in water. **BCF** = Bioconcentration Factor, which is used to determine if a substance will concentrate in lifeforms which consume contaminated plant or animal matter. Coefficient of Oil/Water Distribution is represented by **log K_{ow}** or **log K_{oc}** and is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:
U.S. AND CANADA: This section explains the impact of various laws and regulations on the material. **U.S.: EPA** is the U.S. Environmental Protection Agency. **DOT** is the U.S. Department of Transportation. **SARA** is the Superfund Amendments and Reauthorization Act. **TSCA** is the U.S. Toxic Substance Control Act. **CERCLA (or Superfund)** refers to the Comprehensive Environmental Response, Compensation, and Liability Act**)**. Labeling is per the American National Standards Institute (**ANSI Z129.1**). **CANADA: CEPA** is the Canadian Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **TC** is Transport Canada. **DSL/NDSL** are the Canadian Domestic/Non-Domestic Substances Lists.
EUROPEAN and INTERNATIONAL: EC is the European Community (formerly known as the **EEC,** European Economic Community). **EINECS:** This the European Inventory of Now-Existing Chemical Substances. **IMO** is the International Maritime Organization. The **ARD** is the European Agreement Concerning the International Carriage of Dangerous Goods by Road and the **RID** are the International Regulations Concerning the Carriage of Dangerous Goods by Rail

MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS, And European Community Standards

PART I *What is the material and what do I need to know in an emergency?*

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED):	**CLEANER PRODUCTS:**
214 CLEANER	**914 LOW VOC CLEANER**
CHEMICAL NAME/CLASS:	Solvent Mixture
PRODUCT USE:	Preparing Surfaces for Solvent Welding
SUPPLIER/MANUFACTURER'S NAME:	E-Z Weld, Inc
U.S. BUSINESS PHONE:	1-800-327-8460; 1-561-844-0241
U.S. ADDRESS:	1661 Old Dixie Highway Riviera Beach, FL 33404
U.S. EMERGENCY PHONE:	CHEMTREC: 1-800-424-9300 (U.S. and Canada) 1-703-527-3887 (International)
DATE OF PREPARATION:	November 12 2008

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	EINECS #	% w/w	EXPOSURE LIMITS IN AIR					
				ACGIH		OSHA			
				TLV ppm	STEL ppm	PEL ppm	STEL ppm	IDLH ppm	OTHER
Acetone	67-64-1	200-662-2	2-98	500 A4 (Not Classifiable as a Human Carcinogen)	750	1000 750 (vacated 1989 PEL)	NE 1000 (vacated 1989 PEL)	2500 (based on LEL)	NIOSH REL: TWA = 250 DFG MAK: 500 Carcinogen: EPA-D
Methyl Ethyl Ketone	78-93-3	201-159-0	2-98	200	300	200	300 (vacated 1989 PEL)	3000	NIOSH REL: TWA = 200 STEL = 300 DFG MAK: 200 Carcinogen: EPA-D

NE = Not Established. C = Ceiling Limit. See Section 16 for Definitions of Terms Used.

Acetone has been excluded from the list of volatile organic compounds (VOC) by the United States Environmental Protection Agency (EPA) because of its negligible photochemical activity. Estimated VOC for this product is 0.3 lbs/gal based on MEK content.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This is an extremely flammable liquid with an ether-like odor Inhalation overexposures to the vapors of this product can cause central-nervous system effects (including dizziness, drowsiness, nausea, and headaches). This product can be mildly to severely irritating to the eyes, skin, and other contaminated tissue. Vapors of this product are heavier than air and may travel to a source of ignition and flashback to a leak or open container. Emergency responders must wear the proper personal protective equipment (and have appropriate fire protection) suitable for the situation to which they are responding.

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of occupational overexposure are inhalation and contact with skin and eyes. The symptoms of overexposure to this product, via route of entry, are as follows:

INHALATION: Inhalation of vapors, mists, or sprays of this product can be irritating to the nose, throat, mucous membranes, and other tissues of the respiratory system. Symptoms of overexposure can include coughing, sneezing, and shortness of breath. Additionally, the components of this product are central nervous system depressants. Symptoms of over-exposure can include drowsiness, dizziness, fatigue, headache, nausea, and general anesthetic effects. Inhalation of high concentrations of this product (as may occur in a poorly-ventilated area) may be fatal. Based on clinical studies involving test animals, **This product must be used with adequate ventilation.** Mechanical exhaust may be needed. Ensure exposure to vapors is minimized by use of appropriate engineering controls, work practices, and personal protective equipment, as described in the remainder of this document.

CONTACT WITH SKIN or EYES: Contact with this product can be irritating to contaminated skin and eyes. Vapors of this product can redden and irritate the eyes. If the eyes are contaminated with splashes, sprays or mists of this product, reddening, tearing, and corneal opacity can occur. The liquid can be mildly to severely irritating to contaminated skin (depending on duration of exposure). Prolonged or repeated skin over-exposures can lead to dermatitis.

SKIN ABSORPTION: Skin absorption is a potential route of overexposure Symptoms of such exposure can include those described under “Inhalation” and “Contact With Skin and Eyes”.

HAZARDOUS MATERIAL INFORMATION SYSTEM

HEALTH	(BLUE)	2
FLAMMABILITY	(RED)	3
REACTIVITY	(YELLOW)	0
PROTECTIVE EQUIPMENT		C/D

EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		

For routine applications.

See Section 16 for Definition of Ratings

INGESTION: Ingestion is not anticipated to be a significant route of occupational overexposure for this product. If ingestion occurs, refer to Section 4 (First-Aid Measures) and get medical help immediately. If ingestion of this product does occur, symptoms of such over-exposure can include nausea, vomiting, and other symptoms described for “Inhalation”. Ingestion can also lead to liver and kidney damage. Ingestion of this product may be fatal.

INJECTION: Injection is not anticipated to be a significant route of over-exposure for this product. If injection does occur (i.e. through a puncture by an object contaminated with the product), local irritation and swelling can occur. Additional symptoms may include those described for “Inhalation”.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in **Lay Terms**.

ACUTE: Over-exposures to this product can be irritating to the eyes, skin, and mucous membranes, and can also cause central-nervous system effects (dizziness, drowsiness, nausea and headaches). Ingestion of this product, or inhalation of high concentrations of this product’s vapors, may be fatal.

CHRONIC: Prolonged or repeated skin exposures can lead to dermatitis (dryness, reddening and irritation of the skin). There is limited evidence from animal studies that Methyl Ethyl Ketone, a component of this product, is a reproductive toxin. Refer to Section 11 (Toxicological Information) for additional information

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

SKIN EXPOSURE: If this product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual must seek medical attention if any adverse effect occurs.

EYE EXPOSURE: If this product's liquid or vapors enter the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. The contaminated individual must seek immediate medical attention.

INHALATION: If vapors, mists, or sprays of this product are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.

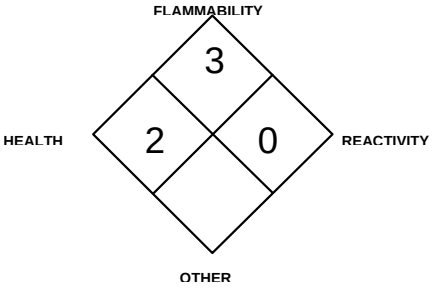
INGESTION: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. The contaminated individual should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

The contaminated individual must be taken for medical attention, especially if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take a copy of label and MSDS to health professional with victim.

5. FIRE-FIGHTING MEASURES

The following information is variable, depending on the blend. The following information is for the main solvents component of this product.

NFPA RATING



See Section 16 for Definition of Ratings

FLASH POINT:

Acetone: -9°C (15°F)
Methyl Ethyl Ketone: -9°C (15°F)

AUTOIGNITION TEMPERATURE:

Acetone: 465°C (869°F)
Methyl Ethyl Ketone: 404°C (759°F)

FLAMMABLE LIMITS (in air by volume):

Acetone:	Lower (LEL): 2.6%	Upper (UEL): 12.8%
Methyl Ethyl Ketone:	Lower (LEL): 1.8%	Upper (UEL): 10.0%

The following information is for the product.

FIRE EXTINGUISHING MATERIALS:

Water Spray: YES (for cooling only)	Carbon Dioxide: YES
Foam: YES	Dry Chemical: YES
Halon: YES	Other: Any "B" Class.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This is a Class I-B Flammable Liquid. When involved in a fire, this material may ignite and produce irritating vapors and toxic gases (e.g., carbon monoxide, carbon dioxide). This material will readily ignite at room temperature. The vapors are heavier than air and may travel to a source of ignition, and flash back to a leak or open container. Tetrahydrofuran can form potentially explosive peroxides; closed containers contaminated with peroxides can rupture violently in the heat of a fire.

Explosion Sensitivity to Mechanical Impact: Not sensitive.
Explosion Sensitivity to Static Discharge: The vapors of this product can be ignited by static electrical energy.

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. If it is safe to do so, allow small fires involving this product to burn-out, while protecting exposures. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. If necessary, rinse contaminated equipment thoroughly before returning such equipment to service.

6. ACCIDENTAL RELEASE MEASURES

RELEASE RESPONSE: In case of a spill, clear the affected area and protect people. Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. Small releases (e.g., 1-pint) must be cleaned-up by personnel wearing gloves, goggles, and appropriate eye protection. Face shields must be worn if splashes or sprays of this product may be generated. In the event of a non-incidental release (e.g., five, 1-gallon containers leaking simultaneously in a poorly-ventilated area), the minimum Personal Protective Equipment should be **Level B: triple-gloves (rubber gloves and nitrile gloves, over latex gloves), chemically resistant suit and boots, hard-hat, and Self-Contained Breathing Apparatus.** Level B should always be used during responses in which the oxygen level is below 19.5% or unknown.

Eliminate all sources of ignition before spill clean-up begins. Use non-sparking tools. Absorb spilled liquid with activated carbon, polypads or other suitable absorbent materials. Monitor the area for combustible vapors and the level of oxygen. Monitoring must indicate less than 10 % of the LEL (see Section 5, Fire-Fighting Measures) and greater than 19.5 % Oxygen is in the atmosphere before personnel are permitted in the area without Level B Protection.

PART III *How can I prevent hazardous situations from occurring?*

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors or mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Containers of this product must be properly labeled. If this mixture is used in other types of containers, only use portable containers approved for flammable liquids. Post “NO SMOKING” signs, where appropriate in storage and use areas. Use non-sparking tools. Bond and ground during transfer of material. Store containers of the product in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers, or in a diked area, as appropriate. Store containers away from incompatible chemicals. Keep container tightly closed when not in use. Storage areas should be made of fire-resistant materials. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Refer to NFPA 30, Flammable and Combustible Liquids Code for additional information on storage. Empty containers may contain residual flammable liquid or vapors. Therefore, empty containers should be handled with care. Do not expose ”empty” containers to welding touches, or any other source of ignition.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely, if necessary. Collect all rinsates and dispose of according to applicable U.S. Federal, State, or local procedures, the applicable standards of Canada and its Provinces, or the appropriate requirements of European Community member States.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation. Mechanical exhaust may be needed. Emergency eye-wash/safety showers: where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye-wash fountain/safety shower within the immediate work area for emergency use.

RESPIRATORY PROTECTION: Respiratory protection is not generally needed when using this product. Maintain airborne contaminant concentrations below guidelines listed in Section 2 (Composition, Information on Ingredients). If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134 or applicable State regulations. Use supplied air respiration protection if oxygen levels are below 19.5% or are unknown. Respiratory protection guidelines for Acetone and Methyl Ethyl Ketone (components of this product) are provided as follows.

NIOSH/OSHA RECOMMENDATIONS FOR ACETONE CONCENTRATIONS IN AIR:

UP TO 2500 ppm SAR operated in a continuous-flow mode; or powered air-purifying respirator with organic vapor cartridge(s); or full-piece chemical cartridge respirator with organic vapor cartridge(s); or gas mask with organic vapor canister; or full-facepiece SCBA; or full-facepiece SAR.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS: Positive pressure, full-facepiece SCBA; or positive pressure, full-facepiece SAR with an auxiliary positive pressure SCBA.ESCAPE: Gas mask with organic vapor canister; or escape-type SCBA.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

NIOSH/OSHA RECOMMENDATIONS FOR ACETONE CONCENTRATIONS IN AIR (continued):

NOTE: The IDLH concentration for acetone is 2,500 ppm (10% of the Lower Explosive Limit). This value is based on the lower explosive limit (LEL). Respiratory protection equipment may not be adequate for fire situations.

NIOSH RECOMMENDATIONS FOR METHYL ETHYL KETONE CONCENTRATIONS IN AIR:

UP TO 3000 ppm: SAR operated in a continuous-flow mode; or powered air-purifying respirator with organic vapor cartridge(s); or full-piece chemical cartridge respirator with organic vapor cartridge(s); or gas mask with organic vapor canister; or full-facepiece SCBA; or full-facepiece SAR.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS: Positive pressure, full-facepiece SCBA; or positive pressure, full-facepiece SAR with an auxiliary positive pressure SCBA.

ESCAPE: Gas mask with organic vapor canister; or escape-type SCBA.

NOTE: The IDLH concentration for Methyl Ethyl Ketone is 3000 ppm.

EYE PROTECTION: Splash goggles or safety glasses. Face shield should be worn when working in situations in which splashes or sprays can be generated.

HAND PROTECTION: Wear gloves for routine industrial use to protect hands from contact. For long exposures, or unusual contact, such as spill cleanup, chemical resistant gloves may be required. See section 6.

BODY PROTECTION: Use body protection appropriate for task (e.g., Apron or Tyvek suit).

9. PHYSICAL and CHEMICAL PROPERTIES

RELATIVE VAPOR DENSITY (air = 1): > 1

EVAPORATION RATE (nBuAc = 1): > 1

SPECIFIC GRAVITY (water = 1): < 1.0

FREEZING/MELTING POINT: Not established.

SOLUBILITY IN WATER @ 25°C: Somewhat soluble.

BOILING POINT: Not established.

VAPOR PRESSURE, mm Hg @ 20°C: Not established.

pH: Not established.

ODOR THRESHOLD: Not established.

COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT): Not established.

ODOR THRESHOLD: Not established.

FORM: Liquid.

COLOR: Clear, purple or blue

ODOR: Ethereal.

VISCOSITY: Water-like.

FLASH POINT:

Acetone: -9°C (15°F)
Methyl Ethyl Ketone: -9°C (15°F)

HOW TO DETECT THIS SUBSTANCE (warning properties): The color and odor of the product may be distinctive properties of this product.

10. STABILITY and REACTIVITY

STABILITY: Stable.

DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product will not be compatible with strong oxidizers, lithium aluminum hydride, and alkaline earth hydroxides.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid exposure or contact to extreme temperatures, sources of ignition, incompatible chemicals.

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The specific toxicology data available for components greater than 1% in concentration are as follows.

ACETONE:
Eye Irritancy (human) = 500 ppm
Skin Irritancy (rabbit) = 395 mg/ open; mild
Skin Irritancy (rabbit) = 500 mg/ 24 hours; mild
Eye Irritancy (rabbit) = 3950 □g; severe

ACETONE (continued):
Eye Irritancy (rabbit) = 20 mg/ 24 hours; moderate
Cytogenetic Analysis (*Saccharomyces cerevisiae*) = 200 mmol/tube
Sex Chromosome Loss and Nondisjunction (*Saccharomyces cerevisiae*) = 47,600 ppm

11. TOXICOLOGICAL INFORMATION (Continued)

TOXICITY DATA (continued):

ACETONE (continued):
TDLo (inhalation, man) = 440 g/m^3/ 6 months
TDLo (inhalation, man) = 10 mg/m^3/ 6 hours
TCLo (inhalation, human) = 500 ppm; eye effects
TCLo (inhalation, man) = 12,000 ppm/ 4 hours; gastrointestinal tract effects
LD_{50} (intravenous, rat) = 5500 mg/kg
LD_{50} (oral, rat) = 5800 mg/kg
LC_{50} (inhalation, rat) = 50,100 mg/m^3/ 8 hours
LDLo (intraperitoneal, rat) = 500 mg/kg
LD_{50} (intravenous, rat) = 5500 mg/kg
LD_{50} (oral, mouse) = 3000 mg/kg
LCLo (inhalation, mouse) = 110 g/m^3/ 1 hour
LD_{50} (intraperitoneal, mouse) = 1297 mg/kg
LDLo (intravenous, mouse) = 4 g/kg
LDLo (oral, dog) = 8 g/kg
LD_{50} (oral, rabbit) = 5340 mg/kg
LD_{50} (skin, rabbit) = 20 g/kg
TDLo - Oral - rat: 273 gm/kg: male 13 week(s) pre-mating: Reproductive - Paternal Effects - spermatogenesis
TCLo - Inhalation: Mammal - species unspecified: 31500 ug/m3/24H: female 1-13 day(s) after conception
Sex chromosome loss and nondisjunction: Yeast - Saccharomyces cerevisiae: 47600 ppm
Cytogenetic analysis: Rodent - hamster Fibroblast: 40 gm/L

METHYL ETHYL KETONE:
Eye effects-Human 350 ppm
Skin-Rabbit, adult 500 mg/24 hours; Moderate irritation effects
Skin-Rabbit, adult 402 mg/24 hours; Mild irritation effects
Skin-Rabbit, adult 13,780 mg/24H open Mild irritation effects
Eye effects-Rabbit, adult 80 mg
Sex Chromosome Loss and Nondisjunction - Saccharomyces cerevisiae; 33,800 ppm
Inhalation-Rat TCLo: 1000 ppm/(6-15D preg):Teratogenic effects
Inhalation-Human TCLo: 100 ppm/ 5 minutes: Irritant effects
Oral-Rat LD_{50}: 2737 mg/kg
Inhalation-Rat LC_{50}: 23,500 mg/m3/8 hours;

METHYL ETHYL KETONE (continued):
Intraperitoneal-Rat LD50: 607 mg/kg
Oral-Mouse LD_{50}: 4050 mg/kg
Inhalation-Mouse LC_{50}: 40 g/m3/2 hours
Intraperitoneal-Mouse LD_{50}: 616 mg/kg

METHYL ETHYL KETONE (continued):
Skin-Rabbit, adult LD_{50}: 6450 mg/kg
Intraperitoneal-Guinea Pig, adult LDLo: 2 g/kg
Inhalation-Unspecified effects LC_{50}: 38 g/m3
Inhalation-Rat TCLo: 5000 ppm/6H/90 days - Intermittent
TDLo - Subcutaneous - cat: 55500 mg/kg/37 weeks - Intermittent: Reproductive - Tumorigenic effects - other reproductive system tumors
TCLo - Inhalation - rat: 3000 ppm/7 hours: female 6-15 day(s) after conception: Reproductive - Specific Developmental Abnormalities - craniofacial (including nose and tongue) , urogenital system , homeostasis
TCLo - Inhalation - rat: 1000 ppm/7 hours: female 6-15 day(s) after conception: Reproductive - Effects on Embryo or Fetus - fetotoxicity (except death, e.g., stunted fetus) Reproductive - Specific Developmental Abnormalities - musculoskeletal system
TCLo - Inhalation - mouse: 3000 ppm/7H: female 6-15 day(s) after conception: Reproductive - Effects on Embryo or Fetus - fetotoxicity

TETRAHYDROFURAN:
Mutation in Microorganisms-Escherichia coli 1 mol/L
Inhalation-Human TCLo: 25,000 ppm: Central nervous system effects
Oral-Rat LD_{50}: 1650 mg/kg.
Inhalation-Rat LC_{50}: 21,000 ppm/3H
Intraperitoneal-Rat LD_{50}: 2900 mg/kg
Inhalation-Mouse LCLo: 24,000 mg/m3/2 hours
Intraperitoneal-Mouse LD_{50}: 1900 mg/kg
Intraperitoneal-Guinea Pig, adult LDLo: 500 mg/kg
Inhalation-Rat TCLo: 5000 ppm/6 hours/91 days - Intermittent
TCLo - Inhalation - rat: 5000 ppm/6H: female 6-19 day(s) after conception: Reproductive - Effects on Embryo or Fetus - fetotoxicity
TCLo - Inhalation - mouse: 1800 ppm/6H: female 6-17 day(s) after conception: Reproductive - Fertility - post-implantation mortality
Mutation in microorganisms: Bacteria - Escherichia coli: 1 umol/L

SUSPECTED CANCER AGENT: Components of this products are listed as follows:

ACETONE:
EPA-D: Not Classifiable as to Human Carcinogenicity.

METHYL ETHYL KETONE:
EPA-D: Not Classifiable as to Human Carcinogenicity.

This product's components are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, and CAL/OSHA and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: This product is expected to mildly to severely irritate the skin and eyes.

SENSITIZATION TO THE PRODUCT: No component of this product is known to be a sensitizer with prolonged or repeated use.

11. TOXICOLOGICAL INFORMATION (Continued)

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: This product is not reported to produce mutagenic effects in humans Animal mutation data are available for Acetone, Methyl Ethyl Ketone, (components of this product); these data were obtained during clinical studies on specific animal tissues or micro-organisms exposed to high doses of these compounds.

Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.

Teratogenicity: This product is not reported to cause teratogenic effects in humans. Three animal studies involving Methyl Ethyl Ketone (a component of this product) have shown fetotoxicity (skeletal anomalies) at doses which did not produce significant maternal toxicity.

Reproductive Toxicity: This product is not reported to cause reproductive effects in humans. Reproductive toxicity data are available for Acetone, Methyl Ethyl Ketone (a component of this product); these data were obtained from clinical studies on test animals exposed to relatively high doses.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

ACGIH BIOLOGICAL EXPOSURE INDICES: Currently, there are ACGIH Biological Exposure Indices (BEIs) associated with components of this product, as follows:

CHEMICAL DETERMINANT	SAMPLING TIME	BEI
ACETONE • Acetone in urine	• End of shift	• 100 mg/L
METHYL ETHYL KETONE (MEK) • MEK in urine	• End of shift	• 2 mg/L

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Preexisting respiratory problems, dermatitis, and other skin disorders, as well as conditions involving the "Target Organs" (see Section 3, Hazard Identification) can be aggravated by exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure. If necessary, review for brain and central nervous system effects and conduct pulmonary function test. Other tests for lung, kidney, and liver effects may also prove useful.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: The components of this product will biodegrade into other organic compounds. Environmental data are available for components of this product, as follows:

ACETONE: Log K_{ow} = -0.24. Water Solubility = Miscible. Acetone is quite readily degraded in the environment. BOD = 122%; 5 days. The potential for bioconcentration in fish is negligible. One experimental study of bioconcentration in adult haddock at 7-9°C (static test) resulted in a BCF of 0.69.

METHYL ETHYL KETONE: Log Kow = 0.29. Water Solubility = 239,000 mg/L. Methyl Ethyl Ketone is rapidly volatilized from water and undergoes slow biodegradation. It undergoes moderate atmospheric photodegradation.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: This product can be harmful or fatal to contaminated plant or animal life, especially if released in large quantities into the environment. Refer to Section 11 (Toxicological Information) for information regarding the effect of this product's components on test animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE: This product can be harmful or fatal to contaminated aquatic plant or animal life, especially if released in large quantity in a body of water. The following page lists aquatic toxicity data are available for the components of this product:

12. ECOLOGICAL INFORMATION (Continued)

EFFECT OF CHEMICAL ON AQUATIC LIFE (continued):

ACETONE:

LC_{50} (Japanese quail) = 40,000 ppm, in diet, age 14 days, (no mortality to 40,000 ppm)
LC_{50} (Ring-necked pheasant) = 40,000 ppm, in diet, age 10 days, (no mortality to 40,000 ppm)
LC_{50} (*Salmo gairdeneri*, rainbow trout) = 5,540 mg/L/ 86 hours/ 12°C; (95% confidence limit 4,740-6,330 mg/L) , wt 1.0 g (static bioassay)
LC_{50}, F (fingerling trout) = 6,100 mg/L/ 24 hours
LD_{100} (*Asellus aquaticus*) = 3 mL/L/ within 3 days; (within 3 days of exposure) (conditions of bioassay not specified)
LD_{100} (*Gamarus fossarum*) = 10 mL/L/ within 48 hours; (conditions of bioassay not specified)
LC_{50} (*Pimephaleus promelas*) = 8,120 mg/L/ 96 hours, (conditions of bioassay not specified)
TLm (*Daphnia magna*) = 10 mg/L/ 24 and 48 hours, (conditions of bioassay not specified)
TLm (brine shrimp) = 2100 mg/L 24 and 48 hours, (conditions of bioassay not specified)
TLm (mosquito fish) = 13000 mg/L/ 24, 48, and 96 hours, (conditions of bioassay not specified)
LC_{50} (*Lepomis macrochirus*, bluegill sunfish) = 8300 mg/L 96 hours, (conditions of bioassay not specified)
LD_{50} (goldfish) = 5000 mg/L/ 24 hours, (conditions of bioassay not specified)
LC_{50} (*Poecilia reticulata*, guppy) = 7,032 ppm/ 14 days, (conditions of bioassay not specified)
LC_{50} (Mexican axolotl) = 20.0 mg/L/ 48 hours/ 3-4 weeks after hatching, (conditions of bioassay not specified)
LC_{50} (clawed toad) = 24.0 mg/L/ 48 hours/ 3-4 weeks after hatching, (conditions of bioassay not specified)

aeruginosa) 8 days = 52 mg/L

METHYL ETHYL KETONE:

EC_0 (*Scenedesmus quadricauda*, green algae) = 4300 mg/L/ 8 days
EC_0 (*Entosiphon sulcatum*, protozoa) = 190 mg/L/ 72 hours
EC_0 (*Uronema parduczi* Chatton-Lwoff, protozoa) = 2830 mg/L
EC_0 (*Pseudomonas putida*, bacteria) = 1150 mg/L/ 16 hours
LC_{50} (*Pimephales promelas*, fathead minnow) = 3200 mg/L/96 hour
LD_0 (*Pseudomonas*, bacteria) = 2,500 mg/L
LD_0 (*Scenedesmus*, algae) = 12,500 mg/L
LD_0 (*Colpoda*, protozoa) = 5,000 mg/L
LC_{50} (mosquito fish) = 5,600 mg/L/ 24□96 hours
LC_{50} (bluegill) = 5,640□1,690 mg/L/ 24□96 hours
LC_{50} (goldfish) = 5,000 mg/L/ 24 hours

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada and its Provinces, as well as those applicable to the EC Member States. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

U.S. EPA WASTE NUMBER: D001 (Characteristic/Ignitability)

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME:	Flammable Liquid nos (acetone, methyl ethyl ketone)
HAZARD CLASS NUMBER and DESCRIPTION:	3 (Flammable Liquid)
UN IDENTIFICATION NUMBER:	UN 1993
PACKING GROUP:	II
DOT LABEL(S) REQUIRED:	Flammable Liquid

NOTE: Shipments of containers holding 1-liter or less in volume qualify for a "Limited Quantity" exception. Refer to 49 CFR 173.150 for additional information.

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER, 1996: 127

MARINE POLLUTANT: No component of this product is designated as a Marine Pollutant by the DOT (per 49 CFR 172.101, Appendix B).

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS. Use the above information for the preparation of Canadian Shipments.

14. TRANSPORTATION INFORMATION (Continued)

IMO DESIGNATION: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS BY THE INTERNATIONAL MARITIME ORGANIZATION

PROPER SHIPPING NAME:	Flammable liquid, n.o.s. (Acetone, Methyl Ethyl Ketone)
HAZARD CLASS NUMBER and DESCRIPTION:	3.1 (Flammable Liquid; Low Flash Point)
UN IDENTIFICATION NUMBER:	UN 1993
PACKING GROUP:	II
LABEL(S) REQUIRED:	Flammable Liquid
IMDG CODE:	3126

MARINE POLLUTANT: This product is not designated by the IMO to be a Marine Pollutant.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This material is considered by the United Nations Economic Commission for Europe to be dangerous goods. Additional information is as follows:

Substance Identification No.:	1993
Name of Substance:	Flammable liquid, n.o.s.
Hazard Identification No. (Description):	33
Label:	Flammable Liquid
Class and Item Number:	3,1° (a), 2° (a), (b), 3° (b), 5° (c)

15. REGULATORY INFORMATION

ADDITIONAL UNITED STATES REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, and are listed as follows:

CHEMICAL NAME	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Acetone	No	Yes	No
Methyl Ethyl Ketone	No	Yes	Yes

U.S. SARA THRESHOLD PLANNING QUANTITY: Not applicable.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Acetone = 500 lb.;. Methyl Ethyl Ketone: 5000 lbU.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

U.S. STATE REGULATORY INFORMATION: Components of this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: Acetone, , Methyl Ethyl Ketone

California - Permissible Exposure Limits for Chemical Contaminants: Acetone, , Methyl Ethyl Ketone

Florida - Substance List: Acetone, , Methyl Ethyl Ketone

Illinois - Toxic Substance List: Acetone, , Methyl Ethyl Ketone

Kansas - Section 302/313 List: Acetone, , Methyl Ethyl Ketone

Massachusetts - Substance List: Acetone, , Methyl Ethyl Ketone

Michigan - Critical Materials Register: No.

Minnesota - List of Hazardous Substances: Acetone, , Methyl Ethyl Ketone

Missouri - Employer Information/Toxic Substance List: Acetone, , Methyl Ethyl Ketone

New Jersey - Right to Know Hazardous Substance List: Acetone, , Methyl Ethyl Ketone,.

North Dakota - List of Hazardous Chemicals, Reportable Quantities: Acetone, , Methyl Ethyl Ketone

Pennsylvania - Hazardous Substance List: Acetone, , Methyl Ethyl Ketone

Rhode Island - Hazardous Substance List: Acetone, , Methyl Ethyl Ketone

Texas - Hazardous Substance List: Acetone, Methyl Ethyl Ketone,

West Virginia - Hazardous Substance List: Acetone, , Methyl Ethyl Ketone

Wisconsin - Toxic and Hazardous Substances: Acetone, , Methyl Ethyl Ketone,

15. REGULATORY INFORMATION (Continued)

CALIFORNIA, SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): This product may contain trace constituents, such as vinyl chloride, present in one of the product's components. Under common usage, exposures to these trace constituents at levels exceeding the "no significant risk level" (NSRL) would not occur. Users are expected to follow normal PPE and ventilation guidelines such as those in section 8 and other portions of this MSDS.
VOC Information: This product emits volatile organic compounds (VOC's) during use and cure. Users should determine if local regulations regarding use of VOC containing products exist in their area and if this product complies.

ANSI STANDARD LABELING (Z129.1): **DANGER!** EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. MAY BE HARMFUL IF INHALED. MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS. MAY CAUSE SKIN AND EYE IRRITATION. ASPIRATION HAZARD - CAN CAUSE LIFE-THREATENING LUNG DAMAGE IF SWALLOWED. MAY CAUSE REPRODUCTIVE EFFECTS, BASED ON ANIMAL TESTS. Keep away from heat, sparks, and flame. Avoid breathing vapor or mists. Avoid contact with skin or clothing. Use only with adequate ventilation. Keep container closed. Wash thoroughly after handling. Recommended maximum shelf-life for unopened containers is 2 years. **FIRST AID:** In case of contact, immediately flush skin or eyes for at least 15 minutes. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **IN CASE OF FIRE:** Use fog, foam, dry chemical or CO_2. Liquid will float and may re-ignite on the surface of water. **IN CASE OF SPILL**: Absorb spill with inert material (e.g. activated carbon) then place in suitable container. Refer to Material Safety Data Sheet for additional information on this product.

ADDITIONAL CANADIAN REGULATIONS:

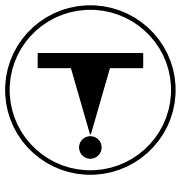
CANADIAN DSL/NDSL INVENTORY STATUS: The components of this product are on the DSL Inventory.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LIST: The components of this product are not on the CEPA Priorities Substances List.

CANADIAN WHMIS SYMBOLS: **Class B2**: Flammable Liquid
Class D2A/B: Materials Causing Other Toxic Effects





EUROPEAN COMMUNITY INFORMATION:

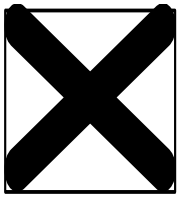
EUROPEAN COMMUNITY INFORMATION FOR PRODUCT:

EC LABELING AND CLASSIFICATION: Based on the information on the product's components and an assessment of the physical and health hazards associated with the material, the following assignments have been made (per council directive 67/548/EEC)

EC CLASSIFICATION: Highly flammable. Irritant. [F;Xi]
EC RISK PHRASES: Highly flammable. Irritating to eyes and respiratory system. [R:11-19-36/37]
EC SAFETY PHRASES: Keep out of reach of children.* Keep away from sources of ignition - No smoking. Do not empty into drains. Do not breathe vapors. Avoid contact with the eyes. Take precautionary measures against static discharges. [S:(2-)*16-23-25-29-33] *This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.

EUROPEAN COMMUNITY ANNEX II HAZARD SYMBOLS:





EUROPEAN COMMUNITY INFORMATION FOR CONSTITUENTS: The following information is available for primary constituents in the components of this product.

ACETONE:
EC CLASSIFICATION: Highly flammable. [F]
EC RISK PHRASES: Highly flammable. [R: 11].
EC SAFETY PHRASES: Keep out of reach of children.* Keep container in a well-ventilated place. Keep away from sources of ignition. No smoking. Do not breathe vapors. [S: (2-)*9-16-23-33].
EC COMMENTS: **This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.*

15. REGULATORY INFORMATION (Continued)

EUROPEAN COMMUNITY INFORMATION FOR CONSTITUENTS (continued):

METHYL ETHYL KETONE:

EC CLASSIFICATION: Highly flammable. Irritant. [F; Xi] (

EC RISK PHRASES: Highly flammable. Irritating to the eyes and respiratory system. [R: 11-36/37].

EC SAFETY PHRASES: Keep out of reach of children.* Keep container in a well-ventilated place. Keep away from sources of ignition. No smoking. Avoid contact with the eyes. Take precautionary measures against static discharges. [S: (2-)*9-16-25-33].

EC COMMENTS: **This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.*

EC COMMENTS :

CONCENTRATIONS GREATER THAN OR EQUAL TO 25 PERCENT: Irritant. Irritating to eyes and respiratory system. [Xi; R36/37]

16. OTHER INFORMATION

PREPARED BY: CHEMICAL SAFETY ASSOCIATES, Inc.
9163 Chesapeake Drive, San Diego, CA 92123-1002
619/565-0302

EDITED/UPDATED BY: John Brown, E-Z Weld, Inc

DATE OF PRINTING: November 12, 2008

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Cookson assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Cookson assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching.

EXPOSURE LIMITS IN AIR:

ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits.

TLV - Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average **(TWA)**, the 15-minute Short Term Exposure Limit, and the instantaneous Ceiling Level **(C)**. Skin absorption effects must also be considered.

OSHA - U.S. Occupational Safety and Health Administration.

PEL - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order.

IDLH - Immediately Dangerous to Life and Health **-** This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. **The DFG - MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. **O**ccupational **S**afety and **H**ealth **A**dministration (**OSHA**). NIOSH issues exposure guidelines called **R**ecommended **E**xposure **L**evels (**REL**s). When no exposure guidelines are established, an entry of **NE** is made for reference.

HAZARD RATINGS:

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: Health Hazard: **0** (minimal acute or chronic exposure hazard); **1** (slight acute or chronic exposure hazard); **2** (moderate acute or significant chronic exposure hazard); **3** (severe acute exposure hazard; onetime overexposure can result in permanent injury and may be fatal); **4** (extreme acute exposure hazard; onetime overexposure can be fatal). Flammability Hazard: **0** (minimal hazard); **1** (materials that require substantial pre-heating before burning); **2** (combustible liquid or solids; liquids with a flash point of 38-93°C [100-200°F]); **3** (Class IB and IC flammable liquids with flash points below 38°C [100°F]); **4** (Class IA flammable liquids with flash points below 23°C [73°F] and boiling points below 38°C [100°F]. Reactivity Hazard: **0** (normally stable); 1 (material that can become unstable at elevated temperatures or which can react slightly with water); **2** (materials that are unstable but do not detonate or which can react violently with water); **3** (materials that can detonate when initiated or which can react explosively with water); **4** (materials that can detonate at normal temperatures or pressures).

NATIONAL FIRE PROTECTION ASSOCIATION: Health Hazard: **0** (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); **1** (materials that on exposure under fire conditions could cause irritation or minor residual injury); **2** (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); **3** (materials that can on short exposure could cause serious temporary or residual injury); **4** (materials that under very short exposure could cause death or major residual injury). Flammability Hazard and Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System".

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (**NFPA**). Flash Point - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD_{50}** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC_{50}** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m^3** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information: BEI** - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV. **Ecological Information:** EC is the effect concentration in water. **BCF** = Bioconcentration Factor, which is used to determine if a substance will concentrate in lifeforms which consume contaminated plant or animal matter. Coefficient of Oil/Water Distribution is represented by **log K_{ow}** or **log K_{oc}** and is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:

U.S. AND CANADA: This section explains the impact of various laws and regulations on the material. **U.S.: EPA** is the U.S. Environmental Protection Agency. **DOT** is the U.S. Department of Transportation. **SARA** is the Superfund Amendments and Reauthorization Act. **TSCA** is the U.S. Toxic Substance Control Act. **CERCLA (or Superfund)** refers to the Comprehensive Environmental Response, Compensation, and Liability Act**)**. Labeling is per the American National Standards Institute (**ANSI Z129.1**). **CANADA: CEPA** is the Canadian Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **TC** is Transport Canada. **DSL/NDSL** are the Canadian Domestic/Non-Domestic Substances Lists.

EUROPEAN and INTERNATIONAL: EC is the European Community (formerly known as the **EEC,** European Economic Community). **EINECS:** This the European Inventory of Now-Existing Chemical Substances. **IMO** is the International Maritime Organization. The **ARD** is the European Agreement Concerning the International Carriage of Dangerous Goods by Road and the **RID** are the International Regulations Concerning the Carriage of Dangerous Goods by Rail.

E-Z WELD®

MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS, And European Community Standards

PART I *What is the material and what do I need to know in an emergency?*

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): **CLEANER / PRIMER PRODUCTS:**

211 CLEAR PRIMER **212 PURPLE PRIMER** **213 PRIMER**
911 CLEAR PRIMER **228 BLUE PRIMER** **912 PURPLE PRIMER** **913 PRIMER**
914 CLEANER **5E522** **E5E24** **5E521** **5E523** **5E520**

CHEMICAL NAME/CLASS: Solvent Mixture
PRODUCT USE: Prep. Surfaces for Solvent Cementing
SUPPLIER/MANUFACTURER'S NAME: E-Z Weld, Inc
U.S. BUSINESS PHONE: 1-800-327-8460; 1-561-844-0241
U.S. ADDRESS: 1661 Old Dixie Highway
Riviera Beach, FL 33404

U.S. EMERGENCY PHONE: CHEMTREC:
1-800-424-9300 (U.S. and Canada)
1-703-527-3887 (International)

DATE OF PREPARATION: November 12 2008

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	EINECS #	% w/w	EXPOSURE LIMITS IN AIR					
				ACGIH		OSHA		IDLH	OTHER
				TLV	STEL	PEL	STEL		
				Ppm	Ppm	ppm	ppm	ppm	
Acetone	67-64-1	200-662-2	0-25	500 A4 (Not Classifiable as a Human Carcinogen)	750	1000 750 (vacated 1989 PEL)	NE 1000 (vacated 1989 PEL)	2500 (based on LEL)	NIOSH REL: TWA = 250 DFG MAK: 500 Carcinogen: EPA-D
Methyl Ethyl Ketone	78-93-3	201-159-0	20-85	200	300	200	300 (vacated 1989 PEL)	3000	NIOSH REL: TWA = 200 STEL = 300 DFG MAK: 200 Carcinogen: EPA-D
Cyclohexanone	108-94-1	203-631-1	5-15	25, skin, A3 (confirmed Animal Carcinogen with Unknown Relevance to Humans)	NE	50 25 (vacated 1989 PEL)	NE	700	NIOSH REL: TWA = 25, Skin DFG MAK: Danger of Cutaneous Absorption Carcinogen: IARC-3; MAK-B
Tetrahydrofuran	109-99-9	203-726-8	5-12	50 A3 (confirmed Animal Carcinogen with Unknown Relevance to Humans)	100	200	250 (vacated 1989 PEL)	2000 (based on LEL)	NIOSH REL: TWA = 200 STEL = 250 DFG MAK: 50

NE = Not Established. C = Ceiling Limit. See Section 16 for Definitions of Terms Used.

2. COMPOSITION and INFORMATION ON INGREDIENTS (Continued)

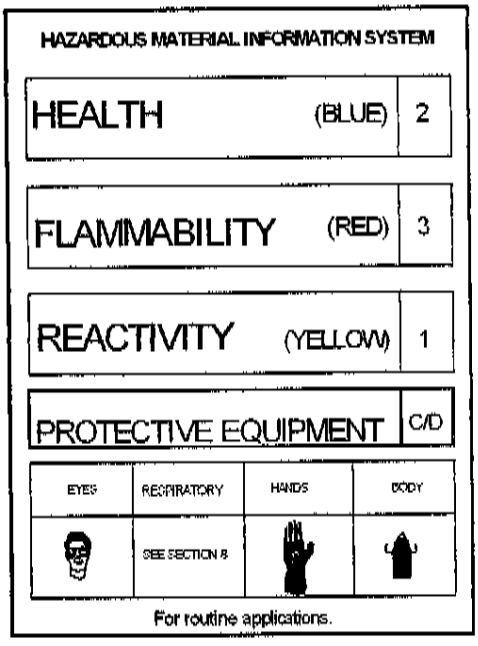
EMERGENCY OVERVIEW: This is a an extremely flammable liquid with an ether-like odor. This product comes in a variety of colors. Inhalation overexposures to the vapors of this product can cause central-nervous system effects (including dizziness, drowsiness, nausea, and headaches). This product can be mildly to severely irritating to the eyes, skin, and other contaminated tissue. Vapors of this product are heavier than air and may travel to a source of ignition and flashback to a leak or open container. Tetrahydrofuran, a component of this product, is known to form explosive peroxides under certain circumstances. Emergency responders must wear the proper personal protective equipment (and have appropriate fire protection) suitable for the situation to which they are responding.

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of occupational overexposure are inhalation and contact with skin and eyes. The symptoms of overexposure to this product, via route of entry, are as follows:

INHALATION: Inhalation of vapors, mists, or sprays of this product can be irritating to the nose, throat, mucous membranes, and other tissues of the respiratory system. Symptoms of overexposure can include coughing, sneezing, and shortness of breath. Additionally, the components of this product are central nervous system depressants. Symptoms of over-exposure can include drowsiness, dizziness, fatigue, headache, nausea, and general anesthetic effects. Inhalation of high concentrations of this product (as may occur in a poorly-ventilated area) may be fatal. Based on clinical studies involving test animals, Cyclohexanone and Tetrahydrofuran, components of this product, may cause liver and kidney damage after long-term inhalation overexposures.

This product must be used with adequate ventilation. Mechanical exhaust may be needed. Ensure exposure to vapors is minimized by use of appropriate engineering controls, work practices, and personal protective equipment, as described in the remainder of this document.

CONTACT WITH SKIN or EYES: Contact with this product can be irritating to contaminated skin and eyes. Vapors of this product can redden and irritate the eyes. If the eyes are contaminated with splashes, sprays or mists of this product, reddening, tearing, and corneal opacity can occur. The liquid can be mildly to severely irritating to contaminated skin (depending on duration of exposure). Prolonged or repeated skin over-exposures can lead to dermatitis.



See Section 16 for Definition of Ratings

SKIN ABSORPTION: Skin absorption is a potential route of overexposure for Cyclohexanone (a component of this product). Symptoms of such exposure can include those described under "Inhalation" and "Contact With Skin and Eyes".

INGESTION: Ingestion is not anticipated to be a significant route of occupational overexposure for this product. If ingestion occurs, refer to Section 4 (First-Aid Measures) and get medical help immediately. If ingestion of this product does occur, symptoms of such over-exposure can include nausea, vomiting, and other symptoms described for "Inhalation". Ingestion can also lead to liver and kidney damage. Ingestion of this product may be fatal.

INJECTION: Injection is not anticipated to be a significant route of over-exposure for this product. If injection does occur (i.e. through a puncture by an object contaminated with the product), local irritation and swelling can occur. Additional symptoms may include those described for "Inhalation".

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in Lay Terms.

ACUTE: Over-exposures to this product can be irritating to the eyes, skin, and mucous membranes, and can also cause central-nervous system effects (dizziness, drowsiness, nausea and headaches). Ingestion of this product, or inhalation of high concentrations of this product's vapors, may be fatal.

CHRONIC: Prolonged or repeated skin exposures can lead to dermatitis (dryness, reddening and irritation of the skin). Tetrahydrofuran, a component of this product, may cause liver and kidney damage after long-term inhalation overexposures. There is limited evidence from animal studies that Methyl Ethyl Ketone, a component of this product, is a reproductive toxin. Refer to Section 11 (Toxicological Information) for additional information. A report from the National Toxicology Program (NTP) has suggested that exposure of mice and rats to Tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetimes caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. No evidence of tumors was seen in female rats or male mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. The NTP, IARC, or OSHA does not list THF as a carcinogen. One THF vendor (DuPont) has recommended a

reduction in the "acceptable exposure limit" from 200 ppm to 25 ppm, 8 and 12 hour time weighted average and a STEL of 75 ppm.

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

SKIN EXPOSURE: If this product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual must seek medical attention if any adverse effect occurs.

EYE EXPOSURE: If this product's liquid or vapors enter the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. The contaminated individual must seek immediate medical attention.

INHALATION: If vapors, mists, or sprays of this product are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.

INGESTION: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. The contaminated individual should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

The contaminated individual must be taken for medical attention, especially if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take a copy of label and MSDS to health professional with victim.

5. FIRE-FIGHTING MEASURES

The following information is variable, depending on the blend. The following information is for the main solvents component of this product.

FLASH POINT:

Acetone: -20°C (-4°F)
Methyl Ethyl Ketone: -9°C (16°F)

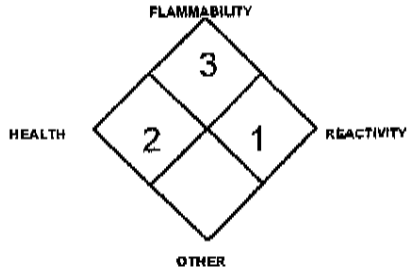
AUTOIGNITION TEMPERATURE:

Acetone: 465°C (869°F)
Methyl Ethyl Ketone: 404°C (759°F)

FLAMMABLE LIMITS (in air by volume):

Acetone:	Lower (LEL): 2.6%	Upper (UEL): 12.8%
Methyl Ethyl Ketone:	Lower (LEL): 1.8%	Upper (UEL): 10.0%

NFPA RATING



See Section 16 for Definition of Ratings

The following information is for the product.

FIRE EXTINGUISHING MATERIALS:

Water Spray: YES (for cooling only)
Foam: YES
Halon: YES
Carbon Dioxide: YES
Dry Chemical: YES
Other: Any "B" Class.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This is a Class I-B Flammable Liquid. When involved in a fire, this material may ignite and produce irritating vapors and toxic gases (e.g., carbon monoxide, carbon dioxide). This material will readily ignite at room temperature. The vapors are heavier than air and may travel to a source of ignition, and flash back to a leak or open container. Tetrahydrofuran can form potentially explosive peroxides; closed containers contaminated with peroxides can rupture violently in the heat of a fire.

Explosion Sensitivity to Mechanical Impact: Not sensitive.
Explosion Sensitivity to Static Discharge: The vapors of this product can be ignited by static electrical energy.

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. If it is safe to do so, allow small fires involving this product to burn-out, while protecting exposures. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. If necessary, rinse contaminated equipment thoroughly before returning such equipment to service.

6. ACCIDENTAL RELEASE MEASURES

RELEASE RESPONSE: In case of a spill, clear the affected area and protect people. Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. Small releases (e.g., 1-pint) must be cleaned-up by personnel wearing gloves, goggles, and appropriate eye protection. Face shields must be worn if splashes or sprays of this product may be generated. In the event of a non-incidental release (e.g.,

6. ACCIDENTAL RELEASE MEASURES (Continued)

five, 1-gallon containers leaking simultaneously in a poorly-ventilated area), the minimum Personal Protective Equipment should be **Level B: triple-gloves (rubber gloves and nitrile gloves, over latex gloves), chemically resistant suit and boots, hard-hat, and Self-Contained Breathing Apparatus.** Level B should always be used during responses in which the oxygen level is below 19.5% or unknown.

Eliminate all sources of ignition before spill clean-up begins. Use non-sparking tools. Absorb spilled liquid with activated carbon, polypads or other suitable absorbent materials. Monitor the area for combustible vapors and the level of oxygen. Monitoring must indicate less than 10 % of the LEL (see Section 5, Fire-Fighting Measures) and greater than 19.5 % Oxygen is in the atmosphere before personnel are permitted in the area without Level B Protection. Place all spill residue in an appropriate container and seal. Dispose of in accordance with U.S. Federal, State, or local procedures, the applicable standards of Canada and its Provinces, or the appropriate requirements of European Community member States (see Section 13, Disposal Considerations).

PART III *How can I prevent hazardous situations from occurring?*

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors or mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Containers of this product must be properly labeled. If this mixture is used in other types of containers, only use portable containers approved for flammable liquids. Post "NO SMOKING" signs, where appropriate in storage and use areas. Use non-sparking tools. Bond and ground during transfer of material. Store containers of the product in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers, or in a diked area, as appropriate. Store containers away from incompatible chemicals. Keep container tightly closed when not in use. Storage areas should be made of fire-resistant materials. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Refer to NFPA 30, Flammable and Combustible Liquids Code for additional information on storage. Empty containers may contain residual flammable liquid or vapors. Therefore, empty containers should be handled with care. Do not expose "empty" containers to welding touches, or any other source of ignition.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely, if necessary. Collect all rinsates and dispose of according to applicable U.S. Federal, State, or local procedures, the applicable standards of Canada and its Provinces, or the appropriate requirements of European Community member States.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation. Mechanical exhaust may be needed. Emergency eye-wash/safety showers: where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye-wash fountain/safety shower within the immediate work area for emergency use.

RESPIRATORY PROTECTION: Respiratory protection is not generally needed when using this product. Maintain airborne contaminant concentrations below guidelines listed in Section 2 (Composition, Information on Ingredients). If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134 or applicable State regulations. Use supplied air respiration protection if oxygen levels are below 19.5% or are unknown. Respiratory protection guidelines for Acetone and Methyl Ethyl Ketone (components of this product) are provided as follows.

NIOSH/OSHA RECOMMENDATIONS FOR ACETONE CONCENTRATIONS IN AIR:

UP TO 2500 ppm — SAR operated in a continuous-flow mode; or powered air-purifying respirator with organic vapor cartridge(s); or full-piece chemical cartridge respirator with organic vapor cartridge(s); or gas mask with organic vapor canister; or full-facepiece SCBA; or full-facepiece SAR.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS: Positive pressure, full-facepiece SCBA; or positive pressure, full-facepiece SAR with an auxiliary positive pressure SCBA.ESCAPE: Gas mask with organic vapor canister; or escape-type SCBA.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

NIOSH/OSHA RECOMMENDATIONS FOR ACETONE CONCENTRATIONS IN AIR (continued):

NOTE: The IDLH concentration for acetone is 2,500 ppm (10% of the Lower Explosive Limit). This value is based on the lower explosive limit (LEL). Respiratory protection equipment may not be adequate for fire situations.

NIOSH RECOMMENDATIONS FOR METHYL ETHYL KETONE CONCENTRATIONS IN AIR:

UP TO 3000 ppm: SAR operated in a continuous-flow mode; or powered air-purifying respirator with organic vapor cartridge(s); or full-piece chemical cartridge respirator with organic vapor cartridge(s); or gas mask with organic vapor canister; or full-facepiece SCBA; or full-facepiece SAR.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS: Positive pressure, full-facepiece SCBA; or positive pressure, full-facepiece SAR with an auxiliary positive pressure SCBA.

ESCAPE: Gas mask with organic vapor canister; or escape-type SCBA.

NOTE: The IDLH concentration for Methyl Ethyl Ketone is 3000 ppm.

EYE PROTECTION: Splash goggles or safety glasses. Face shield should be worn when working in situations in which splashes or sprays can be generated.

HAND PROTECTION: Wear gloves for routine industrial use to protect hands from contact. For long exposures, or unusual contact, such as spill cleanup, chemical resistant gloves may be required. See section 6.

BODY PROTECTION: Use body protection appropriate for task (e.g., Apron or Tyvek suit).

9. PHYSICAL and CHEMICAL PROPERTIES

RELATIVE VAPOR DENSITY (air = 1): > 1

EVAPORATION RATE (nBuAc = 1): > 1

SPECIFIC GRAVITY (water = 1): < 1.0

FREEZING/MELTING POINT: Not established.

SOLUBILITY IN WATER @ 25°C: Somewhat soluble.

BOILING POINT: Not established.

VAPOR PRESSURE, mm Hg @ 20°C: Not established.

pH: Not established.

ODOR THRESHOLD: Not established.

COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT): Not established.

ODOR THRESHOLD: Not established.

FORM: Liquid.

COLOR: Clear, purple or blue

ODOR: Ethereal.

VISCOSITY: Water-like.

FLASH POINT:

Acetone: -9°C (15°F)

Methyl Ethyl Ketone: -9°C (15°F)

HOW TO DETECT THIS SUBSTANCE (warning properties): The color and odor of the product may be distinctive properties of this product.

10. STABILITY and REACTIVITY

STABILITY: Stable. Note: Tetrahydrofuran, a component of this product, can form potentially explosive peroxide compounds when exposed to light or air. Though this product contains inhibitors to prevent peroxide formation, care should be used when storing this product, or handling old containers of this material.

DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product will not be compatible with strong oxidizers, lithium aluminum hydride, and alkaline earth hydroxides.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid exposure or contact to extreme temperatures, sources of ignition, incompatible chemicals.

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The specific toxicology data available for components greater than 1% in concentration are as follows.

ACETONE:

Eye Irritancy (human) = 500 ppm

Skin Irritancy (rabbit) = 395 mg/ open; mild

Skin Irritancy (rabbit) = 500 mg/ 24 hours; mild

Eye Irritancy (rabbit) = 3950 µg: severe

ACETONE (continued):

Eye Irritancy (rabbit) = 20 mg/ 24 hours; moderate

Cytogenetic Analysis (*Saccharomyces cerevisiae*) = 200 mmol/tube

Sex Chromosome Loss and Nondisjunction (*Saccharomyces cerevisiae*) = 47,600 ppm

11. TOXICOLOGICAL INFORMATION (Continued)

TOXICITY DATA (continued):

ACETONE (continued):
TDLo (inhalation, man) = 440 g/m^3/ 6 months
TDLo (inhalation, man) = 10 mg/m^3/ 6 hours
TCLo (inhalation, human) = 500 ppm; eye effects
TCLo (inhalation, man) = 12,000 ppm/ 4 hours; gastrointestinal tract effects
LD_{50} (intravenous, rat) = 5500 mg/kg
LD_{50} (oral, rat) = 5800 mg/kg
LC_{50} (inhalation, rat) = 50,100 mg/m^3/ 8 hours
LDLo (intraperitoneal, rat) = 500 mg/kg
LD_{50} (intravenous, rat) = 5500 mg/kg
LD_{50} (oral, mouse) = 3000 mg/kg
LCLo (inhalation, mouse) = 110 g/m^3/ 1 hour
LD_{50} (intraperitoneal, mouse) = 1297 mg/kg
LDLo (intravenous, mouse) = 4 g/kg
LDLo (oral, dog) = 8 g/kg
LD_{50} (oral, rabbit) = 5340 mg/kg
LD_{50} (skin, rabbit) = 20 g/kg
TDLo - Oral - rat: 273 gm/kg: male 13 week(s) pre-mating: Reproductive - Paternal Effects - spermatogenesis
TCLo - Inhalation: Mammal - species unspecified: 31500 ug/m3/24H: female 1-13 day(s) after conception
Sex chromosome loss and nondisjunction: Yeast - Saccharomyces cerevisiae: 47600 ppm
Cytogenetic analysis: Rodent - hamster Fibroblast: 40 gm/L

CYCLOHEXANONE:
Eye effects-Human 75 ppm
Skin-Rabbit, adult 500 mg open Mild irritation effects
Eye effects-Rabbit, adult 4740 µg Severe Irritation effects
Microsomal Mutagenicity Assay-Salmonella typhimurium 20 µL/L
Mutation in Microorganisms-Bacillus subtilis 200 µL/L
Sister Chromatid Exchange-Hamster: ovary 7500 µL/L
Oral-Mouse TDLo: 11 g/kg (female 8-12D post): Reproductive effects
Inhalation-Human TCLo: 75 ppm: NOSE, Eye effects, Pulmonary system effects

CYCLOHEXANONE (continued):
Oral-Rat LD_{50}: 1535 mg/kg
Inhalation-Rat LC_{50}: 8000 ppm/4 hours
Subcutaneous-Rat LD50: 2170 mg/kg
Oral-Mouse LD_{50}: 1400 mg/kg
Intraperitoneal-Mouse LD_{50}: 1350 mg/kg
Subcutaneous-Mouse LDLo: 1300 mg/kg
Intravenous-Dog, adult LDLo 630 mg/kg
Oral-Rabbit, adult LDLo: 1600 mg/kg
Skin-Rabbit, adult LD50: 948 mg/kg
TCLo - Inhalation - rat: 105 mg/m3/4 hours: female 1-20 day(s) after conception: Reproductive - Fertility - pre-implantation mortality
TDLo - Oral - mouse: 11 gm/kg: female 8-12 day(s) after conception: Reproductive - Effects on Newborn - growth statistics (e.g.%, reduced weight gain)
Mutation in microorganisms: Bacteria - Salmonella typhimurium: 20 uL/
Mutation in micro organisms - Bacteria - Bacillus subtilis 200 uL/L
Cytogenetic analysis: Human Leukocyte: 100 umol/L
Cytogenetic analysis: Human Lymphocyte: 5 ug/L
Sister chromatid exchange: Rodent - hamster Ovary: 7500 uL/L
Mutation in mammalian somatic: Rodent - hamster Ovary: 7500 uL/L

METHYL ETHYL KETONE:
Eye effects-Human 350 ppm
Skin-Rabbit, adult 500 mg/24 hours; Moderate irritation effects
Skin-Rabbit, adult 402 mg/24 hours; Mild irritation effects
Skin-Rabbit, adult 13,780 mg/24H open Mild irritation effects
Eye effects-Rabbit, adult 80 mg
Sex Chromosome Loss and Nondisjunction - Saccharomyces cerevisiae; 33,800 ppm
Inhalation-Rat TCLo: 1000 ppm/(6-15D preg):Teratogenic effects
Inhalation-Human TCLo: 100 ppm/ 5 minutes: Irritant effects
Oral-Rat LD_{50}: 2737 mg/kg
Inhalation-Rat LC_{50}: 23,500 mg/m3/8 hours;

METHYL ETHYL KETONE (continued):
Intraperitoneal-Rat LD50: 607 mg/kg
Oral-Mouse LD_{50}: 4050 mg/kg
Inhalation-Mouse LC_{50}: 40 g/m3/2 hours
Intraperitoneal-Mouse LD_{50}: 616 mg/kg

METHYL ETHYL KETONE (continued):
Skin-Rabbit, adult LD_{50}: 6450 mg/kg
Intraperitoneal-Guinea Pig, adult LDLo: 2 g/kg
Inhalation-Unspecified effects LC_{50}: 38 g/m3
Inhalation-Rat TCLo: 5000 ppm/6H/90 days - Intermittent
TDLo - Subcutaneous - cat: 55500 mg/kg/37 weeks - Intermittent: Reproductive - Tumorigenic effects - other reproductive system tumors
TCLo - Inhalation - rat: 3000 ppm/7 hours: female 6-15 day(s) after conception: Reproductive - Specific Developmental Abnormalities - craniofacial (including nose and tongue) , urogenital system , homeostasis
TCLo - Inhalation - rat: 1000 ppm/7 hours: female 6-15 day(s) after conception: Reproductive - Effects on Embryo or Fetus - fetotoxicity (except death, e.g., stunted fetus) Reproductive - Specific Developmental Abnormalities - musculoskeletal system
TCLo - Inhalation - mouse: 3000 ppm/7H: female 6-15 day(s) after conception: Reproductive - Effects on Embryo or Fetus - fetotoxicity

TETRAHYDROFURAN:
Mutation in Microorganisms-Escherichia coli 1 mol/L
Inhalation-Human TCLo: 25,000 ppm: Central nervous system effects
Oral-Rat LD_{50}: 1650 mg/kg.
Inhalation-Rat LC_{50}: 21,000 ppm/3H
Intraperitoneal-Rat LD_{50}: 2900 mg/kg
Inhalation-Mouse LCLo: 24,000 mg/m3/2 hours
Intraperitoneal-Mouse LD_{50}: 1900 mg/kg
Intraperitoneal-Guinea Pig, adult LDLo: 500 mg/kg
Inhalation-Rat TCLo: 5000 ppm/6 hours/91 days - Intermittent
TCLo - Inhalation - rat: 5000 ppm/6H: female 6-19 day(s) after conception: Reproductive - Effects on Embryo or Fetus - fetotoxicity
TCLo - Inhalation - mouse: 1800 ppm/6H: female 6-17 day(s) after conception: Reproductive - Fertility - post-implantation mortality
Mutation in microorganisms: Bacteria - Escherichia coli: 1 umol/L

SUSPECTED CANCER AGENT: Components of this products are listed as follows:

ACETONE:
EPA-D: Not Classifiable as to Human Carcinogenicity.

CYCLOHEXANONE:
IARC-3: Not Classifiable as a Human Carcinogen.
MAK-B: Justifiably suspected of Having Carcinogenic Potential.

METHYL ETHYL KETONE:
EPA-D: Not Classifiable as to Human Carcinogenicity.

This product's components are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, and CAL/OSHA and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: This product is expected to mildly to severely irritate the skin and eyes.

SENSITIZATION TO THE PRODUCT: No component of this product is known to be a sensitizer with prolonged or repeated use.

11. TOXICOLOGICAL INFORMATION (Continued)

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: This product is not reported to produce mutagenic effects in humans. Human mutation data are available for Cyclohexanone (a component of this product); these data were obtained on specific human tissues exposed to relatively high doses. Animal mutation data are available for Acetone, Methyl Ethyl Ketone, and Tetrahydrofuran (components of this product); these data were obtained during clinical studies on specific animal tissues or micro-organisms exposed to high doses of these compounds.

Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.

Teratogenicity: This product is not reported to cause teratogenic effects in humans. Three animal studies involving Methyl Ethyl Ketone (a component of this product) have shown fetotoxicity (skeletal anomalies) at doses which did not produce significant maternal toxicity.

Reproductive Toxicity: This product is not reported to cause reproductive effects in humans. Reproductive toxicity data are available for Acetone, Methyl Ethyl Ketone and Tetrahydrofuran (a component of this product); these data were obtained from clinical studies on test animals exposed to relatively high doses.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

ACGIH BIOLOGICAL EXPOSURE INDICES: Currently, there are ACGIH Biological Exposure Indices (BEIs) associated with components of this product, as follows:

CHEMICAL DETERMINANT	SAMPLING TIME	BEI
ACETONE • Acetone in urine	• End of shift	• 100 mg/L
METHYL ETHYL KETONE (MEK) • MEK in urine	• End of shift	• 2 mg/L
TETRAHYDROFURAN (Intended) • Tetrahydrofuran in urine	• End of shift	• 8 mg/L

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Preexisting respiratory problems, dermatitis, and other skin disorders, as well as conditions involving the "Target Organs" (see Section 3, Hazard Identification) can be aggravated by exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure. If necessary, review for brain and central nervous system effects and conduct pulmonary function test. Other tests for lung, kidney, and liver effects may also prove useful.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: The components of this product will biodegrade into other organic compounds. Environmental data are available for components of this product, as follows:

ACETONE: Log K_{ow} = -0.24. Water Solubility = Miscible. Acetone is quite readily degraded in the environment. BOD = 122%; 5 days. The potential for bioconcentration in fish is negligible. One experimental study of bioconcentration in adult haddock at 7-9°C (static test) resulted in a BCF of 0.69.

CYCLOHEXANONE: K_{oc} - 0.81. Water Solubility 23,000 mg/L. Cyclohexanone is not rapidly volatilized from water, except for fast moving streams or very shallow ponds. Significant soil leaching occurs, contributing to ground water contamination. Biodegradation and photolysis occur in water. Rapid atmospheric degradation occurs via photolysis, with a half-life of about 1 to 5 days.

METHYL ETHYL KETONE: Log Kow = 0.29. Water Solubility = 239,000 mg/L. Methyl Ethyl Ketone is rapidly volatilized from water and undergoes slow biodegradation. It undergoes moderate atmospheric photodegradation.

TETRAHYDROFURAN: Water Solubility = 30% (25°C). Tetrahydrofuran is significantly biodegraded in standard tests. This compound is not expected to bioconcentrate in fish significantly.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: This product can be harmful or fatal to contaminated plant or animal life, especially if released in large quantities into the environment. Refer to Section 11 (Toxicological Information) for information regarding the effect of this product's components on test animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE: This product can be harmful or fatal to contaminated aquatic plant or animal life, especially if released in large quantity in a body of water. The following page lists aquatic toxicity data are available for the components of this product:

12. ECOLOGICAL INFORMATION (Continued)

EFFECT OF CHEMICAL ON AQUATIC LIFE (continued):

ACETONE:

LC_{50} (Japanese quail) = 40,000 ppm, in diet, age 14 days, (no mortality to 40,000 ppm)

LC_{50} (Ring-necked pheasant) = 40,000 ppm, in diet, age 10 days, (no mortality to 40,000 ppm)

LC_{50} (*Salmo gairdeneri*, rainbow trout) = 5,540 mg/L/ 96 hours/ 12°C: (95% confidence limit 4,740-6,330 mg/L) , wt 1.0 g (static bioassay)

LC_{50}, F (fingerling trout) = 6,100 mg/L/ 24 hours

LD_{100} (*Asellus aquaticus*) = 3 mL/L/ within 3 days; (within 3 days of exposure) (conditions of bioassay not specified)

LD_{100} (*Gamarus fossarum*) = 10 mL/L/ within 48 hours; (conditions of bioassay not specified)

LC_{50} (*Pimepheleus promelas*) = 8,120 mg/L/ 96 hours, (conditions of bioassay not specified)

TLm (*Daphnia magna*) = 10 mg/L/ 24 and 48 hours, (conditions of bioassay not specified)

TLm (brine shrimp) = 2100 mg/L 24 and 48 hours, (conditions of bioassay not specified)

TLm (mosquito fish) = 13000 mg/L/ 24, 48, and 96 hours, (conditions of bioassay not specified)

LC_{50} (*Lepomis macrochirus*, bluegill sunfish) = 8300 mg/L 96 hours, (conditions of bioassay not specified)

LD_{50} (goldfish) = 5000 mg/L/ 24 hours, (conditions of bioassay not specified)

LC_{50} (*Poecilia reticulata*, guppy) = 7,032 ppm/ 14 days, (conditions of bioassay not specified)

LC_{50} (Mexican axolotl) = 20.0 mg/L/ 48 hours/ 3-4 weeks after hatching, (conditions of bioassay not specified)

LC_{50} (clawed toad) = 24.0 mg/L/ 48 hours/ 3-4 weeks after hatching, (conditions of bioassay not specified)

CYCLOHEXANONE:

LC_{50} (*Pimephales promelas* fathead minnow) 527 mg/L 96 hours

EC_0 (bacteria Pseudomonas putida) 16 hours = 180 mg/L)

EC_0 (algae *Microcystis aeruginosa*) 8 days = 52 mg/L

7

CYCLOHEXANONE (continued):

EC_0 (green algae *Scenedesmus quadricauda*) 7 days = 370 mg/L

EC_0 (protozoa *Entosiphon sulcatum*) 72 hours = 545 mg/L

EC_0 (protozoa *Uronema parduczi* Chatton-Lwoff) = 280 mg/L

EC_0 (bacteria *Pseudomonas fluorescens*) 16 hours = 180 mg/L (pH = EC_0 (Chilomonas paramecium Ehrenberg) 48 hours = 573 mg/L

EC_0 (*Daphnia magna* Straus) 24 hours = 526 mg/L

EC_{50} (*Daphnia magna* Straus) 24 hours = 820 mg/L

EC_{100} (*Daphnia magna* Straus) 24 hours = 1,240 mg/L

EC_0 (*Daphnia magna*) 24 hours = 540 mg/L

EC_{50} (*Daphnia magna*) 24 hours = 800 mg/L

EC_{100} (*Daphnia magna*) 24 hours = 1,540 mg/L

LC_{50} (fathead minnow) 96 hours = 526; 618; 630 mg/L

LC_{50} (*Leuciscus idus*) 24 hours = 538 mg/L

LC_{50} (*Leuciscus idus*) 96 hours = 536; 539; 752 mg/L

METHYL ETHYL KETONE:

EC_0 (*Scenedesmus quadricauda*, green algae) = 4300 mg/L/ 8 days

EC_0 (*Entosiphon sulcatum*, protozoa) = 190 mg/L/ 72 hours

EC_0 (*Uronema parduczi* Chatton-Lwoff, protozoa) = 2830 mg/L

EC_0 (*Pseudomonas putida*, bacteria) = 1150 mg/L/ 16 hours

LC_{50} (*Pimephales promelas*, fathead minnow) = 3200 mg/L/96 hour

LD_0 (*Pseudomonas*, bacteria) = 2,500 mg/L

LD_0 (*Scenedesmus*, algae) = 12,500 mg/L

LD_0 (*Colpoda*, protozoa) = 5,000 mg/L

LC_{50} (mosquito fish) = 5,600 mg/L/ 24□96 hours

LC_{50} (bluegill) = 5,640□1,690 mg/L/ 24□96 hours

LC_{50} (goldfish) = 5,000 mg/L/ 24 hours

TETRAHYDROFURAN:

Growth Inhibition (*Microcystis*, blue algea) = 225 mg/L

Toxicity Threshold (Cell Multiplication Inhibit System test):

(*Uronema parduczi* Chatton-Lwoff, protozoa) = 858 mg/L

(*Pseudomonas putida*, bacteria) = 580 mg/L

(*Microcytis aeruginosa*, algea) = 225 mg/L

LC_{50} (silver/golden orfe) = 2820–2930 mg/L

LC_{50} (fathead minnow) = 2160 mg/L/ 96 hours

LC_{50} (carp) = 4400 mg/L/ 48 hours

LC_{50} (goldfish) = 2400 mg/L/ 48 hours

VOC INFORMATION: This product emits VOC's (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.

VOC Level for E-Z Weld 912 and 911: 550 g/l per SCAQMD Test Method 316A.
VOC Level for E-Z Weld 914: 10 g/l per SCAQMD Test Method 316A.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada and its Provinces, as well as those applicable to the EC Member States. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

U.S. EPA WASTE NUMBER: D001 (Characteristic/Ignitability)

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME:	Flammable Liquid, nos. (acetone, tetrahydrofuran, methyl ethyl ketone, cyclohexanone)
HAZARD CLASS NUMBER and DESCRIPTION:	3 (Flammable Liquid)
UN IDENTIFICATION NUMBER:	NA 1993
PACKING GROUP:	II
DOT LABEL(S) REQUIRED:	Flammable Liquid

NOTE: Shipments of containers holding 1-liter or less in volume qualify for a "Limited Quantity" exception. Refer to 49 CFR 173.150 for additional information.

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER, 1996: 127

MARINE POLLUTANT: No component of this product is designated as a Marine Pollutant by the DOT (per 49 CFR 172.101, Appendix B).

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS. Use the above information for the preparation of Canadian Shipments.

14. TRANSPORTATION INFORMATION (Continued)

IMO DESIGNATION: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS BY THE INTERNATIONAL MARITIME ORGANIZATION

PROPER SHIPPING NAME:	Flammable liquid, n.o.s. (Acetone, Methyl Ethyl Ketone)
HAZARD CLASS NUMBER and DESCRIPTION:	3.1 (Flammable Liquid; Low Flash Point)
UN IDENTIFICATION NUMBER:	UN 1993
PACKING GROUP:	II
LABEL(S) REQUIRED:	Flammable Liquid
IMDG CODE:	3126

MARINE POLLUTANT: This product is not designated by the IMO to be a Marine Pollutant.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This material is considered by the United Nations Economic Commission for Europe to be dangerous goods. Additional information is as follows:

Substance Identification No.:	1993
Name of Substance:	Flammable liquid, n.o.s.
Hazard Identification No. (Description):	33
Label:	Flammable Liquid
Class and Item Number:	3,1° (a), 2° (a), (b), 3° (b), 5° (c)

15. REGULATORY INFORMATION

ADDITIONAL UNITED STATES REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, and are listed as follows:

CHEMICAL NAME	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Acetone	No	Yes	No
Cyclohexanone	No	Yes	Yes
Methyl Ethyl Ketone	No	Yes	Yes
Tetrahydrofuran	No	Yes	No

U.S. SARA THRESHOLD PLANNING QUANTITY: Not applicable.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Acetone = 500 lb.; Cyclohexanone = 5000 lb. Methyl Ethyl Ketone: 5000 lb.; Tetrahydrofuran = 1000 lb.

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

U.S. STATE REGULATORY INFORMATION: Components of this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: Acetone, Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.
California - Permissible Exposure Limits for Chemical Contaminants: Acetone,

Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Florida - Substance List: Acetone, Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Illinois - Toxic Substance List: Acetone, Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Kansas - Section 302/313 List: Acetone, Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Massachusetts - Substance List: Acetone, Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Michigan - Critical Materials Register: No.

Minnesota - List of Hazardous Substances: Acetone, Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Missouri - Employer Information/Toxic Substance List: Acetone, Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

New Jersey - Right to Know Hazardous Substance List: Acetone, Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

North Dakota - List of Hazardous Chemicals, Reportable Quantities: Acetone, Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Pennsylvania - Hazardous Substance List: Acetone, Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Rhode Island - Hazardous Substance List: Acetone, Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Texas - Hazardous Substance List: Acetone, Methyl Ethyl Ketone, Cyclohexanone, Tetrahydrofuran.

West Virginia - Hazardous Substance List: Acetone, Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

Wisconsin - Toxic and Hazardous Substances: Acetone, Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran.

15. REGULATORY INFORMATION (Continued)

CALIFORNIA, SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): This product may contain trace constituents, such as vinyl chloride, present in one of the product's components. Under common usage, exposures to these trace constituents at levels exceeding the "no significant risk level" (NSRL) would not occur. Users are expected to follow normal PPE and ventilation guidelines such as those in section 8 and other portions of this MSDS.

VOC Information: This product emits volatile organic compounds (VOC's) during use and cure. Users should determine if local regulations regarding use of VOC containing products exist in their area and if this product complies. 912/911 Primer emits less than 650g/l according to SCAQMD 316A.

ANSI STANDARD LABELING (Z129.1): **DANGER!** EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. MAY BE HARMFUL IF INHALED. MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS. MAY CAUSE SKIN AND EYE IRRITATION. ASPIRATION HAZARD - CAN CAUSE LIFE-THREATENING LUNG DAMAGE IF SWALLOWED. MAY CAUSE REPRODUCTIVE EFFECTS, BASED ON ANIMAL TESTS. Keep away from heat, sparks, and flame. Avoid breathing vapor or mists. Avoid contact with skin or clothing. Use only with adequate ventilation. Keep container closed. Wash thoroughly after handling. Recommended maximum shelf-life for unopened containers is 2 years. **FIRST AID:** *In case of contact, immediately flush skin or eyes for at least 15 minutes. If inhaled, move to fresh air. If not* breathing, give artificial respiration. If breathing is difficult, give oxygen. **IN CASE OF FIRE:** Use fog, foam, dry chemical or CO_2. Liquid will float and may re-ignite on the surface of water. **IN CASE OF SPILL**: Absorb spill with inert material (e.g. activated carbon) then place in suitable container. Refer to Material Safety Data Sheet for additional information on this product.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: The components of this product are on the DSL Inventory.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LIST: The components of this product are not on the CEPA Priorities Substances List.

CANADIAN WHMIS SYMBOLS: **Class B2**: Flammable Liquid
Class D2A/B: Materials Causing Other Toxic Effects





EUROPEAN COMMUNITY INFORMATION:

EUROPEAN COMMUNITY INFORMATION FOR PRODUCT:

EC LABELING AND CLASSIFICATION: Based on the information on the product's components and an assessment of the physical and health hazards associated with the material, the following assignments have been made (per council directive 67/548/EEC)

EC CLASSIFICATION: Highly flammable. Irritant. [F;Xi]

EC RISK PHRASES: Highly flammable. May form explosive peroxides. Irritating to eyes and respiratory system. [R:11-19-36/37]

EC SAFETY PHRASES: Keep out of reach of children.* Keep away from sources of ignition - No smoking. Do not empty into drains. Do not breathe vapors. Avoid contact with the eyes. Take precautionary measures against static discharges. [S:(2-)*16-23-25-29-33] *This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.

EUROPEAN COMMUNITY ANNEX II HAZARD SYMBOLS:





EUROPEAN COMMUNITY INFORMATION FOR CONSTITUENTS: The following information is available for primary constituents in the components of this product.

ACETONE:
EC CLASSIFICATION: Highly flammable. [F]
EC RISK PHRASES: Highly flammable. [R: 11].
EC SAFETY PHRASES: Keep out of reach of children.* Keep container in a well-ventilated place. Keep away from sources of ignition. No smoking. Do not breathe vapors. [S: (2-)*9-16-23-33].
EC COMMENTS: **This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.*

EUROPEAN COMMUNITY INFORMATION FOR CONSTITUENTS (continued):

CYCLOHEXANONE:
EC CLASSIFICATION: Flammable. Harmful. [F; Xn]
EC RISK PHRASES: Flammable. Harmful by inhalation. [R;10-20].
EC SAFETY PHRASES: Keep out of reach of children.* Avoid contact with the eyes. [S:(2-)* 25]. **This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.*
EC COMMENTS: CONCENTRATION GREATER THAN OR EQUAL TO 25%: Harmful. Harmful by inhalation. [Xn; R20]. This product contains less than this concentration; therefore, this risk has been omitted.

METHYL ETHYL KETONE:
EC CLASSIFICATION: Highly flammable. Irritant. [F; Xi] (
EC RISK PHRASES: Highly flammable. Irritating to the eyes and respiratory system. [R: 11-36/37].
EC SAFETY PHRASES: Keep out of reach of children.* Keep container in a well-ventilated place. Keep away from sources of ignition. No smoking. Avoid contact with the eyes. Take precautionary measures against static discharges. [S: (2-)*9-16-25-33].
EC COMMENTS: **This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.*

TETRAHYDROFURAN:
EC CLASSIFICATION: Highly flammable. Irritant. [F;Xi]
EC RISK PHRASES: Highly flammable. May form explosive peroxides. Irritating to eyes and respiratory system. [R:11-19-36/37]
EC SAFETY PHRASES: Keep out of reach of children.* Keep away from sources of ignition - No smoking. Do not empty into drains. Take precautionary measures against static discharges. [S:(2-)*16-29-33] *This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.
EC COMMENTS :
CONCENTRATIONS GREATER THAN OR EQUAL TO 25 PERCENT: Irritant. Irritating to eyes and respiratory system. [Xi; R36/37]

16. OTHER INFORMATION

PREPARED BY: CHEMICAL SAFETY ASSOCIATES, Inc.
9163 Chesapeake Drive, San Diego, CA 92123-1002
619/565-0302

EDITED/UPDATED BY: John Brown, E-Z Weld, Inc

DATE OF PRINTING: November 12, 2008

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Cookson assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Cookson assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching.

EXPOSURE LIMITS IN AIR:
ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits.
TLV - Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average (**TWA**), the 15-minute Short Term Exposure Limit, and the instantaneous Ceiling Level (**C**). Skin absorption effects must also be considered.
OSHA - U.S. Occupational Safety and Health Administration.
PEL - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order.
IDLH - Immediately Dangerous to Life and Health - This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. The **DFG - MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (**OSHA**). NIOSH issues exposure guidelines called Recommended Exposure Levels (RELs). When no exposure guidelines are established, an entry of **NE** is made for reference.

HAZARD RATINGS:
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: Health Hazard: 0 (minimal acute or chronic exposure hazard); 1 (slight acute or chronic exposure hazard); 2 (moderate acute or significant chronic exposure hazard); 3 (severe acute exposure hazard; onetime overexposure can result in permanent injury and may be fatal); 4 (extreme acute exposure hazard; onetime overexposure can be fatal). Flammability Hazard: 0 (minimal hazard); 1 (materials that require substantial pre-heating before burning); 2 (combustible liquid or solids; liquids with a flash point of 38-93°C [100-200°F]); 3 (Class IB and IC flammable liquids with flash points below 38°C [100°F]); 4 (Class IA flammable liquids with flash points below 23°C [73°F] and boiling points below 38°C [100°F]. Reactivity Hazard: 0 (normally stable); 1 (material that can become unstable at elevated temperatures or which can react slightly with water); 2 (materials that are unstable but do not detonate or which can react violently with water); 3 (materials that can detonate when initiated or which can react explosively with water); 4 (materials that can detonate at normal temperatures or pressures).
NATIONAL FIRE PROTECTION ASSOCIATION: Health Hazard: 0 (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); 1 (materials that on exposure under fire conditions could cause irritation or minor residual injury); 2 (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); 3 (materials that can on short exposure could cause serious temporary or residual injury); 4 (materials that under very short exposure could cause death or major residual injury). Flammability Hazard and Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System".

FLAMMABILITY LIMITS IN AIR:
Much of the information related to fire and explosion is derived from the National Fire Protection Association (**NFPA**). Flash Point - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:
Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: LD_{50} - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; LC_{50} - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m^3** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information:** **BEI** - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV. **Ecological Information:** EC is the effect concentration in water. **BCF** = Bioconcentration Factor, which is used to determine if a substance will concentrate in lifeforms which consume contaminated plant or animal matter. Coefficient of Oil/Water Distribution is represented by log K_{ow} or log K_{oc} and is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:
U.S. AND CANADA: This section explains the impact of various laws and regulations on the material. **U.S.: EPA** is the U.S. Environmental Protection Agency. **DOT** is the U.S. Department of Transportation. **SARA** is the Superfund Amendments and Reauthorization Act. **TSCA** is the U.S. Toxic Substance Control Act. **CERCLA (or Superfund)** refers to the Comprehensive Environmental Response, Compensation, and Liability Act). Labeling is per the American National Standards Institute (**ANSI Z129.1**). **CANADA: CEPA** is the Canadian Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **TC** is Transport Canada. **DSL/NDSL** are the Canadian Domestic/Non-Domestic Substances Lists.
EUROPEAN and INTERNATIONAL: EC is the European Community (formerly known as the EEC, European Economic Community). **EINECS:** This the European Inventory of Now-Existing Chemical Substances. **IMO** is the International Maritime Organization. The **ARD** is the European Agreement Concerning the International Carriage of Dangerous Goods by Road and the **RID** are the International Regulations Concerning the Carriage of Dangerous Goods by Rail.

MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS, And European Community Standards

PART I *What is the material and what do I need to know in an emergency?*

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): **LOW VOC PVC SOLVENT CEMENTS:**

902 EZ-1 **903 POOL PRO** **920 TRANSITION** **905 PVC CLEAR**

904 HD Clear **906 HD GRAY** **922 WET WELD**

CHEMICAL NAME/CLASS: Polyvinyl Chloride / Solvent Mixture

PRODUCT USE: Solvent Cement for PVC-Based Material

SUPPLIER/MANUFACTURER'S NAME: E-Z Weld, Inc

U.S. BUSINESS PHONE: 1-800-327-8460; 1-561-844-0241

U.S. ADDRESS: 1661 Old Dixie Highway
Riviera Beach, FL 33404

U.S. EMERGENCY PHONE: CHEMTREC:
1-800-424-9300 (U.S. and Canada)
1-703-527-3887 (International)

DATE OF PREPARATION: November 12 2008

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	EINECS #	% w/w	EXPOSURE LIMITS IN AIR					
				ACGIH		OSHA		IDLH	OTHER
				TLV ppm	STEL ppm	PEL ppm	STEL ppm	ppm	
Tetrahydrofuran	109-99-9	203-726-8	40-60	50 A3 (confirmed Animal Carcinogen with Unknown Relevance to Humans)	100	200	250 (vacated 1989 PEL)	2000 (based on LEL)	NIOSH REL: TWA = 200 STEL = 250 DFG MAK: 50
Methyl Ethyl Ketone	78-93-3	201-159-0	1-12	200	300	200	300 (vacated 1989 PEL)	3000	NIOSH REL: TWA = 200 STEL = 300 DFG MAK: 200 Carcinogen: EPA-D
Polyvinyl Chloride Resin	9002-86-2	206-625-7	< 25	NE	NE	NE	NE	NE	Carcinogen: IARC-3;
Cyclohexanone	108-94-1	203-631-1	8-18	25, skin, A3 (confirmed Animal Carcinogen with Unknown Relevance to Humans)	NE	50 25 (vacated 1989 PEL)	NE	700	NIOSH REL: TWA = 25, Skin DFG MAK: Danger of Cutaneous Absorption Carcinogen: IARC-3; MAK-B

NE = Not Established. C = Ceiling Limit. See Section 16 for Definitions of Terms Used.

2. COMPOSITION and INFORMATION ON INGREDIENTS (Continued)

CHEMICAL NAME	CAS #	EINECS #	% w/w	EXPOSURE LIMITS IN AIR					
				ACGIH		OSHA			
				TLV ppm	STEL ppm	PEL ppm	STEL ppm	IDLH ppm	OTHER
Acetone	67-64-1	200-662-2	5-20	500 A4 (Not Classifiable as a Human Carcinogen)	750	1000 750	NE 1000	2500	NIOSH REL: TWA = 250DFG MAK: 500 Carcinogen: EPA-D
Silicon Dioxide (exposure limits are for silica-amorphous diatomaceous earth)	112945-52-5	Unlisted	Balance	For CAS # 61790-53-2 (uncalcined) 10 mg/m^3(Inhalable particulate) 3 mg/m^3 (Respirable particulate)	NE	20 mppcf or 80 mg/m^3 / % SiO_2 6 mg/m^3 (vacated 1989 PEL)		3000 mg/m^3	NIOSH REL: 6 mg/m^3 DFG MAK: 4 mg/m^3 (CAS # 61790-53-2) Carcinogen: IARC-3 (CAS # 61790-53-2)

NE = Not Established. C = Ceiling Limit. See Section 16 for Definitions of Terms Used.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This is an extremely flammable liquid with an ether-like odor. This product comes in a variety of colors. Inhalation overexposures to the vapors of this product can cause central-nervous system effects (e.g., dizziness, drowsiness, nausea, and headaches). This product can be mildly to severely irritating to the eyes, skin, and other contaminated tissue. Vapors of this product are heavier than air and may travel to a source of ignition and flashback to a leak or open container. Tetrahydrofuran, a component of this product, is known to form explosive peroxides under certain circumstances. Emergency responders must wear the proper personal protective equipment (and have appropriate fire protection) suitable for the situation to which they are responding.

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of occupational overexposure are inhalation and contact with skin and eyes. The symptoms of overexposure to this product, via route of exposure, are as follows:

INHALATION: Inhalation of vapors, mists, or sprays of this product can be irritating to the nose, throat, mucous membranes, and other tissues of the respiratory system. Symptoms of overexposure can include coughing, sneezing, and shortness of breath. Additionally, the components of this product are central nervous system depressants. Symptoms of over-exposure can include drowsiness, dizziness, fatigue, headache, nausea, and general anesthetic effects. Inhalation of high concentrations of this product (as may occur in a poorly-ventilated area) may be fatal. Based on clinical studies involving test animals, Cyclohexanone and Tetrahydrofuran, components of this product, may cause liver and kidney damage after long-term inhalation overexposures.

This product must be used with adequate ventilation. Mechanical exhaust may be needed. Ensure exposure to vapors is minimized by use of appropriate engineering controls, work practices, and personal protective equipment, as described in the remainder of this document.

CONTACT WITH SKIN or EYES: Contact with this product can be irritating to contaminated skin and eyes. Vapors of this product can redden and irritate the eyes. If the eyes are contaminated with splashes, sprays or mists of this product, reddening, tearing, and corneal opacity can occur. The liquid can be mildly to severely irritating to contaminated skin (depending on duration of exposure). Prolonged or repeated skin over-exposures can lead to dermatitis.

SKIN ABSORPTION: Skin absorption is a potential route of overexposure for Cyclohexanone (a component of this product). Symptoms of such exposure can include those described under “Inhalation” and “Contact With Skin and Eyes”.

HAZARDOUS MATERIAL INFORMATION SYSTEM

HEALTH	(BLUE)	2
FLAMMABILITY	(RED)	3
REACTIVITY	(YELLOW)	1
PROTECTIVE EQUIPMENT		C/D

EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		

For routine applications.

See Section 16 for Definition of Ratings

3. HAZARD IDENTIFICATION (Continued)

INGESTION: Ingestion is not anticipated to be a significant route of occupational overexposure for this product. If ingestion occurs, refer to Section 4 (First-Aid Measures) and get medical help immediately. If ingestion of this product does occur, symptoms of such over-exposure can include nausea, vomiting, and other symptoms described for "Inhalation". Ingestion can also lead to liver and kidney damage. Ingestion of this product may be fatal.

INJECTION: Injection is not anticipated to be a significant route of over-exposure for this product. If injection does occur (i.e. through a puncture by an object contaminated with the product), local irritation and swelling can occur. Additional symptoms may include those described for "Inhalation".

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in **Lay Terms**.

ACUTE: Over-exposures to this product can be irritating to the eyes, skin, and mucous membranes, and can also cause central-nervous system effects (dizziness, drowsiness, nausea and headaches). Ingestion of this product, or inhalation of high concentrations of this product's vapors, may be fatal.

CHRONIC: Prolonged or repeated skin exposures can lead to dermatitis (dryness, reddening and irritation of the skin). Tetrahydrofuran, a component of this product, may cause liver and kidney damage after long-term inhalation overexposures. There is limited evidence from animal studies that Methyl Ethyl Ketone, a component of this product, is a reproductive toxin. Refer to Section 11 (Toxicological Information) for additional information. A report from the National Toxicology Program (NTP) has suggested that exposure of mice and rats to Tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetimes caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. No evidence of tumors was seen in female rats or male mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. The NTP, IARC, or OSHA does not list THF as a carcinogen. One THF vendor (DuPont) has recommended a reduction in the "acceptable exposure limit" from 200 ppm to 25 ppm, 8 and 12 hour time weighted average and a STEL of 75 ppm.

TARGET ORGANS: Acute: Skin, eyes, respiratory system, central nervous system. **Chronic:** Liver, kidneys.

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

SKIN EXPOSURE: If this product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual must seek medical attention if any adverse effect occurs.

EYE EXPOSURE: If this product's liquid or vapors enter the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. The contaminated individual must seek immediate medical attention.

INHALATION: If vapors, mists, or sprays of this product are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.

INGESTION: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. The contaminated individual should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

The contaminated individual must be taken for medical attention, especially if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take a copy of label and MSDS to health professional with victim.

5. FIRE-FIGHTING MEASURES

The following information is variable, depending on the blend. The following information is for Tetrahydrofuran, the main solvent component of this product.

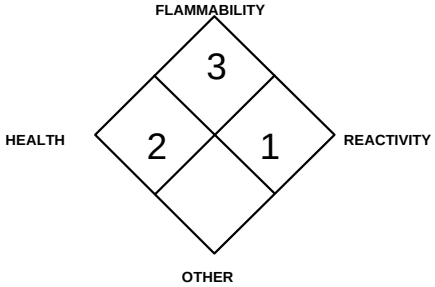
FLASH POINT: -17°C (4.1°F)
AUTOIGNITION TEMPERATURE: 321°C (610°F)
FLAMMABLE LIMITS (in air by volume): Lower (LEL): 1.8%
Upper (UEL): 11.8%

The following information is for the product.

FIRE EXTINGUISHING MATERIALS:

Water Spray: YES (for cooling only)
Foam: YES
Halon: YES
Carbon Dioxide: YES
Dry Chemical: YES
Other: Any "B"

NFPA RATING



See Section 16 for Definition of Ratings

Class.

5. FIRE-FIGHTING MEASURES (Continued)

UNUSUAL FIRE AND EXPLOSION HAZARDS: This is a Class I-B Flammable Liquid. When involved in a fire, this material may ignite and produce irritating vapors and toxic gases (e.g., carbon monoxide, carbon dioxide). This material will readily ignite at room temperature. The vapors are heavier than air and may travel to a source of ignition, and flash back to a leak or open container. Tetrahydrofuran can form potentially explosive peroxides; closed containers contaminated with peroxides can rupture violently in the heat of a fire.

Explosion Sensitivity to Mechanical Impact: Not sensitive.
Explosion Sensitivity to Static Discharge: The vapors of this product can be ignited by static electrical energy.

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. If it is safe to do so, allow small fires involving this product to burn-out, while protecting exposures. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. If necessary, rinse contaminated equipment thoroughly before returning such equipment to service.

6. ACCIDENTAL RELEASE MEASURES

RELEASE RESPONSE: In case of a spill, clear the affected area and protect people. Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used.

Small releases (e.g., 1-pint) must be cleaned-up by personnel wearing gloves, goggles, and appropriate eye protection. Face shields must be worn if splashes or sprays of this product may be generated. In the event of a non-incidental release (e.g., five, 1-gallon containers leaking simultaneously in a poorly-ventilated area), the minimum Personal Protective Equipment should be **Level B: triple-gloves (rubber gloves and nitrile gloves, over latex gloves), chemically resistant suit and boots, hard-hat, and Self-Contained Breathing Apparatus.** Level B should always be used during responses in which the oxygen level is below 19.5% or unknown.

Eliminate all sources of ignition before spill clean-up begins. Use non-sparking tools. Absorb spilled liquid with activated carbon, polypads or other suitable absorbent materials. Monitor the area for combustible vapors and the level of oxygen. Monitoring must indicate less than 10 % of the LEL (see Section 5, Fire-Fighting Measures) and greater than 19.5% Oxygen is in the atmosphere before personnel are permitted in the area without Level B Protection. Place all spill residue in an appropriate container and seal. Dispose of in accordance with U.S. Federal, State, or local procedures, the applicable standards of Canada and its Provinces, or the appropriate requirements of European Community member States (see Section 13, Disposal Considerations).

PART III *How can I prevent hazardous situations from occurring?*

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors or mists generated by this product. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Containers of this product must be properly labeled. If this mixture is used in other types of containers, only use portable containers approved for flammable liquids. Post “NO SMOKING” signs, where appropriate in storage and use areas. Use non-sparking tools. Bond and ground during transfer of material. Store containers of the product in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers, or in a diked area, as appropriate. Store containers away from incompatible chemicals. Keep container tightly closed when not in use. Storage areas should be made of fire-resistant materials. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Refer to NFPA 30, Flammable and Combustible Liquids Code for additional information on storage. Empty containers may contain residual flammable liquid or vapors. Therefore, empty containers should be handled with care. Do not expose ”empty” containers to welding touches, or any other source of ignition.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation. Mechanical exhaust may be needed. Emergency eye-wash/safety showers: where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye-wash fountain/safety shower within the work area for emergency use.

RESPIRATORY PROTECTION: Respiratory protection is not generally needed when using this product. Maintain airborne contaminant concentrations below guidelines listed in Section 2 (Composition, Information on Ingredients). If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134 or applicable State regulations. Use

8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

supplied air respiration protection if oxygen levels are below 19.5% or are unknown. Respiratory protection guidelines for Tetrahydrofuran (a component of this product) are provided on the following page.

NIOSH/OSHA RECOMMENDATIONS FOR TETRAHYDROFURAN CONCENTRATIONS IN AIR:

UP TO 2000 ppm: Supplied Air Respirator (SAR) operated in a continuous-flow mode, full-facepiece chemical cartridge respirator with organic vapor cartridge(s), gas mask with organic vapor canister, powered air-purifying respirator with organic vapor cartridge(s), full-facepiece Self-Contained Breathing Apparatus (SCBA), or full-facepiece SAR.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS: Positive pressure, full-facepiece SCBA or positive pressure, full-facepiece SAR with an auxiliary positive pressure SCBA.

ESCAPE: Gas mask with organic vapor canister or escape-type SCBA.

NOTE: The IDLH concentration for Tetrahydrofuran is 2000 ppm. This value is based on the lower explosive limit (LEL). Respiratory protection equipment may not be adequate for fire situations.

EYE PROTECTION: Splash goggles or safety glasses. Face shield should be worn when working in situations in which splashes or sprays can be generated.

HAND PROTECTION: Wear gloves for routine industrial use to protect hands from contact. For long exposures, or unusual contact, such as spill cleanup, chemical resistant gloves may be required. See section 6.

BODY PROTECTION: Use body protection appropriate for task (e.g., Apron or Tyvek suit).

9. PHYSICAL and CHEMICAL PROPERTIES

For Tetrahydrofuran (the main solvent component of this product):

RELATIVE VAPOR DENSITY (air = 1): 2.5

EVAPORATION RATE (nBuAc = 1): 8-14.5

SPECIFIC GRAVITY (water = 1): Approximately 0.91

FREEZING/MELTING POINT: -1.8.5°C (-16°F)

SOLUBILITY IN WATER @ 25°C: 30%

BOILING POINT: 66°C (151°F)

VAPOR PRESSURE, mm Hg @ 20°C: 129

pH: Not established.

ODOR THRESHOLD: 2.48–3.47 ppm

COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT): 0.46

For this product:

ODOR THRESHOLD: Not applicable.

FORM: Liquid.

COLOR: Variable color.

ODOR: Ethereal.

VISCOSITY: Not available.

FLASH POINT: -17°C (4.1°F) (Tetrahydrofuran)

HOW TO DETECT THIS SUBSTANCE (warning properties): The color and odor of the product may be distinctive properties of this product.

10. STABILITY and REACTIVITY

STABILITY: Stable.

Note: Tetrahydrofuran, a component of this product, can form potentially explosive peroxide compounds when exposed to light or air. Though this product contains inhibitors to prevent peroxide formation, care should be used when storing this product, or handling old containers of this material.

DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, silicon and chloride compounds.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product will not be compatible with strong oxidizers, lithium aluminum hydride, and alkaline earth hydroxides.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid exposure or contact to extreme temperatures, sources of ignition, incompatible chemicals.

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The specific toxicology data available for components greater than 1% in concentration are as follows.

CYCLOHEXANONE:
Eye effects-Human 75 ppm
Skin-Rabbit, adult 500 mg open Mild irritation effects

11. TOXICOLOGICAL INFORMATION (Continued)

TOXICITY DATA (continued):

CYCLOHEXANONE (continued):
Oral-Rat LD_{50}: 1535 mg/kg
Oral-Mouse LD_{50}: 1400 mg/kg
Subcutaneous-Rat LD50: 2170 mg/kg
Intraperitoneal-Mouse LD_{50}: 1350 mg/kg
Subcutaneous-Mouse LDLo: 1300 mg/kg
Intravenous-Dog, adult LDLo 630 mg/kg Oral-Rabbit, adult LDLo: 1600 mg/kg
Skin-Rabbit, adult LD50: 948 mg/kg
TCLo - Inhalation - rat: 105 mg/m3/4 hours: female 1-20 day(s) after conception: Reproductive - Fertility - pre-implantation mortality
TDLo - Oral - mouse: 11 gm/kg: female 8-12 day(s) after conception: Reproductive - Effects on Newborn - growth statistics (e.g.%, reduced weight gain)
Mutation in microorganisms: Bacteria - Salmonella typhimurium: 20 uL/
Mutation in microorganisms - Bacteria - Bacillus subtilis 200 uL/L
Cytogenetic analysis: Human Leukocyte: 100 umol/L
Cytogenetic analysis: Human Lymphocyte: 5 ug/L
Sister chromatid exchange: Rodent - hamster Ovary: 7500 uL/L
Mutation in mammalian somatic: Rodent - hamster Ovary: 7500 uL/L

METHYL ETHYL KETONE:
Eye effects-Human 350 ppm
Skin-Rabbit, adult 500 mg/24 hours; Moderate irritation effects
Skin-Rabbit, adult 402 mg/24 hours; Mild irritation effects
Skin-Rabbit, adult 13,780 mg/24H open Mild irritation effects
Eye effects-Rabbit, adult 80 mg
Intraperitoneal-Mouse LD_{50}: 616 mg/kg
Skin-Rabbit, adult LD_{50}: 6450 mg/kg

METHYL ETHYL KETONE (continued):
Sex Chromosome Loss and Nondisjunction - Saccharomyces cerevisiae; 33,800 ppm
Inhalation-Rat TCLo: 1000 ppm/(6-15D preg):Teratogenic effects
Inhalation-Human TCLo: 100 ppm/ 5 minutes: Irritant effects
Oral-Rat LD_{50}: 2737 mg/kg
Inhalation-Rat LC_{50}: 23,500 mg/m3/8 hours;
Intraperitoneal-Rat LD50: 607 mg/kg
Oral-Mouse LD_{50}: 4050 mg/kg
Inhalation-Mouse LC_{50}: 40 g/m3/2 hours
Intraperitoneal-Guinea Pig, adult LDLo: 2 g/kg
Inhalation-Unspecified effects LC_{50}: 38 g/m3
Inhalation-Rat TCLo: 5000 ppm/6H/90 days - Intermittent
TDLo - Subcutaneous - cat: 55500 mg/kg/37 weeks - Intermittent: Reproductive - Tumorigenic effects - other reproductive system tumors
TCLo - Inhalation - rat: 3000 ppm/7 hours: female 6-15 day(s) after conception: Reproductive - Specific Developmental Abnormalities - craniofacial (including nose and tongue) , urogenital system , homeostasis
TCLo - Inhalation - rat: 1000 ppm/7 hours: female 6-15 day(s) after conception: Reproductive - Effects on Embryo or Fetus - fetotoxicity (except death, e.g., stunted fetus) Reproductive - Specific Developmental Abnormalities - musculoskeletal system
TCLo - Inhalation - mouse: 3000 ppm/7H: female 6-15 day(s) after conception: Reproductive - Effects on Embryo or Fetus - fetotoxicity

POLYVINYL CHLORIDE RESIN:
Oral-Rat TDLo: 210 g/kg/30 weeks - Continuous: Equivocal tumorigenic agent
Implant-Rat TDLo: 7 5 mg/kg: Equivocal tumorigenic agent

SILICON DIOXIDE:
Unscheduled DNA Synthesis-Rat-Intratracheal 120 mg/kg
Body Fluid Assay-Rat: lung 120 mg/kg
Inhalation-Rat TCLo: 50 mg/m3/6 hours/2 years - Intermittent:
Oral-Rat LD_{50}: 3160 mg/kg
Intraperitoneal-Rat LDLo: 50 mg/kg
Intravenous-Rat LD_{50} :15 mg/kg
Intratracheal-Rat LDLo: 10 mg/kg
Intraperitoneal-Guinea Pig, adult LDLo: 120 mg/kg

TETRAHYDROFURAN:
Mutation in Microorganisms-Escherichia coli 1 □mol/L
Inhalation-Human TCLo: 25,000 ppm: Central nervous system effects
Oral-Rat LD_{50}: 1650 mg/kg.
Inhalation-Rat LC_{50}: 21,000 ppm/3H
Intraperitoneal-Rat LD_{50}: 2900 mg/kg
Inhalation-Mouse LCLo: 24,000 mg/m3/2 hours
Intraperitoneal-Mouse LD_{50}: 1900 mg/kg
Intraperitoneal-Guinea Pig, adult LDLo: 500 mg/kg
Inhalation-Rat TCLo: 5000 ppm/6 hours/91 days - Intermittent
TCLo - Inhalation - rat: 5000 ppm/6H: female 6-19 day(s) after conception: Reproductive - Effects on Embryo or Fetus - fetotoxicity
TCLo - Inhalation - mouse: 1800 ppm/6H: female 6-17 day(s) after conception: Reproductive - Fertility - post-implantation mortality
Mutation in microorganisms: Bacteria - Escherichia coli: 1 umol/L

SUSPECTED CANCER AGENT: Components of this products are listed as follows:

CYCLOHEXANONE:
IARC-3: Not Classifiable as a Human Carcinogen.
MAK-B: Justifiably suspected of Having Carcinogenic Potential.

METHYL ETHYL KETONE:
EPA-D: Not Classifiable as to Human Carcinogenicity.

POLYVINYL CHLORIDE RESIN:
IARC-3: Not Classifiable as a Human Carcinogen.

SILICON DIOXIDE:
IARC-3: Not Classifiable as a Human Carcinogen.

This product's components are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, and CAL/OSHA and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: This product is expected to mildly to severely irritate the skin and eyes.

SENSITIZATION TO THE PRODUCT: No component of this product is known to be a sensitizer with prolonged or repeated use.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: This product is not reported to produce mutagenic effects in humans. Human mutation data are available for Cyclohexanone (a component of this product); these data were obtained on specific human tissues exposed to relatively high doses. Animal mutation data are available for Methyl Ethyl Ketone, Silicon Dioxide, and Tetrahydrofuran (components of this product); these data were obtained during clinical studies on specific animal tissues or micro-organisms exposed to high doses of these compounds.

Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.

Teratogenicity: This product is not reported to cause teratogenic effects in humans. Three animal studies involving Methyl Ethyl Ketone (a component of this product) have shown fetotoxicity (skeletal anomalies) at doses which did not produce significant maternal toxicity.

11. TOXICOLOGICAL INFORMATION (Continued)

Reproductive Toxicity: This product is not reported to cause reproductive effects in humans. Reproductive toxicity data are available for Methyl Ethyl Ketone and Tetrahydrofuran (a component of this product); these data were obtained from clinical studies on test animals exposed to relatively high doses.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

ACGIH BIOLOGICAL EXPOSURE INDICES: Currently, there are ACGIH Biological Exposure Indices (BEIs) associated with components of this product, as follows:

CHEMICAL DETERMINANT	SAMPLING TIME	BEI
ACETONE • Acetone in urine	• End of shift	• 100 mg/L
METHYL ETHYL KETONE (MEK) • MEK in urine	• End of shift	• 2 mg/L
TETRAHYDROFURAN (Intended) • Tetrahydrofuran in urine	• End of shift	• 8 mg/L

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Preexisting respiratory problems, dermatitis, and other skin disorders, as well as conditions involving the "Target Organs" (see Section 3, Hazard Identification) can be aggravated by exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure. If necessary, review for brain and central nervous system effects and conduct pulmonary function test. Other tests for lung, kidney, and liver effects may also prove useful.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: The components of this product will biodegrade into other organic compounds. Environmental data are available for components of this product, as follows:

CYCLOHEXANONE: K_{OC} - 0.81. Water Solubility 23,000 mg/L. Cyclohexanone is not rapidly volatilized from water, except for fast moving streams or very shallow ponds. Significant soil leaching occurs, contributing to ground water contamination. Biodegradation and photolysis occur in water. Rapid atmospheric degradation occurs via photolysis, with a half-life of about 1 to 5 days.

METHYL ETHYL KETONE: Log Kow = 0.29. Water Solubility = 239,000 mg/L. Methyl Ethyl Ketone is rapidly volatilized from water and undergoes slow biodegradation. It undergoes moderate atmospheric photodegradation.

TETRAHYDROFURAN: Water Solubility = 30% (25°C). Tetrahydrofuran is significantly biodegraded in standard tests. This compound is not expected to bioconcentrate in fish significantly.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: This product can be harmful or fatal to contaminated plant or animal life, especially if released in large quantities into the environment. Refer to Section 11 (Toxicological Information) for information regarding the effect of this product's components on test animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE: This product can be harmful or fatal to contaminated aquatic plant or animal life, especially if released in large quantity in a body of water. The following aquatic toxicity data are available for the components of this product:

CYCLOHEXANONE:
LC_{50} (*Pimephales promelas* fathead minnow) 527 mg/L 96 hours
EC_0 (bacteria Pseudomonas putida) 16 hours = 180 mg/L)
EC_0 (algae *Microcystis aeruginosa*) 8 days = 52 mg/L
EC_0 (green algae *Scenedesmus quadricauda*) 7 days = 370 mg/L
EC_0 (protozoa *Entosiphon sulcatum*) 72 hours = 545 mg/L
EC_0 (protozoa *Uronema parduczi* Chatton-Lwoff) = 280 mg/L
EC_0 (bacteria *Pseudomonas fluorescens*) 16 hours = 180 mg/L (pH = 7
EC_0 (Chilomonas paramecium Ehrenberg) 48 hours = 573 mg/L
EC_0 (*Daphnia magna* Straus) 24 hours = 526 mg/L
EC_{50} (*Daphnia magna* Straus) 24 hours = 820 mg/L
EC_{100} (*Daphnia magna* Straus) 24 hours = 1,240 mg/L
EC_0 (*Daphnia magna*) 24 hours = 540 mg/L
EC_{50} (*Daphnia magna*) 24 hours = 800 mg/L
EC_{100} (*Daphnia magna*) 24 hours = 1,540 mg/L
LC_{50} (fathead minnow) 96 hours = 526; 618; 630 mg/L
LC_{50} (*Leuciscus idus*) 24 hours = 538 mg/L
LC_{50} (*Leuciscus idus*) 96 hours = 536; 539; 752 mg/L

METHYL ETHYL KETONE:
EC_0 (*Scenedesmus quadricauda*, green algae) = 4300 mg/L/ 8 days
EC_0 (*Entosiphon sulcatum*, protozoa) = 190 mg/L/ 72 hours
EC_0 (*Uronema parduczi* Chatton-Lwoff, protozoa) = 2830 mg/L
EC_0 (*Pseudomonas putida*, bacteria) = 1150 mg/L/ 16 hours
LC_{50} (*Pimephales promelas*, fathead minnow) = 3200 mg/L/96 hour
LD_0 (*Pseudomonas*, bacteria) = 2,500 mg/L
LD_0 (*Scenedesmus*, algae) = 12,500 mg/L
LD_0 (*Colpoda*, protozoa) = 5,000 mg/L
LC_{50} (mosquito fish) = 5,600 mg/L/ 24□96 hours
LC_{50} (bluegill) = 5,640□1,690 mg/L/ 24□96 hours
LC_{50} (goldfish) = 5,000 mg/L/ 24 hours

TETRAHYDROFURAN:
Growth Inhibition (*Microcystis*, blue algea) = 225 mg/L
Toxicity Threshold (Cell Multiplication Inhibit System test):
(*Uronema parduczi* Chatton-Lwoff, protozoa) = 858 mg/L
(*Pseudomonas putida*, bacteria) = 580 mg/L
(*Microcytis aeruginosa*, algea) = 225 mg/L
LC_{50} (silver/golden orfe) = 2820–2930 mg/L
LC_{50} (fathead minnow) = 2160 mg/L/ 96 hours
LC_{50} (carp) = 4400 mg/L/ 48 hours
LC_{50} (goldfish) = 2400 mg/L/ 48 hours

VOC INFORMATION: This product emits VOC's (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.

VOC Level: 510 g/l per SCAQMD Test Method 316A.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada and its Provinces, as well as those applicable to the EC Member States. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

U.S. EPA WASTE NUMBER: D001 (Characteristic/Ignitability)

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME:	FLAMMABLE LIQUID, NOS (acetone, tetrahydrofuran, methyl ethyl ketone, cyclohexanone)
HAZARD CLASS NUMBER and DESCRIPTION:	3 (Flammable Liquid)
UN IDENTIFICATION NUMBER:	UN 1993
PACKING GROUP:	II
DOT LABEL(S) REQUIRED:	Flammable Liquid

NOTE: Shipments of containers holding 1-liter or less in volume qualify for a “Limited Quantity” exception. Refer to 49 CFR 173.150 for additional information.

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER, 1996: 128

MARINE POLLUTANT: No component of this product is designated as a Marine Pollutant by the DOT (per 49 CFR 172.101, Appendix B).

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS. Use the above information for the preparation of Canadian Shipments.

IMO DESIGNATION: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS BY THE INTERNATIONAL MARITIME ORGANIZATION

PROPER SHIPPING NAME:	FLAMMABLE LIQUID, NOS (acetone, tetrahydrofuran, methyl ethyl ketone, cyclohexanone)
HAZARD CLASS NUMBER and DESCRIPTION:	3.2 (Flammable Liquid; Intermediate Flash Point)
UN IDENTIFICATION NUMBER:	UN 1993
PACKING GROUP:	II
LABEL(S) REQUIRED:	Flammable Liquid
IMDG CODE:	3230

MARINE POLLUTANT: This product is not designated by the IMO to be a Marine Pollutant.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This material is not considered by the United Nations Economic Commission for Europe to be dangerous goods. Additional information is as follows:

Substance Identification No.:	1993
Name of Substance:	FLAMMABLE LIQUID, NOS (acetone, tetrahydrofuran, methyl ethyl ketone, cyclohexanone)
Hazard Identification No. (Description):	33
Label:	Flammable Liquid
Class and Item Number:	3, 5°, (c)

15. REGULATORY INFORMATION

ADDITIONAL UNITED STATES REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, and are listed as follows:

CHEMICAL NAME	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Acetone	No	Yes	No
Cyclohexanone	No	Yes	Yes
Methyl Ethyl Ketone	No	Yes	Yes
Tetrahydrofuran	No	Yes	No

U.S. SARA THRESHOLD PLANNING QUANTITY: Not applicable.
U.S. CERCLA REPORTABLE QUANTITY (RQ): Cyclohexanone = 5000 lb.; Methyl Ethyl Ketone: 5000 lb.; Tetrahydrofuran = 1000 lb. ; Acetone = 5000 lb

15. REGULATORY INFORMATION (Continued)

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

U.S. STATE REGULATORY INFORMATION: Components of this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

California - Permissible Exposure Limits for Chemical Contaminants: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

Florida - Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

Illinois - Toxic Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

Kansas - Section 302/313 List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

Massachusetts - Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

Michigan - Critical Materials Register: No.

Minnesota - List of Hazardous Substances: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

Missouri - Employer Information/Toxic Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

New Jersey - Right to Know Hazardous Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

North Dakota - List of Hazardous Chemicals, Reportable Quantities: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

Pennsylvania - Hazardous Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

Rhode Island - Hazardous Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

Texas - Hazardous Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

West Virginia - Hazardous Substance List: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

Wisconsin - Toxic and Hazardous Substances: Cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran**.**

CALIFORNIA, SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): This product may contain trace constituents, such as vinyl chloride, present in one of the product's components. Under common usage, exposures to these trace constituents at levels exceeding the "no significant risk level" (NSRL) would not occur. Users are expected to follow normal PPE and ventilation guidelines such as those in section 8 and other portions of this MSDS.

VOC Information: This product emits volatile organic compounds (VOC's) during use and cure. Users should determine if local regulations regarding use of VOC containing products exist in their area and if this product complies. All Products < 510 g/l VOC as tested.

ANSI STANDARD LABELING (Z129.1): **DANGER!** EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. MAY BE HARMFUL IF INHALED. MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS. MAY CAUSE SKIN AND EYE IRRITATION. ASPIRATION HAZARD - CAN CAUSE LIFE-THREATENING LUNG DAMAGE IF SWALLOWED. MAY CAUSE REPRODUCTIVE EFFECTS, BASED ON ANIMAL TESTS. Keep away from heat, sparks, and flame. Avoid breathing vapor or mists. Avoid contact with skin or clothing. Use only with adequate ventilation. Keep container closed. Wash thoroughly after handling. The recommended storage temperature is 21-32 °C (70-90 °F). Recommended maximum shelf-life for unopened containers is 2 years. **FIRST AID:** In case of contact, immediately flush skin or eyes for at least 15 minutes. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **IN CASE OF FIRE:** Use fog, foam, dry chemical or CO_2. Liquid will float and may re-ignite on the surface of water. **IN CASE OF SPILL**: Absorb spill with inert material (e.g. activated carbon) then place in suitable container. Refer to Material Safety Data Sheet for additional information on this product.

ADDITIONAL CANADIAN REGULATIONS:

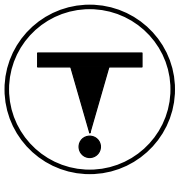
CANADIAN DSL/NDSL INVENTORY STATUS: The components of this product are on the DSL Inventory.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LIST: The components of this product are not on the CEPA Priorities Substances List.

CANADIAN WHMIS SYMBOLS: **Class B2**: Flammable Liquid
Class D2A/B: Materials Causing Other Toxic Effects





EUROPEAN COMMUNITY INFORMATION:

EUROPEAN COMMUNITY INFORMATION FOR PRODUCT:

EC LABELING AND CLASSIFICATION: Based on the information on the product's components and an assessment of the physical and health hazards associated with the material, the following assignments have been made (per council directive 67/548/EEC)

EC CLASSIFICATION: Highly flammable. Irritant. [F;Xi]
EC RISK PHRASES: Highly flammable. May form explosive peroxides. Irritating to eyes and respiratory system. [R:11-19-36/37]

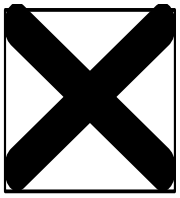
15. REGULATORY INFORMATION (Continued)

EC LABELING AND CLASSIFICATION (CONTINUED):

EC SAFETY PHRASES: Keep out of reach of children.* Keep away from sources of ignition - No smoking. Do not empty into drains. Do not breathe vapors. Avoid contact with the eyes. Take precautionary measures against static discharges. [S:(2-)*16-23-25-29-33] *This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.

EUROPEAN COMMUNITY ANNEX II HAZARD SYMBOLS:





EUROPEAN COMMUNITY INFORMATION FOR CONSTITUENTS: The following information is available for primary constituents in the components of this product.

ACETONE:
EC CLASSIFICATION: Highly flammable. [F]
EC RISK PHRASES: Highly flammable. [R: 11].
EC SAFETY PHRASES: Keep out of reach of children.* Keep container in a well-ventilated place. Keep away from sources of ignition. No smoking. Do not breathe vapors. [S: (2-)*9-16-23-33].
EC COMMENTS: **This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.*

CYCLOHEXANONE:
EC CLASSIFICATION: Flammable. Harmful. [F; Xn]
EC RISK PHRASES: Flammable. Harmful by inhalation. [R;10-20].
EC SAFETY PHRASES: Keep out of reach of children.* Avoid contact with the eyes. [S:(2-)* 25]. **This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.*
EC COMMENTS: CONCENTRATION GREATER THAN OR EQUAL TO 25%: Harmful. Harmful by inhalation. [Xn; R20]. This product contains less than this concentration; therefore, this risk has been omitted.

METHYL ETHYL KETONE:
EC CLASSIFICATION: Highly flammable. Irritant. [F; Xi]
EC RISK PHRASES: Highly flammable. Irritating to the eyes and respiratory system. [R: 11-36/37].
EC SAFETY PHRASES: Keep out of reach of children.* Keep container in a well-ventilated place. Keep away from sources of ignition. No smoking. Avoid contact with the eyes. Take precautionary measures against static discharges. [S: (2-)*9-16-25-33].
EC COMMENTS: **This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.*

POLYVINYL CHLORIDE: An official classification for this substance has not been published in Commission Directives 93/72/EEC, 94/69/EC, and 96/54/EC.

SILICON DIOXIDE: An official classification for this substance has not been published in Commission Directives 93/72/EEC, 94/69/EC, and 96/54/EC.

TETRAHYDROFURAN:
EC CLASSIFICATION: Highly flammable. Irritant. [F;Xi]
EC RISK PHRASES: Highly flammable. May form explosive peroxides. Irritating to eyes and respiratory system. [R:11-19-36/37]
EC SAFETY PHRASES: Keep out of reach of children.* Keep away from sources of ignition - No smoking. Do not empty into drains. Take precautionary measures against static discharges. [S:(2-)*16-29-33] *This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.
EC COMMENTS :
CONCENTRATIONS GREATER THAN OR EQUAL TO 25 PERCENT: Irritant. Irritating to eyes and respiratory system. [Xi; R36/37]

16. OTHER INFORMATION

PREPARED BY: CHEMICAL SAFETY ASSOCIATES, Inc.

9163 Chesapeake Drive, San Diego, CA 92123-1002
619/565-0302

EDITED/UPDATED BY: John Brown, E-Z Weld, Inc

DATE OF PRINTING: November 12, 2008

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Cookson assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Cookson assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching.

EXPOSURE LIMITS IN AIR:

ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits.

TLV - Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average **(TWA)**, the 15-minute Short Term Exposure Limit, and the instantaneous Ceiling Level **(C)**. Skin absorption effects must also be considered.

OSHA - U.S. Occupational Safety and Health Administration.

PEL - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order.

IDLH - Immediately Dangerous to Life and Health **-** This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. **The DFG - MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. **O**ccupational **S**afety and **H**ealth **A**dministration (**OSHA**). NIOSH issues exposure guidelines called **R**ecommended **E**xposure **L**evels (**REL**s). When no exposure guidelines are established, an entry of **NE** is made for reference.

HAZARD RATINGS:

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: Health Hazard: **0** (minimal acute or chronic exposure hazard); **1** (slight acute or chronic exposure hazard); **2** (moderate acute or significant chronic exposure hazard); **3** (severe acute exposure hazard; onetime overexposure can result in permanent injury and may be fatal); **4** (extreme acute exposure hazard; onetime overexposure can be fatal). Flammability Hazard: **0** (minimal hazard); **1** (materials that require substantial pre-heating before burning); **2** (combustible liquid or solids; liquids with a flash point of 38-93°C [100-200°F]); **3** (Class IB and IC flammable liquids with flash points below 38°C [100°F]); **4** (Class IA flammable liquids with flash points below 23°C [73°F] and boiling points below 38°C [100°F]. Reactivity Hazard: **0** (normally stable); 1 (material that can become unstable at elevated temperatures or which can react slightly with water); **2** (materials that are unstable but do not detonate or which can react violently with water); **3** (materials that can detonate when initiated or which can react explosively with water); **4** (materials that can detonate at normal temperatures or pressures).

NATIONAL FIRE PROTECTION ASSOCIATION: Health Hazard: **0** (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); **1** (materials that on exposure under fire conditions could cause irritation or minor residual injury); **2** (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); **3** (materials that can on short exposure could cause serious temporary or residual injury); **4** (materials that under very short exposure could cause death or major residual injury). Flammability Hazard and Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System".

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (**NFPA**). Flash Point - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD_{50}** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC_{50}** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m^3** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information: BEI** - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV. **Ecological Information:** EC is the effect concentration in water. **BCF** = Bioconcentration Factor, which is used to determine if a substance will concentrate in lifeforms which consume contaminated plant or animal matter. Coefficient of Oil/Water Distribution is represented by **log K_{ow}** or **log K_{oc}** and is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:

U.S. AND CANADA: This section explains the impact of various laws and regulations on the material. **U.S.: EPA** is the U.S. Environmental Protection Agency. **DOT** is the U.S. Department of Transportation. **SARA** is the Superfund Amendments and Reauthorization Act. **TSCA** is the U.S. Toxic Substance Control Act. **CERCLA (or Superfund)** refers to the Comprehensive Environmental Response, Compensation, and Liability Act**)**. Labeling is per the American National Standards Institute (**ANSI Z129.1**). **CANADA: CEPA** is the Canadian Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **TC** is Transport Canada. **DSL/NDSL** are the Canadian Domestic/Non-Domestic Substances Lists.

EUROPEAN and INTERNATIONAL: EC is the European Community (formerly known as the **EEC,** European Economic Community). **EINECS:** This the European Inventory of Now-Existing Chemical Substances. **IMO** is the International Maritime Organization. The **ARD** is the European

Agreement Concerning the International Carriage of Dangerous Goods by Road and the **RID** are the International Regulations Concerning the Carriage of Dangerous Goods by Rail.

E.E. Zimmerman Company/Elroy Turpentine Company
P.O. Box 111254
Pittsburgh, PA 15238
(412) 963-0949

Prepared: 9/05

MATERIAL SAFETY DATA SHEET

E-Z XYLENE XYLOL

EMERGENCY CONTACT: FOR CHEMICAL EMERGENCY - SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL CHEMTREC AT 1-(800)-424-9300, DAY OR NIGHT.

INDEX	HMIS		NFPA	
4 - Extreme	Health	*2	Health	2
3 - High	Flammability	3	Flammability	3
2 - Moderate	Physical Hazard	0	Reactivity	0
1 - Slight				
0 - Least	* denotes chronic hazard			

Section 2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	AMOUNT (VOL%)
M-XYLENE	108-38-3	0-46
P-XYLENE	106-42-3	0-20
ETHYL BENZENE	100-41-4	0-19
O-XYLENE	95-47-6	0-15
TOLUENE	108-88-3	0-0.5
BENZENE	71-43-2	0-0.01

EXPOSURE GUIDELINES (SEE SECTION 15 FOR ADDITIONAL EXPOSURE LIMITS)

	CAS NO.	GOVERNING BODY	EXPOSURE LIMITS	
Limit for the product	1330-20-7	ACGIH	STEL	150 ppm
Limit for the product	1330-20-7	ACGIH	TWA	100 ppm
Limit for the product	1330-20-7	OSHA	TWA	100 ppm
BENZENE	71-43-2	OSHA	C	5 ppm Ceiling
BENZENE	71-43-2	ACGIH	STEL	2.5 ppm
BENZENE	71-43-2	OSHA	STEL	5 ppm
BENZENE	71-43-2	ACGIH	TWA	0.5 ppm
BENZENE	71-43-2	OSHA	TWA	1 ppm
ETHYL BENZENE	100-41-4	ACGIH	STEL	125 ppm
ETHYL BENZENE	100-41-4	ACGIH	TWA	100 ppm
ETHYL BENZENE	100-41-4	OSHA	TWA	100 ppm
M-XYLENE	108-38-3	ACGIH	STEL	150 ppm
M-XYLENE	108-38-3	ACGIH	TWA	100 ppm
M-XYLENE	108-38-3	OSHA	TWA	100 ppm
O-XYLENE	95-47-6	ACGIH	STEL	150 ppm
O-XYLENE	95-47-6	ACGIH	TWA	100 ppm
O-XYLENE	95-47-6	OSHA	TWA	100 ppm
P-XYLENE	106-42-3	ACGIH	STEL	150 ppm
P-XYLENE	106-42-3	ACGIH	TWA	100 ppm
P-XYLENE	106-42-3	OSHA	TWA	100 ppm
TOLUENE	108-88-3	OSHA	C	300 ppm
TOLUENE	108-88-3	Mfg	STEL	150 ppm
TOLUENE	108-88-3	NIOSH	STEL	150 ppm
TOLUENE	108-88-3	ACGIH	TWA	50 ppm
TOLUENE	108-88-3	OSHA	TWA	200 ppm

Section 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Danger! Flammable liquid and vapor. Harmful if inhaled. Overexposure may cause nervous system effects. May cause serious disturbances of heart rhythm. May cause skin irritation. Causes eye irritation. Causes respiratory tract irritation. Harmful or fatal if swallowed. Pulmonary aspiration hazard. After ingestion, may enter lungs and produce damage.

POTENTIAL HEALTH EFFECTS

PRE-EXISTING MEDICAL CONDITIONS

The following diseases or disorders may be aggravated by exposure to this product: skin, eye, liver, kidney, nervous system, respiratory system, lung (asthma-like conditions).

INHALATION

High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness and even death). Repeated overexposure has caused a hearing loss in laboratory animals. Repeated overexposure has produced toxic effects in developing and young laboratory animals. Solvent "huffing/sniffing" (abuse) or intentional prolonged overexposure to high levels of vapors can produce abnormal behavior, convulsions, hallucinations, delerium, nervous system damage, serious disturbances of heart rhythm and sudden death. Prolonged or repeated exposure may cause liver and kidney damage. See Section 15 for additional information.

LC50 (mg/l): no data
LC50 (mg/m3): no data
LC50 (ppm): 26800

SKIN

May be absorbed through the skin in harmful amounts. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash). Prolonged or repeated skin contact may cause irritation.

Draize Skin Score: no data out of 8.0
LD50 (mg/kg): 2000

EYES

Causes eye irritation.

INGESTION

Moderately toxic. Irritating to mouth, throat and stomach. May produce central nervous system effects, which may include dizziness, loss of balance and coordination, unconsciousness, coma and even death. Product may be harmful or fatal if swallowed. Pulmonary aspiration hazard. After ingestion, may enter lungs and produce damage. See Section 15 for additional information.

LD50 (g/kg): 4.3

Section 4. FIRST AID MEASURES

INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get immediate medical attention.

SKIN

Wash with soap and water. Get medical attention if irritation develops or persists. Wash clothing before reuse. Injection injuries may not appear serious at first but within a few hours, without proper treatment, the area will become swollen, discolored and extremely painful. See Section 15 for additional information.

EYES

Flush eye with water for 15 minutes. Get medical attention.

INGESTION

Do not induce vomiting! Do not give liquids! Get medical attention immediately.

Section 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Water spray, regular foam, dry chemical, carbon dioxide

FIRE FIGHTING INSTRUCTIONS

Use water spray to cool fire exposed tanks and containers. Wear structural fire fighting gear.

FLAMMABLE PROPERTIES

	TYPICAL	MINIMUM	MAXIMUM	TEXT RESULT	UNITS	METHOD
Flash Point				79 TAG C.C.	F	N/A
Autoignition Temperature	870				F	N/A
Lower Explosion Limit	1.1				%	N/A
Upper Explosion Limit	6.6				%	N/A

Section 6. ACCIDENTAL RELEASE MEASURES

Prevent ignition, stop leak and ventilate the area. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Vapor can be controlled using a water fog. Water streams should not be directed to the liquid as this will cause the liquid to boil and generate more vapor. Keep personnel upwind from leak. Use appropriate personal protective equipment as stated in Section 8 of this MSDS. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Vacuum or sweep up material and place in a disposal container.

Section 7. HANDLING AND STORAGE

HANDLING

Use only in a well-ventilated area. Ground and bond containers when transferring material. Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Wash thoroughly after handling. Never siphon by mouth.

STORAGE

Keep away from heat, sparks and flame. Store in a cool dry place. NFPA class IC storage. Flash point is greater than 73 degrees F and less than 100 degrees F. Consult NFPA and/or OSHA codes for additional information.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult With a Health and Safety Professional for Specific Selections

ENGINEERING CONTROLS

Use with adequate ventilation. Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Use explosion-proof ventilation equipment.

PERSONAL PROTECTION

EYE PROTECTION

Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent).

GLOVES or HAND PROTECTION

The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Protective gloves are recommended to protect against contact with product. Polyvinyl alcohol, viton, safety 4H, teflon.

RESPIRATORY PROTECTION

Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Half-mask air purifying respirator with organic vapor cartridges is acceptable for exposures to ten (10) times the exposure limit. Full-face air purifying respirator with organic vapor cartridges is acceptable for exposures to fifty (50) times the exposure limit. Exposure should not exceed the cartridge limit of 1000 ppm. Protection by air purifying respirators is limited. Use a positive pressure-demand full-face supplied air respirator or SCBA for exposures greater than fifty (50) times the exposure limit. If exposure is above the IDLH (Immediately Dangerous to Life and Health) or there is the possibility of an uncontrolled release, or exposure levels are unknown, then use a positive pressure-demand full-face supplied air respirator with escape bottle or SCBA. Wear a NIOSH-approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

OTHER

Where splashing is possible, full chemically resistant protective clothing (e.g., acid suit) and boots are required. The following materials are acceptable for use as protective clothing: polyvinyl alcohol (PVA), viton, polyurethane. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Remove contaminated clothing and wash before reuse. For non-fire emergencies, positive pressure SCBA and structural firefighter's protective clothing will provide only limited protection.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTY	TYPICAL	UNITS	TEXT RESULT	REFERENCE
Appearance		N/A	COLORLESS LIQUID	
Boiling Point		F	278 TO 290	
Bulk Density		lb/gal	no data	
Melting Point		F	MINUS 53	
Molecular Weight		g/mole	no data	

Octanol/Water Coefficient		N/A	no data	
pH		N/A	no data	
Specific Gravity	0.87	N/A		
Solubility in Water		wt%	NIL	
Odor		N/A	SWEET, PLEASANT	
Odor Threshold		ppm	no data	
Vapor Pressure	9	mmHg		@25C
Viscosity (F)		SUS	no data	
Viscosity (C)		CsT	no data	
% Volatile	100	wt%		

Section 10. STABILITY AND REACTIVITY

STABILITY
Stable

CONDITIONS TO AVOID
Avoid static discharge

INCOMPATIBILITY
Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS
Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.

HAZARDOUS POLYMERIZATION
Will not polymerize.

Section 11. ECOLOGICAL INFORMATION

No data available

Section 12. DISPOSAL CONSIDERATIONS

Follow federal, state and local regulations. This material is a RCRA hazardous waste. Do not flush material to drain or storm sewer. Contract to authorized disposal service.

Section 13. TRANSPORT INFORMATION

Governing Body	Mode	Proper Shipping Name	Container Mode
DOT	Ground	Xylene, 3, UN1307, III	55 Gal Drum/5 Gal Pail
IATA	Air	unknown	
IMDG	Marine	unknown	

Governing Body	Mode	Proper Shipping Name	Container Mode
DOT	Ground	Consumer Commodity, ORM-D	Gallon/Quart
IATA	Air	unknown	
IMDG	Marine	unknown	

OTHER TRANSPORT INFORMATION

The DOT Transport Information may vary with the container and mode of shipment.

Section 14. REGULATORY INFORMATION

Regulatory List	Component	CAS No.
ACGIH-Occupational Exposure Limits - Carcinogens	XYLENE	1330-20-7
ACGIH-Occupational Exposure Limits -TWAs	XYLENE	1330-20-7
ACGIH-Short Term Exposure Limits	XYLENE	1330-20-7
CAA (Clean Air Act) - HON Rule - Organic HAPs	XYLENE	1330-20-7
CAA (Clean Air Act) - HON Rule - SOCMI Chemicals	XYLENE	1330-20-7
CAA-1990 Hazardous Air Pollutants	XYLENE	1330-20-7
CERCLA/SARA-Haz Substances and their RQs	XYLENE	1330-20-7
CERCLA/SARA-Haz Substances and their RQs	XYLENE	1330-20-7

CERCLA/SARA-Haz Substances and their RQs	XYLENE	1330-20-7
CERCLA/SARA-Section 313-Emission Reporting	XYLENE	1330-20-7
CWA (Clean Water Act) - Hazardous Substances	XYLENE	1330-20-7
IARC - Group 3 (not classifiable)	XYLENE	1330-20-7
Inventory-Australia (AICS)	XYLENE	1330-20-7
Inventory-Canada-Domestic Substances List	XYLENE	1330-20-7
Inventory-China	XYLENE	1330-20-7
Inventory-European EINECS Inventory	XYLENE	1330-20-7
Inventory-Japan-(ENCS)	XYLENE	1330-20-7
Inventory-Korea-Existing and Evaluated	XYLENE	1330-20-7
Inventory-Philippines Inventory (PICCS)	XYLENE	1330-20-7
Inventory-TSCA-Sect.8(b) Inventory	XYLENE	1330-20-7
Massachusetts-Right To Know List	XYLENE	1330-20-7
New Jersey-Department of Health RTK List	XYLENE	1330-20-7
New Jersey-Env Hazardous Substances List	XYLENE	1330-20-7
New Jersey-Special Hazardous Substances	XYLENE	1330-20-7
OSHA-Final PELs-Time Weighted Averages	XYLENE	1330-20-7
Pennsylvania-RTK (Right to Know) List	XYLENE	1330-20-7
ACGIH - Occupational Exposure Limits - Carcinogens	BENZENE	71-43-2
ACGIH - Occupational Exposure Limits - Carcinogens	ETHYL BENZENE	100-41-4
ACGIH - Occupational Exposure Limits - Carcinogens	M-XYLENE	108-38-3
ACGIH - Occupational Exposure Limits - Carcinogens	O-XYLENE	95-47-6
ACGIH - Occupational Exposure Limits - Carcinogens	P-XYLENE	106-42-3
ACGIH - Occupational Exposure Limits - Carcinogens	TOLUENE	108-88-3
ACGIH - Occupational Exposure Limits - TWAs	BENZENE	71-43-2
ACGIH - Occupational Exposure Limits - TWAs	ETHYL BENZENE	100-41-4
ACGIH - Occupational Exposure Limits - TWAs	M-XYLENE	108-38-3
ACGIH - Occupational Exposure Limits - TWAs	O-XYLENE	95-47-6
ACGIH - Occupational Exposure Limits - TWAs	P-XYLENE	106-42-3
ACGIH - Occupational Exposure Limits - TWAs	TOLUENE	108-88-3
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ACGIH-Short Term Exposure Limits	ETHYL BENZENE	100-41-4
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ACGIH-Short Term Exposure Limits	P-XYLENE	106-42-3
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CAA (Clean Air Act) - HON Rule - Organic HAPs	ETHYL BENZENE	100-41-4
CAA (Clean Air Act) - HON Rule - Organic HAPs	M-XYLENE	108-38-3
CAA (Clean Air Act) - HON Rule - Organic HAPs	O-XYLENE	95-47-6
CAA (Clean Air Act) - HON Rule - Organic HAPs	P-XYLENE	106-42-3
CAA (Clean Air Act) - HON Rule - Organic HAPs	TOLUENE	108-88-3
CAA (Clean Air Act) - HON Rule - SOCMI Chemicals	BENZENE	71-43-2
CAA (Clean Air Act) - HON Rule - SOCMI Chemicals	ETHYL BENZENE	100-41-4
CAA (Clean Air Act) - HON Rule - SOCMI Chemicals	M-XYLENE	108-38-3
CAA (Clean Air Act) - HON Rule - SOCMI Chemicals	O-XYLENE	95-47-6
CAA (Clean Air Act) - HON Rule - SOCMI Chemicals	P-XYLENE	106-42-3
CAA (Clean Air Act) - HON Rule - SOCMI Chemicals	TOLUENE	108-88-3
CAA - 1990 Hazardous Air Pollutants	BENZENE	71-43-2
CAA - 1990 Hazardous Air Pollutants	ETHYL BENZENE	100-41-4
CAA - 1990 Hazardous Air Pollutants	M-XYLENE	108-38-3
CAA - 1990 Hazardous Air Pollutants	O-XYLENE	95-47-6
CAA - 1990 Hazardous Air Pollutants	P-XYLENE	106-42-3
CAA - 1990 Hazardous Air Pollutants	TOLUENE	108-88-3
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California-Prop. 65-Carcinogens List	ETHYL BENZENE	100-41-4
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Canada-WHMIS-Ingredient Disclosure	ETHYL BENZENE	100-41-4
Canada-WHMIS-Ingredient Disclosure	M-XYLENE	108-38-3

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Canada-WHMIS-Ingredient Disclosure	P-XYLENE	106-42-3
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CERCLA/SARA-Haz Substances and their RQs	ETHYL BENZENE	100-41-4
CERCLA/SARA-Haz Substances and their RQs	ETHYL BENZENE	100-41-4
CERCLA/SARA-Haz Substances and their RQs	ETHYL BENZENE	100-41-4
CERCLA/SARA-Haz Substances and their RQs	M-XYLENE	108-38-3
CERCLA/SARA-Haz Substances and their RQs	M-XYLENE	108-38-3
CERCLA/SARA-Haz Substances and their RQs	M-XYLENE	108-38-3
CERCLA/SARA-Haz Substances and their RQs	O-XYLENE	95-47-6
CERCLA/SARA-Haz Substances and their RQs	O-XYLENE	95-47-6
CERCLA/SARA-Haz Substances and their RQs	O-XYLENE	95-47-6
CERCLA/SARA-Haz Substances and their RQs	P-XYLENE	106-42-3
CERCLA/SARA-Haz Substances and their RQs	P-XYLENE	106-42-3
CERCLA/SARA-Haz Substances and their RQs	P-XYLENE	106-42-3
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Inventory-Korea-Existing and Evaluated	ETHYL BENZENE	100-41-4
Inventory-Korea-Existing and Evaluated	M-XYLENE	108-38-3
Inventory-Korea-Existing and Evaluated	O-XYLENE	95-47-6
Inventory-Korea-Existing and Evaluated	P-XYLENE	106-42-3
Inventory-Korea-Existing and Evaluated	TOLUENE	108-88-3
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Inventory-Philippines Inventory (PICCS)	ETHYL BENZENE	100-41-4
Inventory-Philippines Inventory (PICCS)	M-XYLENE	108-38-3
Inventory-Philippines Inventory (PICCS)	O-XYLENE	95-47-6
Inventory-Philippines Inventory (PICCS)	P-XYLENE	106-42-3
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Inventory-TSCA-Sect.8(b) Inventory	ETHYL BENZENE	100-41-4
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New Jersey-Department of Health RTK List	ETHYL BENZENE	100-41-4
New Jersey-Department of Health RTK List	M-XYLENE	108-38-3
New Jersey-Department of Health RTK List	O-XYLENE	95-47-6
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New Jersey-Department of Health RTK List	TOLUENE	108-88-3
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New Jersey-Env Hazardous Substances List	ETHYL BENZENE	100-41-4
New Jersey-Env Hazardous Substances List	M-XYLENE	108-38-3
New Jersey-Env Hazardous Substances List	O-XYLENE	95-47-6
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New Jersey-Special Hazardous Substances	ETHYL BENZENE	100-41-4
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Pennsylvania-RTK (Right to Know) List	ETHYL BENZENE	100-41-4
Pennsylvania-RTK (Right to Know) List	M-XYLENE	108-38-3
Pennsylvania-RTK (Right to Know) List	O-XYLENE	95-47-6

Pennsylvania-RTK (Right to Know) List	P-XYLENE	106-42-3
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TSCA-Section 4-Chemical Test Rules	P-XYLENE	106-42-3
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Title III Classifications Sections 311, 312:

Acute:	**YES**
Chronic:	**YES**
Fire:	**YES**
Reactivity:	**NO**
Sudden Release of Pressure:	**NO**

Section 15. OTHER INFORMATION

COMPONENT TOXICITY: Ethylbenzene, a component of this product, has been designated by the International Agency for Research on Cancer as "possibly carcinogenic to humans", based on increased tumor incidence in laboratory animals. Overexposure may lead to nervous system effects, including drowsiness, dizziness, nausea, headaches, paralysis, loss of consciousness and even death. Repeated overexposure has caused a hearing loss in laboratory animals. NOTE TO PHYSICIAN: Catecholamines and similar adrenergic drugs are generally contraindicated because of potential for increased sensitivity of the heart from hydrocarbon overexposure and subsequent ventricular fibrillation. EKG monitoring may be indicated and bronchodilators should be selected with care. Following injection, prompt debridement of the wound is necessary to minimize necrosis and tissue loss. Follow all MSDS/label precautions even after container is emptied because it may retain product residue.

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MSDS 6503

6503: Pb Blaster 12 Oz Net
6503-1: Pb Blaster 12 Oz Net
MSDS Last updated: 03/17/2005

MATERIAL SAFETY DATA SHEET

Date Prepared: 07/14/2004

MSDS No: PB Aerosol
PB Penetrating Catalyst - part #'s: 16-PB, 8-PB, 8-PBS, PBTS, 20-PB, 26-PB

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: PB Penetrating Catalyst - part #'s: 16-PB, 8-PB, 8-PBS, PBTS, 20-PB, 26-PB

MANUFACTURER:
The Blaster Chemical Companies
Blaster
8500 Sweet Valley Drive
Valley View, OH 44125
Customer Service: (800) 858-6605

24 HR. EMERGENCY TELEPHONE NUMBERS:
CHEMTREC (800) 424-9300
Emergency Contact: CHEMTREC
Emergency Phone (800) 424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

	wt.%	CAS Registry #
Dipropylene glycol methyl ether	0 - 10	34590-94-8
Heavy Aromatic Naptha Solvent	50 - 70	64742-94-5
Alkyloxypolyethyleneoxyethanol	1 - 10	68131-40-8
Petroleum Distillates	20 - 30	64742-57-0
Carbon Dioxide	0 - 2	124-38-9

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

	EXPOSURE LIMITS		
	OSHA PEL	ACGIH TLV	Supplier
Dipropylene glycol methyl ether	100 ppm	100 ppm	
Heavy Aromatic Naptha Solvent		400 ppm	
Alkyloxpolyethyleneoxyethanol		not established	
Petroleum Distillates	5 mg/m3	5 mg/m3	
Carbon Dioxide	5000 ppm	5000 ppm	

COMMENTS:
The criteria for listing components in this section are as follows:
Carcinogens are listed if present at 0.1% or greater
OSHA hazardous ingredients are listed if present at 1.0% or greater
Non-Hazardous ingredients may be listed if present at 5.0% or greater.

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS
EYES:
Likely to cause immediate or delayed irritation. Irritation will show as redness and/or swelling of the eyes.

SKIN: Repeated or prolonged contact with skin may produce irritation, dryness, or dermatitis.

INGESTION: Ingestion may cause irritation to the mouth, esophagus, and stomach.

INHALATION: Inhalation of spray mist may cause irritation to the respiratory tract.

ACUTE EFFECTS: Irritation of the eyes, nose, throat, digestive tract. Diarrhea, vomiting, nausea, and/or nervous system depression. (Headaches, drowsiness, dizziness)

MEDICAL CONDITIONS AGGRAVATED:
May aggravate pre-existing skin and respiratory disorders.

PHYSICAL HAZARDS:
Aerosol containers are pressurized (even when empty!) Do not expose to temperatures above 120 degrees Fahrenheit. Do not puncture or burn can. Failure to observe these precautions may result in a rapid and violent decompression of the container producing projectiles and atomization of the liquid contents.

COMMENTS:
NOTICE - Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

4. FIRST AID MEASURES

EYES:
Flush with plenty of clear water. Seek medical attention.

SKIN:
Remove contaminated clothing immediately. Wash skin with soap and water. If irritation develops, seek medical attention.

INGESTION:
Wash mouth immediately. If conscious, give exposed individual 6 to 8 ounces of liquid. DO NOT induce vomiting unless advised by physician. Seek medical attention immediately.

INHALATION:
Remove to fresh air. Seek medical attention.

5. FIRE FIGHTING MEASURES

Flashpoint and Method: 152.? F TAG CC

GENERAL HAZARD:
This material can be ignited by heat, sparks, flames, or other sources of ignition (static electricity).
Vapors are heavier than air and will collect in low areas (sewers) or travel

considerable distances to a source of ignition. If containers are not cooled in a fire, they may ignite and explode.

EXTINGUISHING MEDIA:
Dry chemical, carbon dioxide, halon, or foam is recommended. Water spray may be used to cool containers or structures. Halon may decompose into toxic materials and carbon dioxide will displace oxygen. Take proper precautions when using these materials.

HAZARDOUS COMBUSTION PRODUCTS:
Thermal decomposition in the presence of air may yield, carbon monoxide, carbon dioxide, and various hydrocarbons.

FIRE FIGHTING PROCEDURES;
Emergency responders in the danger area should wear bunker gear and self-contained breathing apparatus for fires beyond the incipient stage. Wear other protective gear as conditions warrant. Stop leaks, if it can be done with minimal risk. Water spray may be useful in dispersing vapors or cooling equipment and containers. Material will float on water. Avoid spreading fire with water.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL:
Absorb the liquid and scrub the area with detergent and water.

LARGE SPILL:
Avoid vapors and ignition sources. Use appropriate protective equipment. Stop and contain the discharge if it can be done safely. Keep out of drains and water ways. Handle only with trained personnel. Notify authorities as necessary.

GENERAL PROCEDURES:
Dispose of liquid and absorbents in accordance with local, state, and federal law.

7. HANDLING AND STORAGE

GENERAL PROCEDURES;
Use in accordance with good industrial workplace practices. Open containers slowly to relieve pressure.

HANDLING:
Avoid unnecessary contact. Wash thoroughly after handling. Do not wear contaminated clothing or shoes.

STORAGE;
Store in a dry place away from excessive heat. Store containers tightly closed and property labeled.

Storage Temperature: 120? F maximum

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTION
EYES AND FACE;
Standard safety glasses with splash shields are adequate protection. Where excessive splashing is possible, a face shield should be used.

SKIN:

Excessive contact should be avoided. Neoprene gloves and aprons will provide adequate protection when contact cannot be avoided.

RESPIRATORY:
Good general ventilation should be sufficient to control airborne levels. Maintain airborne concentrations below the established exposure limits of ingredients in Section 2.

PROTECTIVE CLOTHING:
Chemical resistant aprons and boots are suggested when contact with material can not be avoided. Remove and wash any contaminated clothing immediately.

WORK HYGIENIC PRACTICES;
Wash thoroughly after handling.

OTHER USE PRECAUTIONS;
Eye wash stations and emergency showers should be available.

COMMENTS:
The BLASTER CHEMICAL COMPANIES takes no responsibility for determining what measures are required for personal protection in any specific application. The information provided should be used with discretion.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Odor; Strong Aromatic
Appearance: Translucent, viscous, and oily.
Color: Dark brown/amber
Percent Volatile: 69.10
Vapor Density: †1 (Air = 1)
Boiling Point; 352 to 418?F
Freezing Point: Not Established
Solubility in Water:Slight
Evaporation Rate: †1 (n-Butyl Acetate=1)
Specific Gravity: .8918 to .9118 (water=1)
(V0C): 5.194 Pounds per gallon
Weight per Volume: 7.515 Pounds per gallon

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: NO

CONDITIONS TO AVOID:
Avoid excessive heat, sources of ignition, and excessive water.

STABILITY:
Stable.

POLYMERIZATION:
Will not occur.

HAZARDOUS DECOMPOSITION:
Carbon monoxide, carbon dioxide, and various hydrocarbons.

INCOMPATIBLE MATERIALS:
Avoid contact with strong oxidizing agents and strong reducing agents (strong acids or bases). Avoid mixture with water.

11. TOXICOLOGICAL INFORMATION:

COMMENTS:
Toxicological information on this product as a mixture has yet to be determined.
See section 15 for reportable ingredients.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA:
No data available. Contact Env. Dept.

ECOTOXICOLOGICAL INFORMATION:
No data available. Contact Env. Dept.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:
Used or unused product should be disposed of in accordance with local, state, and federal regulations.

EMPTY CONTAINER:
Empty containers will contain residual product and should be handled in the same manner as the product. Containers should be returned to a reputable container reconditioner.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)
Proper Shipping Name: Consumer Commodity
Hazard Class: ORM-D
NA/UN Number: 1950
NAERG: 126
Other Shipping Information: This product, as it leaves Blaster's facilities, meets the definitions set forth in CFR 49 part 173.150c as a "consumer commodity." allowing for certain exceptions (173.156) for domestic surface shipments.

INTERNATIONAL (I.M.O.)
Proper shipping Name: AEROSOLS, 2, UN1950, EMS #2-13,MFAG 311, LIMITED QUANTITIES.

U.S. CUSTOMS HARMONIZATION NUMBER:
3403.19.0000

15. REGULATORY INFORMATION

UNITED STATES
SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)
Title III Notes: There are no SARA 313 reportable materials in this product.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)
CERCLA RQ: This product has no CERCLA Reportable Quantity. However, release into a waterway may require reporting to the National Response Center.

TSCA (TOXIC SUBSTANCE CONTROL ACT)
TSCA Regulatory: This product complies with all TSCA Inventory requirements.

16. OTHER INFORMATION

Approval date: 07/14/2004

REVISION SUMMARY
Revision #: 3

This MSDS replaces the July 28, 2003 MSDS. Any changes in information as follows: In Section 1 Date Prepared

HMIS CODES:
Fire:2 Health: 2 Reactivity: 0 Protection: C

MANUFACTURER DISCLAIMER:
To the best of our knowledge, the information contained herein is accurate. However, neither The Blaster Chemical Companies nor any of its subsidiaries assumes any liability what so ever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user: All materials may present unknown hazards and should be used with caution. Although certain hazards are describer herein, we cannot guarantee that these are the only hazards which exists.

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MSDS Material Safety Data Sheet

The Blaster Corporation

Fuel Injector Cleaner

MSDS Number: FIC

Revision Date: 10/7/13

1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: Fuel Injector Cleaner
Revision Date: 10/7/13
MSDS Number: FIC
Product Code: 16-FIC

Manufacturer:

The Blaster Corporation
8500 Sweet Valley Drive
Valley View, Ohio 44125

(216) 901-5800
(216) 901-5801 fax
www.blasterproducts.com

24 Hour emergency contact: Chemtrec (800) 424-9300
customer #2847

2 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	Percent	Exposure Limits
Isopropanol	67-63-0	12%	OSHA (TWA)- 400 ppm ACGIH (TWA)- 400 ppm
Mineral Spirits		>85%	ACGIH TWA- 100 ppm 8 hr. OSHA TWA- 500 ppm 8 hr

Mineral Spirits may be composed, in whole or in part, of any of the following refinery streams:

Light hydrotreated distillate (petroleum) [CAS No.: 64742-47-8]		
Heavy hydrotreated naphtha (petroleum) [CAS No.: 64742-48-9]		
Petroleum hydrocarbon distillates [CAS No.: 8052-41-3]		
Nonane, all isomers	Mixture.	ACGIH TWA- 200 ppm 8 hr.
Medium Aliphatic Solvent Naphtha	64742-88-7	OSHA TWA- 100 ppm
Hydrotreated Light Distillate	64742-47-8	OSHA TWA-100ppm

3 HAZARDS IDENTIFICATION

Route of Entry: Eyes, skin, inhalation, ingestion

Target Organs: May cause damage to the following organs: kidneys, lungs, the nervous system, liver, mucous membranes, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea

Inhalation: Breathing high concentrations may be harmful. Mist or vapor can irritate the throat and lungs. Breathing this material may cause central nervous system depression with symptoms including nausea, headache, dizziness, fatigue, drowsiness, or unconsciousness. Breathing high concentrations of this material, for example, in an enclosed space or by intentional abuse, can

cause irregular heartbeats which can cause death.

Skin Contact: This product can cause mild, transient skin irritation with short-term exposure. The severity of irritation will depend on the amount of material that is applied to the skin and the speed and thoroughness that it is removed. Symptoms include redness, itching, and burning of the skin. Repeated or prolonged skin contact can produce moderate irritation (dermatitis).

Eye Contact: This product can cause transient mild eye irritation with short-term contact with liquid sprays or mists. Symptoms include stinging, watering, redness, and swelling.

Ingestion: If swallowed, this material may irritate the mucous membranes of the mouth, throat, and esophagus. It can be readily absorbed by the stomach and intestinal tract. Symptoms include a burning sensation of the mouth and esophagus, nausea, vomiting, dizziness, staggering gait, drowsiness, loss of consciousness, and delirium, as well as additional central nervous system (CNS) effects. Due to its light viscosity, there is a danger of aspiration into the lungs during vomiting. Aspiration can result in severe lung damage or death.

Conditions Aggravated by Exposure

Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin, Respiratory System, Liver, Kidneys, Central Nervous System (CNS)

Chronic Health Effects Summary

Chronic effects of ingestion and subsequent aspiration into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction. Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage (sometimes referred to as "Solvent or Painter's Syndrome"). Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal.

Physical Hazards/Precautionary Measures: Extremely flammable liquid and vapor. Vapor can cause flash fire. Keep away from heat, sparks, flames, static electricity or other sources of ignition.

4 FIRST AID MEASURES

Inhalation: Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately.

Skin Contact: Remove contaminated shoes and clothing. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. If skin surface is not damaged, clean affected area thoroughly with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists.

Eye Contact: Flush eyes with cool, clean, low-pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. If easily accomplished, check for and remove contact lenses. If contact lenses cannot be removed, seek immediate medical attention. Do not use eye ointment. Seek medical attention.

Ingestion: Do not induce vomiting. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.

Notes to Physician:

INHALATION: Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract

inflammation, bronchitis, and pneumonitis. Administer supplemental oxygen with assisted ventilation, as required. This material (or a component) sensitizes the heart to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administion of sympathomimetic drugs should be avoided.

INGESTION: If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.

5 FIRE FIGHTING MEASURES

Flash Point: 71 F (TCC) lowest component

Flammable limits in air, % by volume:

Upper:	No Information
Lower:	No Information

Extinguishing Media:
Dry chemical, carbon dioxide, halon, or foam is recommended. Water spray may be used to cool containers or structures. Halon may decompose into toxic materials and carbon dioxide will displace oxygen, take proper precautions when using these materials.

Unusual Fire & Explosion Hazards:
This material may be ignited by heat, sparks, flames or other ignition sources (static electricity). Vapors are heavier than air and will collect in low areas (sewers) or travel considerable distances. If containers are not cooled in a fire, they may rupture and ignite.

Special Fire Fighting Procedures:
Emergency responders should wear self-contained breathing apparatus. Wear other protective gear as conditions warrant. Keep unauthorized people out and try to contain spills or leaks if it can be done safely. Material will float on water, avoid spreading the fire.

6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedure: In case of spill or release, avoid vapors and ignition sources. Use appropriate protective equipment. Clean up small spills by using a nonflammable absorbent. Keep out of drains and waterways. Handle with trained personnel only. Notify authorities as required by law.

Waste Disposal Method: Bottle and contents can then be recycled. Dispose of in accordance with local, state and federal regulations.

7 HANDLING AND STORAGE

Handling Precautions: Use with adequate ventilation. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Avoid breathing vapor. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Decontaminate soiled clothing thoroughly before re-use. Destroy contaminated leather clothing.

Empty containers may contain residues from the product. Treat empty containers with the same precautions as the material.

Storage Requirements: Store in a dry place away from excessive heat. Store containers with lids on and properly labeled.

Do not store at temperatures above 120 degrees F.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Eye wash stations and emergency showers should be immediately available.

Protective Equipment: Eyes and Face: Standard safety glasses with splash shields typically offer adequate protection. Where excessive splashing or spraying is possible, a face shield should be used.

Skin and clothing: Excessive contact should be avoided. Neoprene gloves, boots and aprons will provide adequate protection when contact cannot be avoided. Remove and wash any contaminated clothing immediately. Wash thoroughly after handling.

Respiratory: Good general ventilation should be sufficient to control airborne levels. Maintain airborne concentrations below OSHA established exposure limits of ingredients in Section 2.

Exposure Guidelines/Other: The Blaster Corporation takes no responsibility for determining what measures are required for personal protection in any specific application. This information should be used with discretion.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear Red		
Physical State:	Liquid	Boiling Point:	76 C
Odor:	aromatic	Freezing/Melting Pt.:	Not determined
pH:	Not determined	Solubility:	slight
Vapor Pressure:	Not determined	Spec Grav./Density:	0.815
Vapor Density:	>1 (air = 1)		

Heat Value:	Not determined
VOC:	not determined
Evap. Rate:	>1 (NBA = 1)
Bulk Density:	Not determined
Octanol:	Not applicable
Molecular Weight:	Not determined
Particle Size:	Not applicable

Softening Point:	Not applicable
Viscosity:	Not determined
Percent Volatile:	not determined
Sat. Vap. Concentrat.:	Not determined
Molecular Formula:	Not determined

10 STABILITY AND REACTIVITY

Stability:	This product is stable.
Conditions to avoid:	Avoid excessive heat, sources of ingition and excessive water.
Materials to avoid (incompatability):	Avoid contact with strong oxidizing agents. Avoid mixture with water.
Hazardous Decomposition products:	Carbon monoxide, carbon dioxide, and nitrogen-oxygen compounds .
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION

MINERAL SPIRITS

Light hydrotreated distillate (petroleum):
Studies on laboratory animals have shown similar materials to cause eye and respiratory tract irritation. Studies of similar materials on laboratory animals have resulted in skin irritation after repeated or prolonged contact. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and rash (dermatitis).

Petroleum hydrocarbon distillates:
Dermal, Acute LD_{50} (rabbit): >3000 mg/kg
Inhalation, Acute LC_{50} (rat): >5.5 mg/l (8 hours)
Studies on laboratory animals have associated similar materials with eye and respiratory tract irritation. Studies on laboratory animals have shown similar materials to cause skin irritation after repeated or prolonged contact. Repeated direct application of Stoddard Solvent to the skin can produce defatting dermatitis and kidney damage in laboratory animals. Rats developed kidney damage and elevated blood urea nitrogen levels when exposed to a concentration of 1.9 mg/L for 65 days. The kidney damage occurred only in male rats and appeared to involve both the tubules and glomeruli. The significance of these animal study results to human health is unclear.

ISOPROPANOL

LD/50
5000 MG/KG RAT ORAL
3600 MG/KG MOUSE ORAL
6410 MG/KG RABBIT ORAL
12,800 MG/KG RABBIT DERMAL

LC/50
53,000 MG/M3 MOUSE INHALATION
72,600 MG/M3 RAT INHALATION
16,000 PPM/8H RAT INHALATION

12 ECOLOGICAL INFORMATION

MINERAL SPIRITS

Ecotoxicity

This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems.

Environmental Fate

This product will normally float on water. Components will evaporate rapidly. This material may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment. The log Kow value for this product is expected to be in the range of 3.3 to 6.

ISOPROPANOL

Aquatic toxicity

Low toxicity to aquatic organisms such as bacteria, algae, protozoa and fish.
LC50 (Leuciscus idus melanotus) 48 hours > 100
LC50 (Brown shrimp) 96 hours 467,923 mg/l
EC50 (Brine shrimp) 48 hours > 100 mg/l
EC50 (S. subspicatus (algae)): 72 hours > 100 mg/l

Biodegradation

Readily biodegradable.

13 DISPOSAL CONSIDERATIONS

Dispose of spilled material in accordance with state and local regulations for waste that is non-hazardous by Federal definition. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

Note that this handling and disposal information may also apply to empty containers, liners and rinsate. State or local regulations or restrictions are complex and may differ from federal regulations. This information is intended as an aid to proper handling and disposal; the final responsibility for handling and disposal is with the owner of the waste.

14 TRANSPORT INFORMATION

Dept. of Transportation (DOT):

This product, as it leaves Blaster's facilities, meets the definitions set forth in CFR 49 part 173.150c as a "consumer commodity." Allowing for certain exceptions (173.156) for domestic surface (ground) shipments.

Proper shipping name: Consumer Commodity
Hazard class: ORM-D

International (IMDT-IATA):

Proper shipping name: Flammable liquid n.o.s. (naphtha), Limited Quantities
Hazard class: 3
Packing Group: I
UN Number: 1993

15 REGULATORY INFORMATION

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

Superfund Amendments Reauthorization Act (SARA TITLE) III:
Hazard Category For Section 311/312: Acute Health, Fire Hazard, Sudden Release of Pressure
Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None
Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product is not known to contain any chemical currently listed as carcinogens or reproductive toxins under California Propsition 65.

VOC Regulations: This product complies with the consumer product VOC limits of CARB, the US EPA and states adopting the OTC VOC rules.

Consumer Product Safety Act General Conformity Certification: This product was evaluated by The Blaster Corporation, and is certified to be in compliance with the provisions of the Consumer Product Safety Act, the Federal Hazardous Substances Act and the Poison Prevention Packaging Act, as applicable. This product was manufactured at the location listed in Section 1 of this MSDS. The date of manufacture is stamped on the product container. No testing is required to certify compliance with the above.

16 OTHER INFORMATION

Manufacturer's Disclaimer:
To the best of our knowledge, the information contained herein is accurate. However, neither The Blaster Corporation nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazard which exists.

HMIS Ratings:		NFPA Ratings:	
Health:	1	Health:	1
Fire:	3	Fire:	3
Reacitivity:	0	Reacitivity:	0

END OF MSDS DOCUMENT

SAFETY DATA SHEET

Section 1. Identification

Trade name : Famowood Wood Filler - Original Formula

Product code : 10101100

Date of issue/Date of revision : 9/10/2014.

Supplier : Eclectic Products Inc.
1075 Arrowsmith
Eugene, OR 97402
541-484-9621

Responsible name : Regulatory Compliance

Emergency telephone number (with hours of operation) : CALL INFOTRAC
800-535-5053
001-352-323-3500
24 hours per day, 7 days per week.

Relevant identified uses of the substance or mixture and uses advised against

Putty.

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
Causes serious eye irritation.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear protective gloves. Wear eye or face protection. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Wash hands thoroughly after handling.

Response : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store in a well-ventilated place. Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Acetone	5-10%	67-64-1
Methyl Ethyl Ketone	5-10%	78-93-3
Wood Dust Particles	5-10%	9004-34-6
Solvent Naphtha	1-5%	64742-89-8
Isopropyl alcohol	1-5%	67-63-0
crystalline silica respirable	<1%	14808-60-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Section 4. First aid measures

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Acetone	**ACGIH TLV (United States, 3/2012).** STEL: 1782 mg/mÂ³ 15 minutes. STEL: 750 ppm 15 minutes. TWA: 1188 mg/mÂ³ 8 hours. TWA: 500 ppm 8 hours. **NIOSH REL (United States, 1/2013).** TWA: 590 mg/mÂ³ 10 hours. TWA: 250 ppm 10 hours. **OSHA PEL (United States, 6/2010).** TWA: 2400 mg/mÂ³ 8 hours.

Section 8. Exposure controls/personal protection

	TWA: 1000 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989). Notes: The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors.** STEL: 2400 mg/mÂ³ 15 minutes. STEL: 1000 ppm 15 minutes. TWA: 1800 mg/mÂ³ 8 hours. TWA: 750 ppm 8 hours.
Methyl Ethyl Ketone	**ACGIH TLV (United States, 3/2012). Notes: Substances for which there is a Biological Exposure Index or Indices** STEL: 885 mg/mÂ³ 15 minutes. STEL: 300 ppm 15 minutes. TWA: 590 mg/mÂ³ 8 hours. TWA: 200 ppm 8 hours. **NIOSH REL (United States, 1/2013).** STEL: 885 mg/mÂ³ 15 minutes. STEL: 300 ppm 15 minutes. TWA: 590 mg/mÂ³ 10 hours. TWA: 200 ppm 10 hours. **OSHA PEL (United States, 6/2010).** TWA: 590 mg/mÂ³ 8 hours. TWA: 200 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989).** STEL: 885 mg/mÂ³ 15 minutes. STEL: 300 ppm 15 minutes. TWA: 590 mg/mÂ³ 8 hours. TWA: 200 ppm 8 hours.
Wood Dust Particles	**NIOSH REL (United States, 1/2013).** TWA: 5 mg/mÂ³ 10 hours. Form: Respirable fraction TWA: 10 mg/mÂ³ 10 hours. Form: Total **OSHA PEL (United States, 6/2010).** TWA: 5 mg/mÂ³ 8 hours. Form: Respirable fraction TWA: 15 mg/mÂ³ 8 hours. Form: Total dust **OSHA PEL 1989 (United States, 3/1989).** TWA: 5 mg/mÂ³ 8 hours. Form: Respirable fraction TWA: 15 mg/mÂ³ 8 hours. Form: Total dust **ACGIH TLV (United States, 3/2012).** TWA: 10 mg/mÂ³ 8 hours.
Isopropyl alcohol	**ACGIH TLV (United States, 3/2012).** TWA: 200 ppm 8 hours. STEL: 400 ppm 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes. **NIOSH REL (United States, 1/2013).** TWA: 400 ppm 10 hours. TWA: 980 mg/m³ 10 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes. **OSHA PEL (United States, 6/2010).** TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours.
crystalline silica respirable	**OSHA PEL Z3 (United States, 9/2005).** TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable TWA: 10 MG/M3 / (%SiO2+2) 8 hours. Form: Respirable TWA: 30 MG/M3 / (%SiO2+2) 8 hours. Form: Total dust. **OSHA PEL 1989 (United States, 3/1989).** TWA: 0.1 mg/m³, (as quartz) 8 hours. Form: Respirable dust

Section 8. Exposure controls/personal protection

	ACGIH TLV (United States, 3/2012). TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 1/2013).** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

This product may contain materials classified as nuisance particulates, which may be present at hazardous levels only during sanding or abrading of the dried film. Wear a dust/mist respirator approved for dust when dusts are generated from sanding or abrading the dried film.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Paste.]

Color : Various

Odor : Not available.

pH : Not available.

Boiling point : 56.111°C (133°F)

Flash point : Open cup: -17°C (1.4°F) []

Flammability : Not available.

Evaporation rate : <1 (ether (anhydrous) = 1)

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : >1 [Air = 1]

Specific gravity : 1.49 to 1.58

Solubility : Partially soluble in the following materials: water.

VOC (wt%) : 14.51% - 17.11%

Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
Methyl Ethyl Ketone	LD50 Dermal	Rabbit	6480 mg/kg	-
	LD50 Oral	Rat	2737 mg/kg	-
Wood Dust Particles	LD50 Oral	Rat	>5 g/kg	-
Solvent Naphtha	LC50 Inhalation Gas.	Rat	>5000 ppm	1 hours
	LD50 Dermal	Rat	2001 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
Isopropyl alcohol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	395 milligrams	-
Methyl Ethyl Ketone	Skin - Mild irritant	Rabbit	-	24 hours 14 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
Isopropyl alcohol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Limestone and natural iron oxide used in making this product contain crystaline silica as an impurity. Repeated, prolonged exposure to respirable crystalline dusts may increase the risk of developing a disabling lung disease called silicosis. The International Agency for Research on Cancer (IARC) reports there is sufficient evidence in humans for the carcinogencity of inhaled crystalline silica from occupational sources. Based on studies of workers in industrial and occupational settings, The National Toxicology Program (NTP) Ninth Report on Carcinogens lists crystalline silica (respirable) as a substance known to be a carcinogen to humans.

Classification

Product/ingredient name	OSHA	IARC	NTP
Wood Dust Particles	-	1	-
crystalline silica respirable	-	1	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	Not applicable.	Narcotic effects
Methyl Ethyl Ketone	Category 3	Not applicable.	Narcotic effects
Isopropyl alcohol	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Not available.

Aspiration hazard

Name	Result
Solvent Naphtha	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Routes of entry anticipated: Dermal, Inhalation.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	31050.4 mg/kg
Dermal	51058.4 mg/kg
Inhalation (gases)	114824 ppm

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 100 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
Methyl Ethyl Ketone	Acute EC50 >500000 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 5091000 to 6440000 µg/l Fresh water	Daphnia - Daphnia magna - Larvae	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
Isopropyl alcohol	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 1400000 µg/l	Fish - Gambusia affinis	96 hours

Persistence and degradability

Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	1993	1993	1993	1993
UN proper shipping name	FLAMMABLE LIQUIDS, N.O.S. (Acetone, Methyl Ethyl Ketone)	FLAMMABLE LIQUIDS, N.O.S. (Acetone, Methyl Ethyl Ketone)	FLAMMABLE LIQUIDS, N.O.S. (Acetone)	FLAMMABLE LIQUIDS, N.O.S. (Acetone)
Transport hazard class (es)	3 	3 	3 	3 
Packing group	II	II	II	II
Environmental hazards	No.	No.	No.	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.

SARA 311/312

Classification : Fire hazard
Immediate (acute) health hazard

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Zinc Stearate	557-05-1	1-5
Supplier notification	Zinc Stearate	557-05-1	1-5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

California Prop. 65

Section 15. Regulatory information

WARNING: This product contains a chemical known to the State of California to cause cancer.
The California listing of silica, crystalline as a carcinogen is qualified as “airborne particles of respirable size”.

Wood Dust Particles Avoid inhalation of dust from sanding. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator.

Ingredient name	Cancer	Reproductive
Wood Dust Particles	Yes.	No.
crystalline silica respirable	Yes.	No.

WHMIS (Canada) : Class B-2: Flammable liquid
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

Canada inventory : Not determined.

International regulations

International lists : **Australia inventory (AICS)**: Not determined.
China inventory (IECSC): Not determined.
Japan inventory: Not determined.
Korea inventory: Not determined.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

National Fire Protection Association (U.S.A.)



Key to abbreviations : ATE = Acute Toxicity Estimate
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Fast Acting Gypsum**
Formula: Calcium Sulfate Dihydrite + Anionic Polyacrylamide Emulsion + Anionic Polymer
CAS No.: N/A
Recommended Use: Fertilizer; Soil Amendment

Company Identification: **Encap, LLC**
3921 Algoma Road
Green Bay, WI 54311
Phone: (877) 405-5050

2. HAZARDS IDENTIFICATION

HMIS Classification

Health Hazard:	1
Chronic Health Hazard:	-
Flammability:	0
Physical Hazards:	0
Personal Protection:	E

HEALTH	1
FIRE	0
REACTIVITY	0
PPE	E

(Safety glasses, gloves, and dust respirator)

NFPA Rating

Health Hazard:	1
Fire:	0
Reactivity Hazard:	0
Special Hazard:	None



GHS Labeling
Symbol: Exclamation mark
Signal Word: Warning



Hazard Statements:

H315	Causes skin irritation
H320	Causes eye irritation
H335	May cause respiratory irritation
H303	May be harmful if swallowed

Precautionary Statements: P 261 Avoid breathing dust

Hazards Not Otherwise Classified: Unknown

OSHA Hazards
No known OSHA hazards

Target Organs
Skin, eyes, and respiratory system.

Potential Immediate Health Effects

Inhalation: May cause respiratory tract irritation. Coughing, sneezing, or shortness of breath may occur following exposures in excess of exposure limits. Conjunctivitis, chronic rhinitis, laryngitis, pharyngitis, impaired sense of smell and taste, bleeding from the nose, and reactions of tracheal and bronchial membrans are possible with acute exposure.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed. May cause gastrointestinal tract irritation. Intestinal obstruction may occur if the material hardens. Weakness, abdominal cramps, vomiting, bloody diarrhea, weakness, convulsions, and collapse are possible if large amounts are ingested.

3. COMPOSITION

Chemical Identity:	CaSO4·2H2O	93.6%
Common Name:	Gypsum	
CAS No.:	13397-24-5	
Chemical Identity:	Anionic Polyacrylamide Emulsion	1.0%
Common Name:	Anionic Polyacrylamide Emulsion	
CAS No.:	N/A	
Chemical Identity:	Anionic Polymer	0.5%
Common Name:	Anionic Polymer	
CAS No.:	N/A	

4. FIRST AID MEASURES

EYE:
Symptoms: May cause eye irritation.
Irrigate immediately. If this product contacts the eyes, immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention if needed.

SKIN:
Symptoms: May be harmful if absorbed through skin. May cause skin irritation.
Wash skin immediately rinse skin with plenty of water. Cover irritated skin with emmolient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if needed.

INHALATION:
Symptoms: May cause respiratory tract irritation. Coughing, sneezing, or shortness of breath may occur following exposures in excess of exposure limits. Conjunctivitis, chronic rhinitis, laryngitis, pharyngitis, impaired sense of smell and taste, bleeding from the nose, and reactions of tracheal and bronchial membrans are possible with acute exposure.
Fresh air. If a person breathes in large amounts of this product, move to fresh air at once. If not breathing, give artificial respiration. Get medical attention if needed.

INGESTION:
Symptoms: May be harmful if swallowed. May cause gastrointestinal tract irritation. Intestinal obstruction may occur if the material hardens. Weakness, abdominal cramps, vomiting, bloody diarrhea, weakness, convulsions, and collapse are possible if large amounts are ingested.
Rinse mouth. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if needed.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use an extinguishing agent suitable for the surrounding fire.

Unsuitable Extinguishing Media
None

Special Protective Equipment for Fire-Fighters
Self-contained breathing apparatus and full protective clothing.
Note: Aqueous solutions or powders may render surfaces slippery.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Use personal protective equipment. Avoid dust formation. Ensure adequate ventilation.

Environmental Precautions
Prevent product from entering drains.

Methods and Materials for Containment and Clean-up
Sweep spilled substance into containers; avoid generating dust. Reuse if not contaminated.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Eating, drinking, and smoking should be prohibited in areas where this material is handled or stored. Do not ingest and avoid contact with skin and eyes. Avoid breathing in dust. Wear appropriate respirator when ventilation is inadequate.

Recommended Conditions for Storage
Store in a cool, dry, well ventilated location. Do not store near aluminum (at high temperatures), diazomethane, oxidizing agents or other incompatible materials. Keep away from moisture.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

	CAS No.	ACGIH TLV	OSHA/PEL
Calcium sulfate dihydrate (gypsum)	13397-24-5	10 mg/m_3	15 mg/m_3 (total)
Anionic Polyacrylamide Emulsion	No CAS No.	none	none
Anionic Polymer	No CAS No.	none	none

Engineering Controls
Local exhaust ventilation recommended. Running water should be available in case material gets in eyes. Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Wash clothing before reusing.

Personal Protective Equipment

Respiratory Protection
A NIOSH (US) or CEN (EU) approved particulate respirator is recommended where total dust concentration exceeds 10 mg/m^3.

Hand Protection
None required for normal use. If prolonged or repeated use irritates skin, use rubber, neoprene, vinyl, or nitrile gloves.

Skin and Body Protection
Long sleeves or lab coat are recommended.

Eye Protection
NIOSH (US) or CEN (EU) approved safety glasses with side shields, goggles, or face shield are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brown granular mix
Odor:	Mineral
Odor threshold:	Unknown
pH:	Neutral
Melting Point:	Unknown
Freezing Point:	Unknown
Evaporation Rate:	0
Flammability:	Not Flammable
Explosion Limits:	Unknown
Vapor Pressure:	N/A
Vapor Density:	N/A
Specific Gravity:	2.6 - 2.75
Solubility in Water:	0-.2% at 40°C
Partition coefficient:	Unknown
Auto-ignition temp.:	Unknown
Decomposition temp.:	Unknown
Viscosity:	N/A
Other:	Unknown

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under recommended storage conditions. Avoid excess heat and incompatible materials.

Conditions to Avoid: Oxidizing agents, aluminum (at high temperatures), and diazomethane

Hazardous Decomposition Products: Thermal decomposition may produce: calcium oxide, nitrogen oxides, carbon oxides, sulfur oxides, and hydrogen cyanide.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure
Eyes, skin, ingestion, and inhalation.

Potential Health Effects

Inhalation: May cause respiratory tract irritation. Coughing, sneezing, or shortness of breath may occur following exposures in excess of exposure limits. Conjunctivitis, chronic rhinitis, laryngitis, pharyngitis, impaired sense of smell and taste, bleeding from the nose, and reactions of tracheal and bronchial membrans are possible with acute exposure.

Ingestion: May be harmful if swallowed. May cause gastrointestinal tract irritation. Intestinal obstruction may occur if the material hardens. Weakness, abdominal cramps, vomiting, bloody diarrhea, weakness, convulsions, and collapse are possible if large amounts are ingested.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Acute Toxicity
LD50 Oral - rat - 0.5 mg/kg (anionic polyacrylamide emulsion)

Reproductive Toxicity
No data available.

Germ Cell Mutagenicity
No data available.

Specific target organ toxicity - single exposure
Adverse health effects are not expected under normal use.

Specific target organ toxicity - repeated exposure
No data available.

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC. IARC = International Agency for Research on Cancer

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as carcinogen or potential carcinogen by ACGIH. ACGIH = American Conference of Industrial Hygienists

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated carcinogen by NTP. NTP = National Toxicology Program

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as carcinogen or potential carcinogen by OSHA. OSHA = Occupational Safety and Health Administration

12. ECOLOGICAL INFORMATION

Toxicity
LC50 - fathead minnows - 317 mg/L (anionic polyacrylamide emulsion)
LC50/72-hr - Algae - 100 mg/L (anionic polyacrylamide emulsion)
LC50 - Daphnia - 1,070 mg/L (anionic polyacrylamide emulsion)

Mobility
Water contaminating.

Persistence and Degradability
No data available.

PBT and vPvB Assessment
Not applicable.

Bioaccumulative Potential
Not applicable.

Other Adverse Effects
No data available.

13. DISPOSAL CONSIDERATIONS

May be disposed of as an inert solid in sanitary landfill or by other procedures in accordance with all federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT (US)
This material is not regulated by the DOT.

IMDG
This material is not regulated by the IMDG.

IATA
This material is not regulated by IATA.

15. REGULATORY INFORMATION

OSHA Hazards
None of the chemicals in this product are listed as highly hazardous by OSHA.

DSL Status
None of the chemicals in the product are on the Canadian Domestic Substance List (DSL) list.

SARA 302 Compounds
No chemicals in this material are subject to SARA Title III, Section 302 reporting.

SARA 313 Compounds
No chemicals in this material are subject to the reporting requirements of Section 313 of SARA.

SARA 311/312 Hazards
No chemicals in this material are subject to Section 311/312 of SARA.

Massachusetts Right To Know
Gypsum is listed by the Massachusetts Right to Know Act.

Pennsylvania Right To Know
Gypsum is listed by the Pennsylvania Right to Know Act.

New Jersey Right To Know
Gypsum is listed by the New Jersey Right to Know Act.

California Proposition 65
This product contains a chemical known to the State of California to cause cancer: Residual Acrylamide.

16. OTHER INFORMATION

No data is available, per 29 CFR 1910.1200(d)(b); health hazards are based upon all of the components which make up the mixture.

The above information is believed to be correct, but is not purported to be all-inclusive and should only be used as a guide. Because data, safety standards, and regulatory inputs are subject to change, no warranty, guarantee, or representation with respect to the completeness or continuing accuracy of the information contained in this document is made. The user of this product must decide what safety measures are necessary to safely use this product; the conditions of handling and use, or misuse, are beyond the control of Encap, LLC. The user is also responsible to determine its environmental regulatory compliance obligations under any applicable federal or state laws.

Material Safety Data Sheet

This MSDS is prepared in accordance with OSHA 29 CFR 1910.1200

 WHMIS (Pictograms)	**WHMIS CLASS D-2: Material causing other toxic effects.** WHMIS (Classification)	HCS Class: Irritating substance. HCS

Section 1. Chemical Product and Company Identification

Product Name/ Trade name	**Clear Image Concentrate**
Synonym	Non-Ammoniated Glass Cleaner
Chemical Family	Not available.
Chemical Formula	Not applicable.
Manufacturer/ Supplier	Betco Corporation 1001 Brown Avenue Toledo, Ohio 43607 (419) 241-2156
TSCA	**TSCA Inventory: All components listed or are exempt from listing.**
DSL/ NDSL	**All components listed unless noted elsewhere on this MSDS**

Code	199
Version Number	2.0
Validation Date	**9/29/2010**
Print Date	9/29/2010
In Case of Emergency	Chemtrec (800) 424-9300

Protective Clothing



Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits	LC_{50}/LD_{50}
2-Butoxyethanol	111-76-2	5 - 10	**ACGIH (United States).** TWA: 20 ppm **OSHA (United States).** TWA: 50 ppm	ORAL (LD50): Acute: 1746 mg/kg [Rat].
Sodium Lauryl Sulfate	151-21-3	1 - 5	Not available.	Not available.
Sodium Xylene Sulfonate	1300-72-7	1 - 5	Not available.	ORAL (LD50): Acute: 650 mg/kg [Rat]. 5939 mg/kg [Mouse].

Section 3. Hazards Identification

Potential Acute Health Effects	Harmful if swallowed. Harmful if absorbed through the skin.
Potential Chronic Health Effects	Over-exposure by inhalation may cause respiratory irritation. *Repeated or prolonged exposure to the substance can produce liver damage. *Repeated or prolonged exposure to the substance can produce nervous system damage. *Repeated or prolonged exposure to the substance can produce blood disorders. *Information is based on animal data, relevance to humans has yet to be determined.
Carcinogenic Effects	Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Section 4. First Aid Measures

Eye Contact	Flush with large quantities of water. Seek medical attention if irritation persists.
Skin Contact	Flush with large quantities of water. Seek medical attention if irritation persists.
Inhalation	Get to fresh air. Seek medical attention if irritation persists.
Ingestion	INDUCE VOMITING by sticking finger in throat. Seek immediate medical attention.

Section 5. Fire Fighting Measures

Products of Combustion	Not available.
Fire Fighting Media and Instructions	N/A
Special Remarks on Fire Hazards	N/A
Special Remarks on Explosion Hazards	N/A

Section 6. Accidental Release Measures

Small Spill and Leak	Safety glasses recommended. Absorb with an inert material and place in an appropriate waste disposal container.
Large Spill and Leak	Avoid to runoff to sewers and waterways. Wear Protective Clothing. Absorb with inert Material. Contact you local Emergency planning commission for further instructions.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Section 7. Handling and Storage

Precautions	Keep out of reach of children. Keep locked up. For Institutional and Commercial Use
Incompatibility	None known.
Storage	Keep out of the reach of children. Not for use or storage in or around the home.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.
Personal Protection	
Eyes	Safety glasses.
Body	No special protective clothing is required.
Respiratory	Wear appropriate respirator when ventilation is inadequate.
Hands	Gloves.
Protective Clothing (Pictograms)	
Exposure Limits	**2-Butoxyethanol** TWA: 25 (ppm) TWA: 50 (ppm) from OSHA (PEL) Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.
Molecular Weight	Not applicable.
pH	Not available.
Boiling/Condensation Point	209°F initial

Odor	Characteristic.
Taste	Not available.
Color	Blue.

Melting/Freezing Point	Not available.
Critical Temperature	Not available.
Instability Temperature	Not available.
Specific Gravity	0.98 (Water = 1)
Vapor Pressure	Not available.
Vapor Density	>1 (Air = 1)
Volatility	100
VOC	Not available.
Evaporation Rate	>1 compared to Water
Dispersion Properties	See solubility in water.
Solubility	Easily soluble in cold water.
The Product is:	May be combustible at high temperature.
Auto-ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	Not available.
Fire Hazards in Presence of Various Substances	No specific information is available in our database regarding the flammability of this product in presence of various materials.
Explosion Hazards in Presence of Various Substances	Not applicable

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Incompatibility with Various Substances	None known.
Hazardous Decomposition Products	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	**WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.** Acute oral toxicity (LD50): 1746 mg/kg [Rat]. (2-Butoxyethanol). Acute toxicity of the gas (LC50): 926 ppm 4 hour(s) [Mouse]. (2-Butoxyethanol).
Acute Effects on Humans	
Eyes	Eye irritant. Liquid and mists may damage the eyes causing corneal injury.
Skin	Skin irritant. May cause moderate redness and swelling.
Inhalation	Vapors may be irritating to mucous membranes of the nose, throat, and lungs.
Ingestion	May cause headache, dizziness, nausea, vomiting, and diarrhea.

Chronic Effects on Humans	Over-exposure by inhalation may cause respiratory irritation. *Repeated or prolonged exposure to the substance can produce liver damage. *Repeated or prolonged exposure to the substance can produce nervous system damage. *Repeated or prolonged exposure to the substance can produce blood disorders. *Information is based on animal data, relevance to humans has yet to be determined.
Special Remarks on Toxicity to Animals	No additional remark.
Special Remarks on Chronic Effects on Humans	No additional remark.

Section 12. Ecological Information

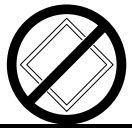
Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on the Products of Biodegradation	No additional remark.

Section 13. Disposal Considerations

Waste Information	Any method in accordance with allapplicable local , state, and federal regulations.
Waste Stream	Not available.

Section 14. Transport Information

DOT (U.S.A) (Pictograms)



TDG Classification Not controlled under TDG (Canada).



PIN UN, Proper Shipping Name, PG Not applicable.

Maritime Transportation Not available.

Special Provisions for Transport Not applicable.

Section 15. Other Regulatory Information and Pictograms

WHMIS (Classification) WHMIS CLASS D-2: Material causing other toxic effects.



Regulatory Lists

Other Regulations

Other Classifications

HCS (U.S.A.) HCS Class: Irritating substance.

USA Regulatory Lists

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: 2-Butoxyethanol: immediate health hazard, delayed health hazard
SARA 313 toxic chemical notification and release reporting: 2-Butoxyethanol

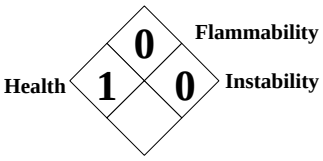
DSD (EEC) R22- Harmful if swallowed.
R36/38- Irritating to eyes and skin.

International Regulations Lists No products were found.

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		0
Physical Hazard		0

National Fire Protection Association (U.S.A.)



The Hazard Ranking systems presented on this MSDS provide only a quick reference for hazard information. The ENTIRE MSDS must be consulted to determine any specific hazards, First Aid measures, and PPE associated with this product.

Section 16. Other Information

Validated by CRushton on 9/29/2010.

Verified by CRushton.

Printed 9/29/2010.

Information Contact **Betco Corporation**
1001 Brown Avenue
Toledo, Ohio 43607

Notice to Reade

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Continued on Next Page

Material Safety Data Sheet

This MSDS is prepared in accordance with OSHA 29 CFR 1910.1200

WHMIS (Pictograms)	WHMIS (Classification)	HCS
	**WHMIS CLASS D-2: Material causing other toxic effects.**	Mild Irritant

Section 1. Chemical Product and Company Identification

Product Name/ Trade name	**Clear Image Concentrate (At Dilution)**
Synonym	Non-Ammoniated Glass Cleaner
Chemical Family	Not available.
Chemical Formula	Not applicable.
Manufacturer/ Supplier	Betco Corporation 1001 Brown Avenue Toledo, Ohio 43607 (419) 241-2156
TSCA	**TSCA Inventory: All components listed or are exempt from listing.**
DSL/ NDSL	**All components listed unless noted elsewhere on this MSDS**

Code	199 At Dilution
CAS #	Not applicable.
Validation Date	**3/2/2010**
Print Date	3/3/2010
In Case of Emergency	Chemtrec (800) 424-9300

Protective Clothing



Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits	LC_{50}/LD_{50}
Water	7732-18-5	>60	Not available.	Not available.
2-Butoxyethanol	111-76-2	0-5	TWA: 20 (ppm) from ACGIH (TLV) [United States] TWA: 50 (ppm) from OSHA (PEL) [United States]	ORAL (LD50): Acute: 1746 mg/kg [Rat].
Sodium Lauryl Sulfate	151-21-3	0-5	Not available.	Not available.
Sodium Xylene Sulfonate	1300-72-7	0-5	Not available.	Not available.
Tetrasodium salt of ethylendiaminetetraacetic acid	64-02-8	0-5	Not available.	ORAL (LD50): Acute: 3030 mg/kg [Rat].
Perfume Oil	N/A	0-5	Not available.	Not available.
Dye	N/A	0-5	Not available.	Not available.
Nonionic Surfactant	66455-15-0	0-5	Not available.	Not available.

Section 3. Hazards Identification

Potential Acute Health Effects	This product is an eye irritant.
Potential Chronic Health Effects	Over-exposure by inhalation may cause respiratory irritation.
Carcinogenic Effects	Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Section 4. First Aid Measures

Eye Contact	Avoid contact with eyes In case of contact with eyes, rinse immediately with plenty of water. Seek immediate medical attention.
Skin Contact	Avoid contact with skin and eyes After contact with skin, wash immediately with plenty of water. Seek medical attention if irritation persists.
Inhalation	Get to fresh air. Seek medical attention if irritation persists.
Ingestion	Seek immediate medical attention. Do NOT induce vomiting unless instructed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person

Section 5. Fire Fighting Measures

Products of Combustion	Not available.
Fire Fighting Media and Instructions	N/A
Special Remarks on Fire Hazards	N/A
Special Remarks on Explosion Hazards	N/A

Section 6. Accidental Release Measures

Small Spill and Leak	Safety glasses recommended. Absorb with an inert material and place in an appropriate waste disposal container.
Large Spill and Leak	Avoid to runoff to sewers and waterways. Wear Protective Clothing. Absorb with inert Material. Contact you local Emergency planning commission for further instructions.
Personal Protection in Case of a Large Spill	Gloves. Boots. Safety glasses. Vapor respirator.

Section 7. Handling and Storage

Precautions	Keep out of reach of children. Keep locked up. For Institutional and Commercial Use
Incompatibility	Not Available
Storage	Keep out of the reach of children. Not for use or storage in or around the home.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.
Personal Protection	
Eyes	Eye contact with the concentrate is unlikely when dispensing through a dilution control system. Eye protection should be worn in operations where splashing may occur .
Body	No special protective clothing is required.
Respiratory	A respirator is not needed under normal and intended conditions of product use.
Hands	Although skin contact with concentrate is unlikely when using through a dilution control system, the use of gloves is recommended when using this product.
Protective Clothing (Pictograms)	

Exposure Limits	**2-Butoxyethanol** TWA: 25 (ppm) TWA: 50 (ppm) from OSHA (PEL) Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.
Molecular Weight	Not applicable.
pH	9 to 10 [Basic.]
Boiling/Condensation Point	212°F initial
Melting/Freezing Point	Not available.
Critical Temperature	Not available.
Instability Temperature	Not available.
Specific Gravity	0.96 (Water = 1)
Vapor Pressure	25mm Hg @ 68°F
Vapor Density	>1 (Air = 1)
Volatility	100
VOC	
Evaporation Rate	>1 compared to Water
Dispersion Properties	See solubility in water.
Solubility	Easily soluble in cold water.
The Product is:	May be combustible at high temperature.
Auto-ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	Not available.
Fire Hazards in Presence of Various Substances	No specific information is available in our database regarding the flammability of this product in presence of various materials.
Explosion Hazards in Presence of Various Substances	Not applicable

Odor	Characteristic.
Taste	Not available.
Color	Blue.

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Incompatibility with Various Substances	Not Available
Hazardous Decomposition Products	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Skin. Eyes. Ingestion.
Toxicity to Animals	**WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.** Acute oral toxicity (LD50): 1746 mg/kg [Rat]. (2-Butoxyethanol). Acute toxicity of the gas (LC50): 926 ppm 4 hour(s) [Mouse]. (2-Butoxyethanol).
Acute Effects on Humans	
Eyes	Irritant.
Skin	Slightly irritating
Inhalation	Slightly irritating to the respiratory system.
Ingestion	May cause headache, dizziness, nausea, vomiting, and diarrhea.
Chronic Effects on Humans	Over-exposure by inhalation may cause respiratory irritation.
Special Remarks on Toxicity to Animals	No additional remark.
Special Remarks on Chronic Effects on Humans	No additional remark.

Section 12. Ecological Information

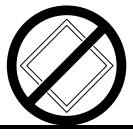
Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on the Products of Biodegradation	No additional remark.

Section 13. Disposal Considerations

Waste Information	Any method in accordance with allapplicable local , state, and federal regulations.
Waste Stream	Not available.

Section 14. Transport Information

DOT (U.S.A) (Pictograms)



TDG Classification Not controlled under TDG (Canada).



PIN UN, Proper Shipping Name, PG Not applicable.

Maritime Transportation	Not available.
Special Provisions for Transport	Not applicable.

Section 15. Other Regulatory Information and Pictograms

WHMIS (Classification) WHMIS CLASS D-2: Material causing other toxic effects.



Regulatory Lists

Other Regulations

Other Classifications

HCS (U.S.A.) Mild Irritant

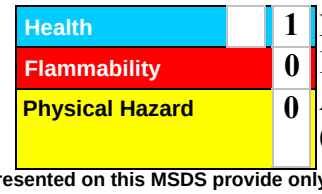
USA Regulatory Lists

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: 2-Butoxyethanol: immediate health hazard, delayed health hazard
SARA 313 toxic chemical notification and release reporting: 2-Butoxyethanol

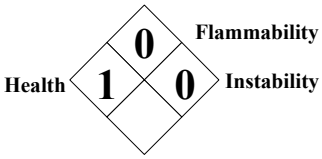
DSD (EEC)

International Regulations Lists No products were found.

Hazardous Material Information System (U.S.A.)



National Fire Protection Association (U.S.A.)



The Hazard Ranking systems presented on this MSDS provide only a quick reference for hazard information. The ENTIRE MSDS must be consulted to determine any specific hazards, First Aid measures, and PPE associated with this product.

Section 16. Other Information

Validated by CRushton on 3/2/2007.

Verified by CRushton.

Printed 11/30/2007.

Information Contact **Betco Corporation**
1001 Brown Avenue
Toledo, Ohio 43607

Notice to Reade

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Continued on Next Page

SAFETY DATA SHEET

1. Identification

Product number	1000012027
Product identifier	**FAST KILL RESIDUAL ROACH & ANT KILLER**
Company information	Claire Manufacturing Co. 1005 S. Westgate Drive Addison, IL 60101 United States
Company phone	General Assistance 1-630-543-7600
Emergency telephone US	1-866-836-8855
Emergency telephone outside US	1-952-852-4646
Version #	01
Recommended use	PESTICIDE
Recommended restrictions	None known.

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
Health hazards	Acute toxicity, inhalation	Category 4
	Aspiration hazard	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements



Signal word	Danger
Hazard statement	Extremely flammable aerosol. May be fatal if swallowed and enters airways.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.
Response	If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting.
Storage	Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Disposal	Not available.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Distillates (Petroleum), Hydrotreated Light		64742-47-8	80 - 90
Butane		106-97-8	2.5 - 10
Propane		74-98-6	2.5 - 10
Esfenvalerate		66230-04-4	0.01 - 0.1

#: This substance has workplace exposure limit(s).
*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention immediately.
Skin contact	Wash off with warm water and soap.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. No need for first aid is anticipated if material is swallowed.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Immediate medical attention is required. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Dry chemicals. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. Fire may produce irritating, corrosive and/or toxic gases.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable aerosol.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Keep out of low areas. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Use water spray to reduce vapors or divert vapor cloud drift. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS. This material and its container must be disposed of as hazardous waste.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Handle and open container with care. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Level 3 Aerosol.

Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS). Level 3 Aerosol.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m3 800 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines No Exposure standards allocated.

Appropriate engineering controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face protection Face shield is recommended. Wear safety glasses with side shields (or goggles).

Hand protection Wear appropriate chemical resistant gloves.

Skin protection

Other Chemical resistant gloves.

Skin protection

Respiratory protection If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Avoid contact with eyes. Avoid contact with skin. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Gas.

Form Aerosol.

Color clear colorless

Odor Solvent.

Odor threshold	Not available.
pH	Not applicable estimated
Melting point/freezing point	Not available.
Initial boiling point and boiling range	387.07 °F (197.26 °C) estimated
Flash point	-156.0 °F (-104.4 °C) Propellant estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	0.5 % estimated
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	35 - 50 psig @70F estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	421 °F (216.11 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Specific gravity	0.765 estimated estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Risk of explosion.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Nitrates. Fluorine. Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Inhalation	Not available.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	Acute LD50: 2356 mg/kg, Rat, Dermal May be fatal if swallowed and enters airways.

Product	Species	Test Results
FAST KILL RESIDUAL ROACH & ANT KILLER (CAS Mixture)		
Acute		
Dermal		
LD50	Rat	2356 mg/kg
Inhalation		
LC50	Rat	6 mg/l/4h
Oral		
LD50	Rat	

Components	Species	Test Results
Butane (CAS 106-97-8)		
Acute		
Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l
Distillates (Petroleum), Hydrotreated Light (CAS 64742-47-8)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
		> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Rat	> 7.5 mg/l, 6 Hours
		> 4.6 mg/l, 4 Hours
Oral		
LD50	Rat	> 5000 mg/kg
Propane (CAS 74-98-6)		
Acute		
Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l
		658 mg/l/4h

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Not expected to be hazardous by OSHA criteria.

Serious eye damage/eye irritation Irritating to eyes.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity Not expected to be hazardous by OSHA criteria. Not expected to be hazardous by WHMIS criteria.

Carcinogenicity Not expected to be hazardous by WHMIS criteria. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity Not expected to be hazardous by OSHA criteria.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Not expected to be hazardous by WHMIS criteria.

Further information This product has no known adverse effect on human health.

12. Ecological information

Ecotoxicity LC50: 53 mg/L, Fish, 96.00 Hours

Product		Species	Test Results
FAST KILL RESIDUAL ROACH & ANT KILLER (CAS Mixture)			
Aquatic			
Fish	LC50	Fish	53.0035 mg/L, 96 Hours

Components		Species	Test Results
Distillates (Petroleum), Hydrotreated Light (CAS 64742-47-8)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.9 mg/l, 96 hours
Esfenvalerate (CAS 66230-04-4)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	0.0002 - 0.0003 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Butane	2.89
Propane	2.36

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. After recovery of solvent dispose of residue as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

DOT

UN number UN1950

UN proper shipping name Aerosols, flammable, (each not exceeding 1 L capacity)

Transport hazard class(es)

Class 2.1

Subsidiary risk -

Label(s) 2.1

Packing group Not applicable.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions N82

Packaging exceptions 306

Packaging non bulk None

Packaging bulk None

This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity. Until 12/31/2020, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking and both may be displayed concurrently.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No.
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.
Packaging Exceptions	LTD QTY

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Packaging Exceptions	LTD QTY

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

DOT



IATA; IMDG



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Butane (CAS 106-97-8)
Propane (CAS 74-98-6)

Safe Drinking Water Act (SDWA)

Not regulated.

FIFRA Information

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The pesticide label also includes other important information, including directions for use.

US state regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List

Butane (CAS 106-97-8)
Propane (CAS 74-98-6)

US. New Jersey Worker and Community Right-to-Know Act

Butane (CAS 106-97-8)
Propane (CAS 74-98-6)

US. Pennsylvania Worker and Community Right-to-Know Law

Butane (CAS 106-97-8)
Propane (CAS 74-98-6)

US. Rhode Island RTK

Butane (CAS 106-97-8)
Propane (CAS 74-98-6)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-14-2015

Version # 01

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

MATERIAL SAFETY DATA SHEET

REVISION DATE: 03-28-2011 SUPERSEDES: None

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION
H.B. Fuller Construction Products Inc.
1105 S. Frontenac Street
Aurora, IL 60504
Phone: 1-800-552-6225

Medical Emergency Phone Number (24 Hours): 1-888-853-1758
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

PRODUCT INFORMATION

PRODUCT NUMBER:	SKILL SET FAST SETTING MORTAR
PRODUCT DESCRIPTION:	Cement
PRODUCT IDENTIFIER:	829154PM

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL STATE:	Solid
COLOR:	Gray
ODOR:	Odorless

Moderate eye irritant.
Causes skin irritation.
Moderate respiratory tract irritant.
Harmful if swallowed.
Cancer hazard.

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY
EYE: Can cause moderate irritation, tearing and reddening, but not likely to permanently injure eye tissue. Can cause moderate irritation, tearing and reddening.

SKIN: Can cause moderate skin irritation, defatting, and dermatitis. Not likely to cause permanent damage.
INHALATION: Can cause moderate respiratory irritation. Inhalation of dusts produced during cutting, grinding or sanding of this product may cause irritation of the respiratory tract.
Other possible symptoms include coughing or wheezing.
Nasal perforation is possible from a single large or repeated smaller inhalation overexposures.
Overexposure to crystalline silica may cause silicosis. Overexposure to iron oxide dust/fume may cause siderosis.

INGESTION: Ingestion is not an anticipated route of exposure. Harmful if swallowed. Severely irritating to mouth, throat, and stomach.
LONG-TERM (CHRONIC) HEALTH EFFECTS
TARGET ORGAN(S): Lungs

REGULATED CARCINOGEN STATUS:
Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.
Crystalline silica

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: Lung disease

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	PERCENT

MATERIAL SAFETY DATA SHEET

Crystalline silica	14808-60-7	50 - 70
Alumina cement	65997-16-2	10 - 30
Portland cement	65997-15-1	10 - 30
Calcium sulfate	7778-18-9	1 - 5
Aluminum oxide	1344-28-1	1 - 5
Calcium oxide, CaO	1305-78-8	1 - 5
Iron oxide	1309-37-1	1 - 5
Magnesium Oxide	1309-48-4	1 - 5
Calcium carbonate	471-34-1	1 - 5
Sulfur trioxide	7446-11-9	1 - 5

Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for exposure limit guidelines.

SECTION 4: FIRST AID MEASURES

IF IN EYES: Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention.

IF ON SKIN: Wash with soap and water. Remove contaminated clothing and launder. Get medical attention if irritation develops or persists.

IF VAPORS INHALED: Remove to fresh air. Restore breathing, if necessary. Call a physician if symptoms persist.

IF SWALLOWED: Severely irritating. Do not induce vomiting. Seek medical attention immediately. Drink 2 glasses of water or milk to dilute. Do not give anything by mouth to an unconscious person.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT:	Non flammable
AUTOIGNITION TEMPERATURE:	Not established
LOWER EXPLOSIVE LIMIT (% in air):	Not established
UPPER EXPLOSIVE LIMIT (% in air):	Not established
EXTINGUISHING MEDIA:	Use water spray, foam, dry chemical or carbon dioxide.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	There is a possibility of pressure buildup in closed containers when heated. Water spray may be used to cool the containers.
SPECIAL FIRE FIGHTING INSTRUCTIONS:	Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.
HAZARDOUS COMBUSTION PRODUCTS:	Carbon dioxide, Carbon monoxide Sulfur containing gases Aluminum oxide

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION:	Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this MSDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred.
CLEAN-UP:	Avoid creating dusts. Cover material with absorbent and moisten and collect for disposal.

MATERIAL SAFETY DATA SHEET

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

SECTION 7: HANDLING AND STORAGE

Handling: Harmful or irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. Avoid breathing material.

Storage: Store in a cool, dry place.

Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Wear safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Have an eye wash station available.

SKIN PROTECTION: Avoid skin contact by wearing chemically resistant gloves and long sleeved shirt. An apron may be appropriate if splashing can occur.

GLOVES: Nitrile

RESPIRATORY PROTECTION: Respiratory protection may be required to avoid overexposure when handling this product. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. NIOSH approved air purifying respirator with dust/mist filter.
Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).

VENTILATION: Use local exhaust ventilation or other engineering controls to minimize exposures.

EXPOSURE LIMITS:

Chemical Name	**ACGIH EXPOSURE LIMITS**	**OSHA PEL**
Crystalline silica	0.025 mg/m3 TWA (respirable fraction)	((250)/(%SiO2 + 5) mppcf TWA (respirable)); ((10)/(%SiO2 + 2) mg/m3 TWA (respirable)); ((30)/(%SiO2 + 2) mg/m3 TWA (total dust))
Alumina cement	Not established	Not established
Portland cement	1 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
Calcium sulfate	10 mg/m3 TWA (inhalable fraction)	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
Aluminum oxide	Not established	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
Calcium oxide, CaO	2 mg/m3 TWA	5 mg/m3 TWA
Iron oxide	5 mg/m3 TWA (respirable fraction)	10 mg/m3 TWA (as fume)
Magnesium Oxide	10 mg/m3 TWA (inhalable fraction)	15 mg/m3 TWA (total particulate) (as fume)
Calcium carbonate	Not established	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)

MATERIAL SAFETY DATA SHEET

Sulfur trioxide	Not established	Not established

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Solid
COLOR:	Gray
ODOR:	Odorless
ODOR THRESHOLD:	Not established
WEIGHT PER GALLON (lbs.):	11.2
SPECIFIC GRAVITY:	1.34
SOLIDS (% by weight):	100.0
	Not applicable
pH:	Not established
FLASH POINT:	Non flammable
BOILING POINT (deg. C):	Not established
FREEZING/MELTING POINT (deg. C):	Not established
VAPOR PRESSURE (mm Hg):	Not established
VAPOR DENSITY:	Not established
EVAPORATION RATE:	Not established
OCTANOL/WATER COEFFICIENT:	Not established
VOC, weight percent	Not determined

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Stable under normal conditions.
CHEMICAL INCOMPATIBILITY:	Not established
HAZARDOUS POLYMERIZATION:	Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide, carbon dioxide Sulfur containing gases Aluminum oxide

SECTION 11: TOXICOLOGICAL INFORMATION

COMPONENT	**LD50/LC50**
Crystalline silica	Not established
Alumina cement	Not established
Portland cement	Not established
Calcium sulfate	Not established
Aluminum oxide	Not established
Calcium oxide, CaO	Not established
Iron oxide	Not established
Magnesium Oxide	Not established
Calcium carbonate	Oral LD50 Rat = 6450 mg/kg
Sulfur trioxide	Not established

MATERIAL SAFETY DATA SHEET

TOXICOLOGY SUMMARY: No additional health information available.

SECTION 12: ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available

SECTION 13: DISPOSAL CONSIDERATIONS

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Dispose of in an approved landfill. Consult your state, local or provincial authorities and your local waste vendor for more restrictive requirements.

SECTION 14: TRANSPORTATION INFORMATION

Consult Bill of Lading for transportation information.
DOT: NOT REGULATED
IATA: NOT REGULATED

SECTION 15: REGULATORY INFORMATION

INVENTORY STATUS

U.S. EPA TSCA:	This product is in compliance with the Toxic Substances Control Act's Inventory requirements.
CANADIAN CEPA DSL:	The components of this product are included on the DSL or are exempt from DSL requirements.
EUROPEAN EINECS:	As a result of the introduction of REACH into Europe, this product cannot be imported into Europe unless the REACH requirements are met.

If you need more information about the inventory status of this product call 651-236-5858.

This product may contain chemical substances that are regulated for export by various government agencies (such as the Environmental Protection Agency, the Bureau of Industry and Security, or the Drug Enforcement Administration, among others). Before exporting this product from the USA or Canada, we recommend you contact us at 651-236-5858 (USA) or 450-655-1306 x227 (Canada) to request an export review.

FEDERAL REPORTING
EPA SARA Title III Section 313
Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name	CAS#	%
Aluminum oxide	1344-28-1	1 - 5

WHMIS STATUS: Unless listed below, this product is not controlled under the Canadian Workplace Hazardous Materials Information System.
D2A D2B

STATE REPORTING
Proposition 65, The Safe Drinking Water and Toxic Enforcement Act of 1986:
Unless listed below, this product does not contain known levels of any chemical known to the State of California to cause cancer or reproductive harm.

Chemical Name/List	CAS	Percent
Quartz (Carcinogen)	14808-60-7	50 - 70
Acetaldehyde (Carcinogen)	75-07-0	0.001 - 0.01
Formaldehyde (Carcinogen)	50-00-0	< 10 ppm
Nickel (Carcinogen)		< 10 ppm
Lead compounds (Carcinogen)		< 10 ppm
Cadmium compounds (Carcinogen)		< 10 ppm

MATERIAL SAFETY DATA SHEET

Lithium carbonate (Developmental toxin)	554-13-2	0.01 - 0.1

SECTION 16: ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

HMIS RATING: HEALTH -- 2 FLAMMABILITY -- 0 REACTIVITY -- 0
See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

Prepared by: The Global Regulatory Department

Phone: 651-236-5842

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to H.B. Fuller Construction Products, Inc. from its suppliers, and because H.B. Fuller Construction Products, Inc. has no control over the conditions of handling and use, H.B. Fuller Construction Products, Inc. makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and H.B. Fuller Construction Products, Inc. assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B. Fuller Construction Products, Inc. products to comply with all applicable federal, state and local laws and regulations.

FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 334.00
Revision Date: November 25, 2002

Section 1 — Chemical Product and Company Identification

Fehlings Solution A

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Cupric Sulfate (7758-99-8) 7% and Water (7732-18-5) 93%.

CAS#: None Established

Section 3 — Hazards Identification

Blue-colored liquid. Odorless.
Body tissue irritant. Slightly toxic by ingestion. Avoid contact with skin, eyes and mucous membranes.

FLINN AT-A-GLANCE
Health-1
Flammability-0
Reactivity-0
Exposure-1
Storage-0

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Rinse out mouth, give 1 to 2 cups of water or milk, induce vomiting. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non flammable liquid.

NFPA CODE
None Established

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area and ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates.

Section 8 — Exposure Controls , Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.

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Section 9 — Physical and Chemical Properties

Blue colored liquid. Odorless.
Solution contains copper sulfate and water.

Section 10 — Stability and Reactivity

Shelf life: Fair

Section 11 — Toxicological Information

Acute effects: Irritant
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD50: 300 mg/kg for copper sulfate.
IHL-RAT LC50: N.A.
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #26b is one option.

Section 14 — Transport Information

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A

N/A = Not applicable

Section 15 — Regulatory Information

Not listed.

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

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flinn@flinnsci.com www.flinnsci.com
P.O. Box 219 Batavia IL 60510
(800) 452-1261 Fax (866) 452-1436

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FLINN SCIENTIFIC INC.

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Material Safety Data Sheet (MSDS)

MSDS #: 341.00

Revision Date: July 15, 2003

Section 1 — Chemical Product and Company Identification

Ferric Nitrate Solution

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Ferric Nitrate (7782-61-8) 4-8%, and Water (7732-18-5) 92-96%.

CAS#: None Established

Section 3 — Hazards Identification

Brown-yellow liquid. Odorless.
May be a skin and body tissue irritant. Avoid contact with skin, eyes and mucous membranes.

FLINN AT-A-GLANCE

Health-1
Flammability-0
Reactivity-0
Exposure-1
Storage-0

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give large quantities of water. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non flammable, non combustible liquid.

NFPA CODE

None Established

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area and ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates and nitrites.

Section 8 — Exposure Controls, Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.

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Section 9 — Physical and Chemical Properties

Brown-yellow liquid. Odorless.
A mixture of ferric nitrate and water.

Section 10 — Stability and Reactivity

Avoid contact with oxidizers and organic material.
Shelf life: Good

Section 11 — Toxicological Information

Acute effects: Corrosive or irritant
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD50: N.A.
IHL-RAT LC50: N.A.
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #26b is one option.

Section 14 — Transport Information

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A

N/A = Not applicable

Section 15 — Regulatory Information

Not listed.

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

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flinn@flinnsci.com www.flinnsci.com
P.O. Box 219 Batavia IL 60510
(800) 452-1261 Fax (866) 452-1436

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 340.00
Revision Date: March 21, 2014

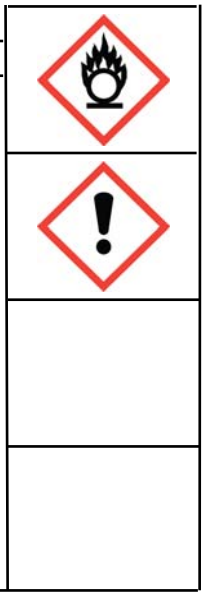
SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Iron(III) Nitrate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing solids (Category 3). May intensify fire; oxidizer (H272). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Iron(III) nitrate nonahydrate	7782-61-8	$Fe(NO_3)_3 \cdot 9H_2O$	404.00	
Synonym: Ferric nitrate				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid. Strong oxidizer, contact with combustible material may cause fire.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates, nitrites and azides.
Deliquescent. Store in a cool, dry place within a Flinn Chem-Saf™ bag. Keep and store away from clothing and combustible materials (P220). Take any precautions to avoid mixing with combustibles (P221).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling (P264).
Exposure guidelines: TLV 1 mg/m^3 (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Pale violet crystals. Odorless.
Soluble: Water and alcohol.

Melting point: 47.2 °C
Specific gravity: 1.7

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with combustible materials.
Shelf life: Fair to poor, deliquescent. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 3250 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Ferric nitrate. Hazard class: 5.1, Oxidizer. UN number: UN1466.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (233-899-5), RCRA code D001.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 342.00
Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Iron(III) Oxide, Red

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Iron(III) oxide, red	1309-37-1	Fe_2O_3	159.69	
Synonyms: Ferric oxide, red; Ferric trioxide				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Rinse cautiously with water for several minutes (P351).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.
Store in a cool, dry place. Use and dispense in a hood or well-ventilated area. Keep container tightly closed (P233).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use exhaust ventilation to keep airborne concentrations low.
Exposure Guidelines: PEL 10 mg/m^3 (as fume) (OSHA), TLV 5 mg/m^3 (respirable fraction) (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Dark, dense, red powder or lumps. Odorless.
Soluble: Acids. Insoluble in water.

Melting point: 1565 ^oC

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong acids, peroxides, and chloroformates.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (215-168-2).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 344.00
Revision Date: November 4, 2015

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Iron(III) Sulfate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Iron(III) sulfate, heptahydrate	10028-22-5	$Fe_2(SO_4)_3 \cdot 7H_2O$	399.88	
Synonym: Ferric sulfate				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Rinse cautiously with water for several minutes (P351).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Keep tightly closed and protect from light. Store in a Flinn Chem-Saf™ bag and then inside a Flinn Saf-Stor™ can. Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).
Exposure guidelines: TLV 1 mg/m^3 (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Yellow to grayish-white crystals or powder. Odorless.
Soluble: Water

Specific gravity: 2.0 - 2.1
Melting point: 480 °C

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Fair to poor, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (233-072-9).

SECTION 16 — OTHER INFORMATION

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Revision Date: November 4, 2015

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MATERIAL SAFETY DATA SHEET

PRODUCT: Spray
REVISION NUMBER: 3

REVISION DATE: 04/27/2006
Date Printed: 04/27/2006

1. PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURED BY:

Ferro Corporation
251 West Wylie Avenue
P.O. Box 519
Washington, PA 15301
Prod Info 724-223-5900
CHEMTREC 800-424-9300

Use the CHEMTREC telephone number only in the event of chemical emergencies.

PREPARED BY: Mike Pellegrini
Environmental Engineer

PRODUCT CODE: **LMM-6000AER**

PRODUCT TRADE NAME: **LMM-6000 METAL MARKING AEROSOL SPRAY**

CAS NO: Mixture
CHEMICAL FAMILY: Decorative Coating
PRODUCT TYPE: Laser Marking Coating

2. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not have exposure limit values. Exposure limit values for some of the components are listed below as a guideline for safe use of this product.

HAZARDOUS COMPONENTS

INGREDIENTS/CAS #	OSHA PEL:	ACGIH TLV:
Mica Group Minerals 12001-26-2	TWA: 20 mppcf	TWA: (respirable fraction): 3 mg/m^3
Molybdenum Trioxide 1313-27-5	TWA Insoluble Mo compounds: 10.0 mg/m^3 Soluble Mo compounds: 3.0 mg/m^3	TWA 5.0 mg/m^3
Crystalline Silica 14808-60-7	TWA respirable dust: 0.1 mg/m^3	TWA respirable dust: 0.05 mg/m^3
Ethyl Alcohol 64-17-5	TWA: 1000 ppm;TWA: 1900 mg/m^3	TWA: 1000 ppm;TWA: 1880 mg/m^3
Methyl Alcohol 67-56-1	TWA: 200 ppm; 260 mg/m^3	TWA: 200 ppm; 262 mg/m^3

3. HAZARDS IDENTIFICATION

PRINCIPLE ROUTES OF EXPOSURE: Inhalation, ingestion and dermal.

The key immediate hazards are:

Skin, eye, and respiratory irritant
Extremely Flammable Aerosol.
Harmful if swallowed or inhaled.

Effects from Acute Exposure:

EYE CONTACT : Causes eye irritation.

SKIN CONTACT: Causes skin irritation.

INHALATION: Causes lung irritation.

INGESTION: May be harmful if swallowed.

AGGRAVATED MEDICAL CONDITIONS:
Respiratory

Effects from Chronic Exposure:

CARCINOGENIC INGREDIENTS:
This product contains greater than 0.1% crystalline silica. The International Agency for Research on Cancer (IARC) has determined that "there is sufficient evidence for the carcinogenicity of crystalline silica to experimental animals and limited evidence of carcinogenicity in humans. "The National Toxiocology Program (NTP) Sixth Annual Report confirms this determination. It has listed crystalline silica as a substance reasonably anticipated to be a carcinogen.

OVEREXPOSURE EFFECTS:

CONTAINS MOLYBDENUM COMPOUND(S) :

Molybdenum compounds can cause eye and respiratory irritation. They can be toxic if swallowed or inhaled based on animal studies where symptoms included anemia, loss of appetite, diarrhea, tiredness, joint pain and changes, liver and kidney damage, and lung effects.

CONTAINS CRYSTALLINE SILICA:

Crystalline silica can cause silicosis, a lung disease characterized by coughing, wheezing, impaired lung function and increased sputum production. This damage can be progressive and may cause death. May cause cancer following repeated and prolonged inhalation of the fine dust. Smoking aggravates these effects. Skin and eye contact may cause irritation due to mechanical abrasion.

CONTAINS DENATURED ALCOHOL:

Overexposure to denatured alcohol can cause serious health effects such as liver toxicity and central nervous system depression ("drunk"). Use during pregnancy may cause fetal alcohol syndrome. Inhalation may cause headache and respiratory irritation. Skin and eye irritant. Denaturants are added to discourage ingestion and will cause nausea and vomiting.

CONTAINS SURFACTANT:

This surfactant can cause skin and eye irritation. Symptoms can include redness of skin and eyes, as well as tearing.

CONTAINS PROPANE AND ISOBUTANE:

When inhaled, this product is an asphyxiant and may exhibit anesthetic properties at very high concentrations. Initial symptoms of exposure at these concentrations are disorientation, lack of coordination, rapid respiration, headache, and nausea. Continued exposure may result in unconsciousness, coma, and possible death.

4. FIRST AID MEASURES

INGESTION: If swallowed, give at least 3-4 glasses of water, but do not induce vomiting. Do not give anything by mouth to an unconscious or convulsing person. Get immediate medical attention.

SKIN: For skin contact, wash affected areas with plenty of water, and soap if available, for several minutes. Get medical attention if irritation occurs.

INHALATION: If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

EYES: For eye contact, immediately flush eyes for at least 15 minutes with running water. Hold eyelids apart to ensure rinsing of the entire eye surface and lids with water. Get immediate medical attention if irritation develops.

NOTES TO PHYSICIAN: None specified.

5. FIRE FIGHTING MEASURES

OSHA FLAMMABILITY CLASS: FLAMMABLE

FLASH POINT (°F): -156 F

Flashpoint Method: Pensky-Martin Closed Cup or Grabner Mini-flash

Lower Explosive Limit: Not Available

Upper Explosive Limit: Not Available

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam or Water Mist

FIRE FIGHTING PROCEDURES: Fire-Fighters should wear self-contained breathing apparatus and full protective clothing when fighting chemical fires.

Use water spray to cool nearby containers and structures exposed to fire.

UNUSUAL HAZARDS: Keep away from heat, sparks and flame.

Decomposition and combustion products may be toxic.

This product presents an extreme fire hazard. Liquid very quickly evaporates, even at low temperatures, and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus against the hazardous effects of normal products of combustion or oxygen deficiency. Petroleum gases are heavier than air and travel along the ground or into drains to possible distant ignition sources, causing an explosive flashback.

6. ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES: Wear appropriate protective equipment. Avoid the generation of dust. Collect material and place in closable container(s) for disposal.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Caution, contents under pressure. Do not puncture, incinerate, crush, or store above 120 degrees fahrenheit. Heat from sunlight, radiators, stoves, or other sources may cause container to burst.

Store in a cool, dry location away from incompatible materials.

NOTES ON HANDLING INFORMATION: Minimize dust generation during handling. Use adequate ventilation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Adequate ventilation should be provided to keep concentrations below acceptable Exposure Limits. Discharge from the ventilation system should comply with the applicable air pollution control regulations.

EYE PROTECTION: Wear safety glasses or goggles to protect against exposure.

PROTECTIVE GLOVES: Use gloves as a standard industrial handling procedure.

RESPIRATORY PROTECTION: Appropriate respiratory protection is required when exposure to airborne contaminant is likely to exceed acceptable limits. Respirators should be selected and used in accordance with OSHA Subpart I (29 CFR 1910.134) and manufacturer's recommendations.

OTHER PERSONAL PROTECTIVE EQUIPMENT: None specified.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Off-white Liquid

BOILING POINT: Not Available

VAPOR DENSITY (AIR=1): Heavier than air

EVAP. RATE(BUTYL ACETATE=1): Slower than n-Butyl Acetate

VOC, Wt.% (EPA METH.24): 70 wt.%

BULK DENSITY: 1150 g/L

SOLUBILITY (in water): Insoluble

10. STABILITY AND REACTIVITY

STABILITY DATA: STABLE

POLYMERIZATION: WILL NOT OCCUR

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and depending on conditions, some hydrocarbon fragments may also be formed.

INCOMPATIBILITY
(MATERIALS TO AVOID): Strong oxidizing agents

CONDITIONS/HAZARDS TO AVOID: Keep away from heat,sparks and flame.

11. TOXICOLOGICAL INFORMATION

No Toxicological data known.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data at this time

CHEMICAL FATE INFORMATION: No data at this time.
PERSISTENCE/DEGRADABILITY: No data at this time.
APPRAISAL: No data at this time.
MOBILITY: No data at this time.

13. DISPOSAL CONSIDERATIONS

DISPOSAL OF WASTE METHOD: Dispose in accordance with Federal, State and Local regulations.

14. TRANSPORT INFORMATION

DOT Shipping Name: CONSUMER COMMODITY
DOT HAZARD CLASS: ORM-D
DOT LABEL(S): NONE
UN/NA NUMBER: UN8000
PACKING GROUP: NONE

15. REGULATORY INFORMATION

SARA SECTION 302: None Found

SARA (311, 312) HAZARD CLASS: ACUTE HEALTH HAZARD
CHRONIC HEALTH HAZARD
FIRE HAZARD

SARA 313 Title III Toxic Chemical List:

The following chemicals are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

2	%	Vanadium	< 1	%
21	%	Molybdenum Trioxide	21	%
	%	Methanol	< 1	%
	%	Methyl Isobutyl Ketone	< 1	%

TSCA Inventory Status: This product (and/or all of its components) is in compliance with the U.S. EPA Toxic Substance Control Act, TSCA, (15 U.S.C. 2604).
This product and all of its components is listed on the DSL inventory.

16. OTHER INFORMATION

Revisions: The Format has been changed to meet the requirements of the new ANSI Standard Z400.1.

LABEL INFORMATION:
DANGER!
Extremely flammable.
Keep away from heat, sparks and flame.
Vapors will accumulate and may ignite explosively. Turn off all sources of flame and sparks before use. Do not smoke. Keep area well ventilated until all vapors (odors) are gone.
Contains crystalline silica which can cause lung damage, including cancer.
Skin, eye, and respiratory irritant.
Avoid contact with eyes, skin and clothing.
Harmful if swallowed or inhaled.
Keep away from food products.
Avoid breathing dust, mist or vapor.
Wash thoroughly after handling and before eating, drinking or using cosmetic or tobacco products or toilet facilities.
Use with adequate ventilation.
Keep container closed when not in use.
FIRST AID: If inhaled, remove to fresh air. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water. Remove contaminated clothing. Get medical attention.
IN CASE OF FIRE: Use water, dry chemical or carbon dioxide.
IN CASE OF SPILL: Soak up with inert absorbent and dispose in accordance with federal, state and local regulations.
FOR INDUSTRIAL USE ONLY.
Do not breathe dust.
WARNING!
IN CASE OF SPILL: Collect and dispose in accordance with federal, state and local regulations.

DEFINITIONS AND ABBREVIATIONS :
ACGIH = American Conference of Governmental Industrial Hygienists
C (CEIL) = The concentration that shall not be exceeded during any part of the working exposure.
CAS # = Chemical Abstracts Service Registry Number
EPA = Environmental Protection Agency
IARC = International Agency for Research on Cancer
NIOSH = National Institute for Occupational Safety and Health
NTP = National Toxicology Program
OSHA = Occupational Safety and Health Administration
PEL = Permissible Exposure Limit
SARA = Superfund Amendments and Reauthorization Act
STEL = Short Term Exposure Limit. Usually a 15 minute time weighted average exposure.
TLV = Threshold Limit Values
TSCA = Toxic Substance Control Act
TWA = Time Weighted Average. Exposure concentration for a normal 8 hour day or 40 hour week.
VOC = Volatile Organic Content

DISCLAIMER: The information contained in this Material Safety Data Sheet (MSDS) has been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS was prepared. No guarantee is made as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in combination with other products, and determine the regulatory compliance obligations under any applicable federal or state laws.

***** END OF MSDS *****

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 345.00
Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Ferrous Ammonium Sulfate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Ferrous ammonium sulfate, hexahydrate	7783-85-9	$Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$	392.16	
Synonym: Mohr's salt				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists**: Get medical advice or attention (P337+P313).
If on skin: Rinse cautiously with water for several minutes (P351).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool, dry place. Due to a poor shelf life, store in a Flinn Chem-Saf™ bag and then inside a Flinn Saf-Stor™ can. Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).
Exposure guidelines: TLV 1 mg/m^3 (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Pale green, crystalline powder. Odorless.
Soluble: Water. Insoluble in alcohol.

Melting point: 100 ^{o}C (decomposes)
Specific gravity: 1.865

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong acids and strong oxidizers.
Shelf life: Fair to poor, deliquescent and affected by light. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 3250 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Revision Date: March 25, 2014

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Material Safety Data Sheet

Complies with OSHA's Hazard Communication Standard 29 CFR 1910.1200

NFPA Fire: 2
Health: 2
Reactivity: 0

SECTION I - IDENTITY AND MANUFACTURER'S INFORMATION

Manufacturer's Name, Address **Franklin Cleaning Technology - PO Box 214 Great Bend KS 67530**

Product Name: Film Buster Baseboard Stripper — Product Number: F4240
Chemical Family: Pressurized solution of surfactants, builders and solvents — Package Size: 18 oz

EPA Reg. No: N/A — Emergency Telephone No. 620-792-1711
Preparer: Bill Dayton — Date: 11/18/02 — Signature:

SECTION II - HAZARDOUS INGREDIENTS IDENTITY INFORMATION

Hazardous Components	CAS#	OSHA TWA	ACGIH TWA	Percent
Isopropanol	67-63-0	400 ppm	400 ppm	<10
Sodium Metasilicate	6834-92-0	2 mg/m	2 mg/m	<2
Potassium Hydroxide	1310-58-3	2 mg/m	2 mg/m	<5
Diisopropanolamine	110-97-4	N/A	n/a	
*Water	7732-18-5	N/A	n/a	
Isobutane	75-28-5	1000 ppm	800 ppm	<5

SECTION III - PHYSICAL AND CHEMICAL CHARACTERISTICS

No Physical Hazards		Flammable Gas		Flammable Liquid/Solid		Water Reactive	
Combustible		Flammable Aerosol		Pyrophoric		Oxidizer	
Compressed Gas	x	Explosive		Unstable - Reactive:		Organic Peroxide	

Boiling Point, °F: 212F — Solubility in Water: Complete — Evaporation Rate: <1
Vapor Pressure: Unknown — Specific Gravity (water =1): NE — pH: 14
Vapor Density: — %Volatiles by Weight: 94.2

Appearance and Odor: Thin colorless, typical odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method): 110 F — Flammable Limits: LEL: n/a — UEL: n/a
Extinguishing Media: n/a

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: CONTENTS UNDER PRESSURE. Temperatures in excess of 130°F may cause bursting.

SECTION V - REACTIVITY DATA

Stability: Unstable [ ] Stable [x] — Conditions to Avoid: n/a

Incompatibility: (Materials to Avoid) Strong oxidizers, reducing agents, acids or bleach. Mix only with water.

Hazardous Decomposition Products or Byproducts: None

Hazardous Polymerization: May Occur: [ ] Will Not Occur: [x]
Conditions to Avoid: n/a

Comments:
*Added to comply with the Pennsylvania Worker Right to Know Act of 1984 and the New Jersey Worker & Community Right to Know Act of 1983.

SECTION VI - HEALTH HAZARD DATA

Route (s) of entry:	Inhalation	x	Skin:	x	Eye:	x	Ingestion:	x

No Health Hazard		Reproductive toxin		Sensitizer	
Toxic		Irritant		Carcinogen	
Highly Toxic		Corrosive	x	See Target Organs	x

TARGET ORGANS

Lungs		Eyes	x	Blood		Teratogen		Mucous Membranes	x
Heart		Skin	x	Liver		Central Nervous System	x	Autonomic Nervous System	
Kidney		Prostrate		Mutagen		Cardiovascular System		Respiratory System	x

Carcinogenicity:	None Known	x	NTP:		IARC:		OSHA Regulated	

Medical Conditions Generally Aggravated by Exposure:
None known

Signs and Symptoms of Exposure:
Causes severe eye & skin damage.

Emergency and First Aid Procedures:
In case of eye or skin contact, flush with copious amounts of cool water. If irritation persists, seek medical attention. If ingested, Call a physician or Poison Control Center immediately.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:
Mop up and rinse with water.

Waste Disposal Method:
Dispose in accordance with Local, State and Federal Regulations.

Potential EPA Hazardous Waste Code(s): D001,D002

Steps to be taken in handling and storage:
Store at 40-90F in the original container. Follow label use directions. KEEP OUT OF REACH OF CHILDREN.

SECTION VIII - CONTROL MEASURES

Respiratory Protection(Specify Type):
Not Required

Ventilation: Local Exhaust: Special:
Mechanical: Recommended

Protective Gloves: Required Eye Protection: Required

Other Protective Clothing and Equipment:
Aprons, Coveralls, Chemical resistant boots.

SECTION IX - SHIPPING INFORMATION

DOT Proper Shipping Name and Number:
Consumer Commodity, ORM-D

NE = Not Established
N/A = Not Applicable

MATERIAL SAFETY DATA SHEET

COMPLIES WITH OSHA'S HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

SECTION I · PRODUCT IDENTIFICATION

Product Name: Fine Crystalline Odor Eliminator
Product Number: 11225
Product Type: Crystalline Powder
Supplier's Name: Terand Industries, Inc.
Supplier's Address: P.O. Box 667770, Pompano Beach, FL. 33066
Shipping Description: (Not DOT Regulated) Processed Calcite, N.O.I.

Formula: Proprietary
Date Prepared: 12/27/07
Emergency Phone: (800) 535-5053
Information Phone: (954) 974-5440

HMIS Rating:
0-Minimal 1-Slight 2-Moderate
3-Serious 4-Extreme
HEALTH: 0 FIRE: 0 REACTIVITY: 0
Personal Protection : None

SECTION II · INGREDIENTS

CHEMICAL NAME	CAS #	%WT	313/Chem	Skin	Carcinogen	PEL	TWA/TLV
Calcite Crystals	1317-65-3	01-100	NO	NO	NO	*15mg/m^3	*15mg/m^3

*Permissible Exposure Limits / Time Weighted Averages Established for Respirable Dust Particles

SECTION III · PHYSICAL DATA

Flash Point: N/A
Solubility in Water: Not Soluble
Appearance/Odor: Fine Crystalline Granules/ Fresh Fragrance

SECTION IV · FIRE AND EXPLOSION DATA

Melting Point: N/A
Flammability: Product will not support combustion.
Extinguishing Media: N/A
Special Fire Fighting Procedures: N/A
Unusual Fire and Explosion Hazards: N/A

SECTION V · REACTIVITY DATA

Stability: Material Stable.
Hazardous Polymerization: Will not Occur.
Incompatibility: Avoid contact with strong acids or strong oxidizing agents.
Hazardous Decomposition Products: N/A

SECTION VI · STORAGE AND HANDLING

KEEP OUT OF REACH OF CHILDREN.
For Industrial and Institutional use only.
Store plastic container in a cool, dry area away from heat or open flame.

SECTION VII · HEALTH AND FIRST AID

PRIMARY ROUTES OF ENTRY & EFFECTS OF OVER EXPOSURE:
Eyes: May cause slight irritation but does not injure eye tissue.
Skin: May cause slight irritation for individuals with sensitive skin conditions.
Inhalation: Inhalation of dust particles can cause irritation of nasal and respiratory passages.
Ingestion: Can cause gastrointestinal irritation, nausea, and vomiting. Aspiration of material into the lungs can cause chemical pneumonitis. Minimal toxicity.
FIRST AID PROCEDURES:
Eyes: Flush with large amounts of cool running water for at least 15 minutes while holding upper and lower lids open. Immediately remove contact lens, if applicable. If irritation persists get medical attention immediately.
Skin: Wash with soap and water. If irritation persists seek medical attention.
Inhalation: Remove to fresh air. Seek medical attention immediately. If breathing stops give artificial respiration.
Ingestion: Do not induce vomiting. Rinse mouth immediately with water; give individual a glass of water or milk. Seek medical attention immediately.

SECTION VIII · SPECIAL PROTECTION DATA

Respiratory Protection: None needed for proper use in accordance with label directions.
Ventilation: Provide local exhaust to keep air concentrations of ingredients listed in Section II below established exposure limits.
Protective Gloves: None needed for proper use in accordance with label directions.
Eye Protection: None needed for proper use in accordance with label directions.

SECTION IX · SPILL OR LEAK PROTECTION

STEPS TO BE TAKEN IN CASE OF SPILL OR LEAK: No special disposal instructions required.
WASTE DISPOSAL INSTRUCTIONS: N/A

N/A= NOT APPLICABLE · N/E=NOT ESTABLISHED · N/D=NOT DETERMINED · <=LESS THAN · >=MORE THAN

NOTICE: The information contained on this Material Safety Data Sheet is considered accurate as of the date of publication. It is not necessarily all inclusive nor fully adequate in every circumstance. The suggestions should not be confused with, nor followed in violation of applicable laws, regulations, rules or insurance requirements. No warranty, express or implied, of merchantability, fitness, accuracy of data, or the results to be obtained from the use thereof is made. The vendor assumes no responsibility for injury or damages resulting from the inappropriate use of this product.

SAFETY DATA SHEET

BLACK BISON PASTE ALL COLOURS

Version: 5-1 **Review date: 20/03/07** **1907/2006/EC - ISO 11014-1**

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name:	BLACK BISON PASTE ALL COLOURS. Rockler SKUs: 25796, 30382, 33726, 37661, 59949, 59956, 59964, 59972, 59998, 60004, 60053, 60061, 60087, 60095, 60103, 60111, 60145, 67875
Uses or/and applications:	Wood care.
Product code nr:	320.
Supplier:	LIBERON Ltd Mountfield Industrial Estate - NEW ROMNEY KENT TN28 8XU UK Phone: + 44 1797 367 555 Fax: + 44 1797 367 575
E-mail:	info.uk@v33.com
Emergency phone number (to be used by the practicing doctor):	UK - National Poisons Information Service Phone: 44 / 191 22 5131 B - Centre Antipoisons Tél: 070 / 245.245

2. HAZARDS IDENTIFICATION

Most important hazards:	Repeated exposure may cause skin dryness or cracking Flammable.
Specific hazards:	Repeated and prolonged exposure may cause skin irritation and dermatitis due to degreasing properties of the product.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Formula:	FOLKGH3.
Component(s) contributing to the hazard:	• NAPHTA HYDROTRAITE PT EBU BAS - CAS no: *64742-48-9. Conc. wt. (%): 70 < C <= 80 - Symbol(s): Xn - R-phrase(s): 10-65-66.

4. FIRST AID MEASURES

General advice:	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. For symptom description, see item 11.
Inhalation:	Take victim to fresh air, in a quiet place, in an half laying position and if necessary take medical advice.
Skin contact:	Wash off with soap and plenty of water. If skin irritation persists, take medical advice.
Eye contact:	Rinse immediately and plentifully with water, also under the eyelids, for at least 20 minutes. If eye irritation persists, take medical advice.
Ingestion:	If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. Rinse mouth, do not drink anything, keep quiet, and go immediately to hospital or to a doctor.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2), water spray, sand, earth.
Extinguishing media which must NOT be used for safety reasons:	Do not use water jet.
Specific method(s):	If area is heavily exposed to fire and if conditions permit, let fire burn itself out because water may increase the area contaminated.

Specific fire hazard(s):	In case of fire, product decomposes in: carbon oxides (CO and CO2) and smokes. Concerning product toxicity, see item 11 and about product stability and reactivity see item 10.
Special protective equipment for fire-fighters:	Use a self-contained breathing apparatus and also a protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal precaution(s):	Ensure adequate ventilation. Concerning personal protective equipment to use, see item 8.
Environmental precaution(s):	Do not allow material to contaminate ground water system. Concerning disposal elimination after cleaning, see item 13.
Method(s) for cleaning up:	Shovel into suitable and closed container for disposal.

7. HANDLING AND STORAGE

Handling:

- Precaution(s):	Smoking, eating and drinking is prohibited in areas of storage and use.
- Technical condition(s):	Maximum handling temperature: 55°C
- Safe handling advice(s):	Avoid letting the product become dry.

Storage:

- Precaution(s):	Store in a place accessible by authorized persons only.
- Storage condition(s):	Keep container tightly closed and at a temperature not exceeding (°C): 55°C Keep away from sources of ignition - No smoking. Store away from direct sunlight or other heat sources. Store in a well-ventilated place.
- Separation of incompatible product(s):	Keep away from: strong acids, strong bases and oxidizing compounds.
- Packaging / tank material:	Stainless steel, mild steel.
- Unsuitable packaging materials:	Avoid certain plastics which are soluble in product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measure(s):	Ensure adequate ventilation, especially in confined areas.

Control parameter(s):

- Exposure limit(s):	None.

Personal protection equipment:

- Respiratory protection:	No personal breathing protective equipment is normally required.
- Hand protection:	Nitrile rubber gloves.
- Skin and body protection:	Solvent-resistant apron and boots.
- Eye protection:	Safety glasses or face shield.
Hygiene measure(s):	Do not eat, drink, or smoke during work. Keep away from food, drink and animal feed. Keep workplace clean and tidy as much as possible.

9. PHYSICAL AND CHEMICAL PROPERTIES

General information:

- Physical state / form:	Paste.
- Colour:	Pale Yellow to Dark Brown
- Odour:	Characteristic.

Important health, safety and environmental information:

- PH:	Not applicable.
- Boiling point/range:	155-200° C.
- Flash point:	38° C.
- Explosion limits:	Not applicable.
- Relative density (water = 1):	0.7-0.8.
- Viscosity:	> 7 * 10-6 m2/s.
- Water solubility:	No water mixable.
- Fat solubility:	Not applicable.
- Solvent solubility:	Soluble in hydrocarbons.

10. STABILITY AND REACTIVITY

Stability: Stable in use and storage conditions as recommended in item 7.

Condition(s) to avoid: Do not expose at temperatures above 55°C.

Material(s) to avoid: Avoid certain plastics which are soluble in product.

Hazardous decomposition products: Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

- Inhalation:	None.
- Skin contact:	Components of the product may be absorbed into the body through the skin. Frequent or prolonged contacts may defat and dry the skin, leading to discomfort and dermatitis.
- Eyes contact:	Liquid splashes in the eye may cause irritation (pain, redness)
- Ingestion:	May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic toxicity: Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.

Specific effect(s): Use of alcoholic beverages may enhance toxic effects.

12. ECOLOGICAL INFORMATION

General information(s): There is no data available on the product itself.

Persistence and degradability: Product has only a limited biodegradability in soil and water.

Bioaccumulation: None bioaccumulation.

Environmental toxicity: May be dangerous for environment.

Other adverse effects: None.

13. DISPOSAL CONSIDERATIONS

Waste / unused products: Collect all waste in suitable and labeled containers and dispose according to local legislation.
Can be recycled.
Do not dispose of waste into sewer.
Can be incinerated according to local regulations.

Contaminated packaging: Do not burn, or use a cutting torch on the empty drum.

Further Information(s): None.

14. TRANSPORT INFORMATION

General information(s):	Transport followed ADR, IMDG, and IATA.
UN N°:	1263.
Land (Road / Railway: ADR/RID):	Class 3.
Verpakkingsgroep:	III.
Sea (IMDG):	Class 3.
Air (ICAO/IATA):	None.

15. REGULATORY INFORMATION

Labeling:	According to European directives on classification, packaging and labeling of dangerous substances.67/548/ EC. Using the calculation method 88/379/ EC.
EC number:	Not applicable.
Symbol(s):	None according to EC directives.
R-phrase(s):	10 Flammable. 66 Repeated exposures may cause skin dryness or cracking.
S-phrase(s):	2 Keep out of the reach of children. 29 Do not empty into drains. 51 Use only in well-ventilated areas. 62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

16. OTHER INFORMATION

According legislation(s):	This safety data sheet is in compliance with directives and adaptings: 91/155, 67/548, 88/379.
Important remarks:	Information in this safety data sheet is based on actual knowledge in our possession and our experience. It is recommended to pass the information of this safety data sheet, eventually in an appropriated form, to the users.
Uses or/and applications:	Wood care.
Restrictions:	This information relates to the specific material designated and may not be valid in combination with other product(s).

History:

- First edition date:	19/06/98.
- Previous revision date:	27/02/06.
- Review date:	20/03/07.
- Version:	5-1
- Review chapter(s):	No 1/16
Written by:	V33.

Material Safety Data Sheet

Revision Date: *25-Jan-2008* **Revision Number:** *1*

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **MASTER PRIMER**
Product Code **728**
Color All

Manufactured For
F&H Paints
101 Paragon Drive
Montvale, NJ 07645
Phone: 1-800-892-5917
www.fhpaint.com

Emergency Telephone Number(s)
CHEMTREC: 800-424-9300

2. COMPOSITION INFORMATION ON COMPONENTS

Hazardous Components

Chemical Name	CAS-No	Weight % (max)
Nepheline syenite	37244-96-5	20
Titanium dioxide	13463-67-7	15
Ethylene glycol	107-21-1	5
Zinc oxide	1314-13-2	5

3. HAZARDS IDENTIFICATION

Emergency Overview

Vapors may be irritating to eyes, nose, throat, and lungs. May cause skin irritation and/or dermatitis.

Appearance liquid **Odor** little or no odor

OSHA Regulatory Status While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Potential Health Effects

Principal Routes of Exposure Eye contact, skin contact and inhalation.

Acute Effects

Eyes	May cause slight irritation.
Skin	Substance may cause slight skin irritation.
Inhalation	May cause irritation of respiratory tract.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects Repeated contact may cause allergic reactions in very susceptible persons.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions None known

HMIS **Health:** 1* **Flammability:** 0 **Reactivity:** 0 **PPE:** -

HMIS Legend
0 - Minimal Hazard
1 - Slight Hazard
2 - Moderate Hazard
3 - Serious Hazard
4 - Severe Hazard
* - Chronic Hazard
X - Consult your supervisor or S.O.P. for "Special" handling instructions.

Note: The PPE rating has intentionally been left blank. Choose appropriate PPE that will protect employees from the hazards the material will present under the actual normal conditions of use.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, F&H Paints, has choosen to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS® training. HMIS® is a registered trade and service mark of the NPCA. HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

4. FIRST AID MEASURES

General Advice	No hazards which require special first aid measures.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Ingestion	Clean mouth with water and afterwards drink plenty of water. Consult a physician if necessary.
Notes To Physician	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective Equipment And Precautions For Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Specific Hazards Arising From The Chemical	Closed containers may rupture if exposed to fire or extreme heat.
Sensitivity To Mechanical Impact	No
Sensitivity To Static Discharge	No
Flash Point Data	
Flash Point (°F)	Not applicable
Flash Point (°C)	Not applicable
Flash Point Method	Not applicable
Flammability Limits In Air	
Lower Explosion Limit	Not available
Upper Explosion Limit	Not available

NFPA **Health:** 1 **Flammability:** 0 **Instability:** 0 **Special:** -

NFPA Legend
0 - Not Hazardous
1 - Slightly
2 - Moderate
3 - High
4 - Severe

The ratings assigned by F&H Paints are only suggested ratings, the contractor/employer has ultimate responsibilities for NFPA ratings where this system is used.
Additional information regarding the NFPA rating system is available from the National Fire Protection Agency (NFPA) at www.nfpa.org.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
Environmental Precautions	Prevent further leakage or spillage if safe to do so.
Methods For Clean-Up	Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.
Other Information	None known

7. HANDLING AND STORAGE

Handling	Avoid contact with skin, eyes and clothing. Avoid breathing vapors, spray mists or sanding dust. In case of insufficient ventilation, wear suitable respiratory equipment.
Storage	Keep container tightly closed. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits

Hazardous Components

Chemical Name	ACGIH	OSHA
Nepheline syenite	N/E	PEL 5 mg/m^3 Total dust
Titanium dioxide	TWA: 10 mg/m^3	PEL 15 mg/m^3 Total dust.
Ethylene glycol	100 mg/m^3 Aerosol.	N/E
Zinc oxide	TWA: 2 mg/m^3 Respirable fraction. 10 mg/m^3 Respirable fraction.	PEL 5 mg/m^3 Fume. PEL 5 mg/m^3 Respirable fraction. PEL 15 mg/m^3 Total dust.

Legend
ACGIH - American Conference of Governmental Industrial Hygienists Exposure Limits
OSHA - Occupational Safety & Health Administration Exposure Limits
N/E - Not Established

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields.
Skin Protection Protective gloves and impervious clothing.
Respiratory Protection In case of insufficient ventilation wear suitable respiratory equipment.

Hygiene Measures Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance liquid
Odor little or no odor
Density (lbs/gal) 10.269
Specific Gravity 1.233
pH Not available
Viscosity (centistokes) Not available
Evaporation Rate Not available
Vapor Pressure Not available
Vapor Density Not available
Wt. % Solids 48.6
Vol. % Solids 37.1
Wt. % Volatiles 51.4
Vol. % Volatiles 62.9
VOC (g/L) Not available
Boiling Point (°F) Not available
Boiling Point (°C) Not available
Freezing Point (°F) Not available
Freezing Point (°C) Not available
Flash Point (°F) Not applicable
Flash Point (°C) Not applicable
Flash Point Method Not applicable
Upper Explosion Limit Not available
Lower Explosion Limit Not available

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.

Conditions To Avoid Prevent from freezing

Incompatible Materials No materials to be especially mentioned.

Hazardous Decomposition Products None under normal use.

Possibility Of Hazardous Reactions None under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product
No information available

Component

Titanium dioxide
LD50 Oral: > 24000 mg/kg (Rat)
LD50 Dermal: > 10000 mg/m³ (Rabbit)
LC50 Inhalation (Dust): > 6.82 mg/L (Rat, 4 hr.)

Ethylene glycol
LD50 Oral: 4700 mg/kg (Rat)
LD50 Dermal: 9530 µg/L (Rabbit)

Zinc oxide
LD50 Oral: > 8437 mg/kg (Rat)
LC50 Inhalation (Dust): > 5700 mg/m³ (Rat, 4 hr.)

Chronic Toxicity

Carcinogenicity
The information below indicates whether each agency has listed any ingredient as a carcinogen:

Chemical Name	ACGIH	IARC	NTP	OSHA Carcinogen
Titanium dioxide		2B Possible carcinogen.		

Legend
ACGIH - American Conference of Governmental Industrial Hygienists
IARC - International Agency for Research on Cancer
NTP - National Toxicity Program
OSHA - Occupational Safety & Health Administration

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

Product
Acute Toxicity to Fish
No information available

Acute Toxicity to Aquatic Invertebrates
No information available

Acute Toxicity to Aquatic Plants
No information available

Component
Acute Toxicity to Fish
No information available

Titanium dioxide
LC50: >1000 mg/L (Fathead Minnow - 96 hr.)

Acute Toxicity to Aquatic Invertebrates
No information available

Acute Toxicity to Aquatic Plants
No information available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of in accordance with federal, state, and local regulations. Dry, empty containers may be recycled in a can recycling program. Local requirements may vary, consult your sanitation department or state-designated environmental protection agency for more disposal options.

14. TRANSPORT INFORMATION

DOT Not regulated

ICAO / IATA Not regulated

IMDG / IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

United States TSCA Yes - All components are listed or exempt.

15. REGULATORY INFORMATION

Canada DSL No - Not all of the components are listed.

Federal Regulations

SARA 311/312 hazardous categorization

Acute Health Hazard	No
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight % (max)
Ethylene glycol	107-21-1	5
Zinc oxide	1314-13-2	5

This product may contain trace amounts of (other) SARA reportable chemicals. Contact F&H Paints for further information.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

Chemical Name	CAS-No	Weight % (max)
Ethylene glycol	107-21-1	5

This product may contain trace amounts of (other) HAPs chemicals. Contact F&H Paints for further information.

State Regulations

California Proposition 65

This product may contain small amounts of materials known to the state of California to cause cancer or reproductive harm.

State Right-to-Know

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Louisiana	Rhode Island
Titanium dioxide	X	X	X		X
Ethylene glycol	X	X	X		X
Zinc oxide	X	X	X		X

Legend

X - Listed

16. OTHER INFORMATION

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Prepared By

Product Stewardship Department
F&H Paints
101 Paragon Drive
Montvale, NJ 07645
Phone: 1-800-892-5917

Revision Date: 25-Jan-2008
Revision Summary Not available

Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, provincial, and local laws and regulations.

End of MSDS

MATERIAL SAFETY DATA SHEET

(Essentially similar to OSHA form 174, Sept. 1985 - For Compliance with OSHA's Hazard Communication Standard, 29CFR 1910.1200)

Section I - Product Identity: Firebond® Concentrate(7460)/Adhesive(7450) Z-01687

Manufacturer's Name:
Fiberlock Technologies, Inc.
150 Dascomb Road
Andover, MA 01810

Date of Preparation: March 12, 2007
Information Telephone Number: (978) 623-9987
Emergency Telephone Numbers:
Weekdays: (978) 623-9987
After hours, weekends & holidays: (978) 887-5926, or
"CHEM-TEL" Emergency Contact Number: (800) 255-3924

Section II - Hazardous Ingredients/Identity Information

HAZARDOUS COMPONENT	COMMON NAME(S)	%	CAS. NO.	OSHA PEL	OR	ACGIH TLV

None per the limits for reporting set forth in 29CFR 1910.1200

Section III - Physical/Chemical Characteristics [See reference note(s) No. 1, 2 on Reverse]

Boiling Points of Major Constituent: (Water)	212°F	Specific Gravity (H_2O=1) Wgt./gal.	8.8
Vapor Pressure (mm Hg) @ 68°F	17	Melting Point Water (Ice)	32°F
Vapor Density (AIR=1) Heavier Lighter	 X 	Evaporation Rate (Butyl Acetate=1)	Slower
Solubility in Water	Total	Appearance: liquid Odor: slight odor	Maximum VOC's 100 g/l (0.9 lbs/gal)

Section IV - Fire and Explosion Hazard Data (Nonflammable)

Flash Point: Noncombustible	Flammable Limits: LEL: N/A UEL:N/A	DOT Hazard Class: Not Regulated	Marking: "Keep From Freezing"

Section V - Reactivity Data

Hazardous Polymerization: Will not occur.
Stability: Stable
Incompatibility: Avoid Contact with: Strong oxidizing agents (e.g., nitric acid, permanganates), etc.
Hazardous Decomposition Products: Some carbon monoxide.

Section VI - Health Hazard Data, Toxicity Data

Route(s) of Entry: N/A
Carcinogenicity?: No
Health Hazards (Acute and Chronic): N/A

EFFECTS OF OVEREXPOSURE: Inhalation: Vapors or spray mists may be slightly irritating to eye, nose, throat, and mucous membranes of respiratory tract producing symptoms of headache, nausea in poorly ventilated areas. Skin Contact: Prolonged or repeated contact with coating may cause slight skin irritation. Eye Contact: Direct contact; inconsequential eye irritation.

EMERGENCY AND FIRST AID PROCEDURES: Inhalation: Remove to fresh air. Eye and Skin Contact: Immediately flush eyes with plenty of water for at least 15 minutes and consult physician; wash skin thoroughly with soap and water. If drenched, remove and wash clothing before reuse. Ingestion: If swallowed, call a physician immediately. If victim is conscious, give 2 glasses of water. Never give anything to an unconscious person. Treat symptomatically.

TOXICITY INFORMATION: The effects of overexposure shown in Section VI are based on acute toxicity profiles for a number of special emulsions that are compositionally similar to this product. Typical values are: Rat, oral LD 50:>5.0 g/kg; Rabbit, dermal LD 50:>5.0 g/kg; Rabbit, skin irritation: practically non irritating --72 hour Mean Irritation Score = 0 to 2: Rabbit, eye irritation: Inconsequentially irritating.

SUPPLEMENTAL INFORMATION

To comply with New Jersey DOH Right-To-Know labeling law
(N.J.A.C. 8:59 - 5.1 & 5.2)

CAS. No.:	CHEMICAL INGREDIENTS:
7732-18-5	Water
Not Avail.*	Proprietary defoamer
Not Avail.*	Acrylic resin solids

*Contents partially unknown

HMIS HAZARD RATING			
Health 1	Flammability 0	Physical Hazard 0	Personal Protection A
HAZARD INDEX: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe			
PERSONAL PROTECTION CODE			
A=Safety Glasses			

Section VII: Precautions for Safe Handling and Use

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Keep unnecessary people away. Floor may be slippery; use care to avoid falling. Dike and contain material with inert material (e.g. sand, earth). Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for disposal. Keep spills and runoffs out of municipal sewers and open bodies of water.
WASTE DISPOSAL METHOD: The coating and any contaminated diking material should be thoroughly air dried and collected into drums. The drums should then be sealed and properly labeled with waste designation and disposed of in a landfill or incinerated according to current local, state and federal regulations.
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Maximum storage temperature 100°F. Keep closure tight and container upright to prevent leakage. Precautionary Labeling: "Keep from Freezing".
OTHER PRECAUTIONS: Do not get in eyes. Avoid skin contact. Prevent prolonged or repeated breathing of vapors or spray mists. Do not handle until the manufacturer's safety precautions and label instructions have been read and understood. Avoid breathing sanding dust.

Section VIII: Control Measures

RESPIRATORY PROTECTION: None required if good ventilation is maintained. Wear respirator (MSHA/NIOSH-approved or equivalent) suitable for concentrations and types of air contaminants encountered. Use approved chemical/mechanical filters designed to remove particulates in open and restricted ventilation areas. Use MSHA/NIOSH-approved airline type respirators or hood in confined areas.
VENTILATION: Sufficient ventilation, in pattern and volume, should be provided to keep the air contaminant concentration below applicable exposure limits. All application areas should be ventilated in accordance with OSHA regulation 29CFR Part 1910.94.
PROTECTIVE GLOVES: Impervious gloves should be worn if prolonged skin contact is likely. Use neoprene or rubber gloves to prevent prolonged skin contact.
EYE PROTECTION: Use safety eyewear including side shields, face shields, or chemical splash goggles (ANSIZ-87.1 or approved equivalent).
OTHER PROTECTIVE EQUIPMENT: Use disposable or impervious clothing if work clothing contamination is likely. Use protective cream if prolonged skin contact is likely.
HYGIENIC PRACTICES: Wash hands before eating, smoking, or using the washroom. Food or beverages should not be consumed anywhere this product is being applied.

References:

1. Sax, N.I., "Dangerous Properties of Industrial Materials", 8th ed., Van Nostrand Reinhold Company, Inc., NY, 1992.
2. American Conference of Governmental Industrial Hygienists, "TLV's and Biological Exposure Indices" for the current year (published annually).
3. U.S. Code of Federal Regulations (CFR) U.S. Dept. of Labor, No. 29, Parts 1900 to 1910.1200. OSHA Communications Standard 29 CFR 1910.1200.
4. Sax, N.I., R.J. "Hazardous Chemicals Desk Reference", Van Nostrand Reinhold Co., Inc., NY, 1987.
5. Fire Protection Guide to Hazardous Materials, 12th edition, National Fire Protection Association, Quincy, MA, 1997.
6. Title III List of Lists, U.S. Environmental Protection Agency publication EPA 560/4-90-011, January 1990.

SAFETY DATA SHEET

1. Identification

Product identifier **First Class Furniture Polish**

Other means of identification

Product code F801015

Recommended use Furniture Maintenance

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Franklin Cleaning Technology	
Address	One Fuller Way Great Bend, KS 67530 United States	
Telephone	Customer Service	(800) 810-4829
E-mail	Not available.	
Emergency phone number	CHEMTREC	(800) 424-9300
	Emergency	(620) 792-1711
	24 hour Emergency	(800) 424-9300

2. Hazard(s) identification

Physical hazards	Gases under pressure	Compressed gas
Health hazards	Not classified.	
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3
OSHA defined hazards	Not classified.	

Label elements



Signal word Warning

Hazard statement Contains gas under pressure; may explode if heated. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention Avoid release to the environment.

Response If exposed or concerned: Get medical advice/attention.

Storage Protect from sunlight. Store in a well-ventilated place.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information 11.67% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 11.67% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
ISOBUTANE		75-28-5	3 - < 5

Chemical name	Common name and synonyms	CAS number	%
DIMETHICONE		63148-62-9	1 - < 3
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation If symptoms develop move victim to fresh air. Get medical attention if symptoms persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion In the unlikely event of swallowing contact a physician or poison control center.

Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical Contents under pressure.

Special protective equipment and precautions for firefighters Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire-fighting equipment/instructions In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Refer to attached safety data sheets and/or instructions for use. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Ground and bond containers when transferring material. Do not re-use empty containers. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains.

Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in a well-ventilated place. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
ISOBUTANE (CAS 75-28-5)	STEL	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
ISOBUTANE (CAS 75-28-5)	TWA	1900 mg/m3 800 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear suitable protective clothing.

Respiratory protection If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Viscous Liquid

Physical state Liquid.

Form Aerosol. Compressed gas. Emulsion

Color White.

Odor Matches to Standard

Odor threshold Not available.

pH 6

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure	4184.84 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	5.70 lbs/gal estimated
Flame extension	0 in
Flammability (flash back)	0 in
Heat of combustion (NFPA 30B)	4 kJ/g estimated
Percent volatile	95.9 % estimated
Specific gravity	0.68 estimated
VOC (Weight %)	9.5 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Concentration of product is an aspiration hazard that can be harmful or fatal if swallowed and enters airways. However, due to the form and method of deliverance of product, ingestion is not a primary route of exposure.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Not available.

Product	Species	Test Results
First Class Furniture Polish (CAS Mixture)		
Acute		
Dermal		
LD50	Rabbit	33670.0352 ml/kg estimated
Inhalation		
LC50	Mouse	1238.0952 mg/l, 1 Hours estimated
	Rat	5789.4736 mg/l, 4 Hours estimated
Oral		
LD50	Rat	89473.6875 mg/kg estimated

Product	Species	Test Results
		24915.8242 ml/kg estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Product		Species	Test Results
First Class Furniture Polish (CAS Mixture)			
Aquatic			
Crustacea	EC50	Daphnia	79754.3828 mg/l, 48 hours estimated
Fish	LC50	Fish	760.2296 mg/l, 96 hours estimated

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

ISOBUTANE	2.76

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

DOT

UN number	ID8000
UN proper shipping name	Consumer commodity
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Packaging exceptions	167
Packaging non bulk	167
Packaging bulk	None

IATA

UN number	ID8000
UN proper shipping name	Consumer commodity
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No.
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	ID8000
UN proper shipping name	Consumer commodity
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

DOT; IATA; IMDG



15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are listed or exempted from listing on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

ISOBUTANE (CAS 75-28-5) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

ISOBUTANE (CAS 75-28-5)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

ISOBUTANE (CAS 75-28-5)

US. New Jersey Worker and Community Right-to-Know Act

ISOBUTANE (CAS 75-28-5)

US. Pennsylvania Worker and Community Right-to-Know Law

ISOBUTANE (CAS 75-28-5)

US. Rhode Island RTK

ISOBUTANE (CAS 75-28-5)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

16. Other information, including date of preparation or last revision

Issue date 12-08-2014

Version # 01

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Material Safety Data Sheet: FIX ALL UV CARTRIDGE SAMPLE, NAC MM

Supercedes Date 05/27/2011 **Issuing Date** 04/15/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name FIX ALL UV CARTRIDGE SAMPLE, NAC MM
Recommended use Adhesives and/or sealants
Information on Manufacturer
CHEMSEARCH DIV. OF NCH CORP.
BOX 152170
IRVING, TX 75015

Product Code 5823
Chemical nature Halogenated compounds
Emergency Telephone Number
CHEMTREC® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
WARNING
Harmful if inhaled
Severe skin irritation
Causes severe eye irritation
Harmful if swallowed

Color Colorless **Physical State** Liquid **Odor** Ether-like

Potential Health Effects

Principle Route of Exposure	Inhalation, Skin contact, Eye contact.
Primary Routes of Entry	Inhalation, Skin Absorption.
Acute Effects	
Eyes	Severe irritation.
Skin	Severe irritation. May be absorbed through the skin in harmful amounts.
Inhalation	Causes respiratory tract irritation. Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Irregular cardiac activity. May be fatal if inhaled in large quantities.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system effects such as headache, dizziness, weakness, staggering gait, nausea, blurred vision, excitation, and in extreme cases, coma or death. Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways.
Chronic Toxicity	Liver and kidney injuries may occur. Contains a known or suspected carcinogen. May cause irregular heartbeats, especially under conditions of stress.
Target Organ Effects	Central nervous system, Skin, Eyes, Liver, Kidney, Respiratory system, Cardiovascular system.
Aggravated Medical Conditions	Respiratory disorders, Skin disorders, Neurological disorders, Kidney disorders, Liver disorders.
Potential Environmental Effects	See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Tetrachloroethylene	127-18-4

4. FIRST AID MEASURES

General advice	Avoid contact with skin, eyes and clothing. Avoid breathing mist.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.
Skin Contact	Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Inhalation	Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point Does not flash **Method** Closed cup
Autoignition Temperature No information available.
Flammability Limits in Air % No information available. **Upper** No data available **Lower** No data available
Suitable Extinguishing Media

Carbon dioxide (CO2). Foam. Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Material can create slippery conditions.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA	**Health** 2	**Flammability** 1	**Instability** 0
HMIS	**Health** 2	**Flammability** 1	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so.
Environmental Precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13)
Methods for Cleaning Up	Pick up and transfer to properly labeled containers
Neutralizing Agent	Not applicable.

7. HANDLING AND STORAGE

Handling	Avoid contact with skin, eyes and clothing. Avoid breathing mist.				
Storage	Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.				
Storage Temperature	**Minimum**	35 °F / 2 °C		**Maximum**	120 °F / 49 °C
Storage Conditions	**Indoor**	X	**Outdoor**	**Heated**	**Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Tetrachloroethylene	TWA: 25 ppm STEL: 100 ppm	TWA: 100 ppm Ceiling: 200 ppm	150 ppm

Engineering Measures	Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
Personal Protective Equipment	
Eye/Face Protection	Tightly fitting safety goggles.
Skin Protection	Wear suitable protective clothing, Impervious gloves.
Respiratory Protection	In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General Hygiene Considerations	Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Viscous
Color	Colorless	**Odor**	Ether-like
Appearance	Hazy	**pH**	Not applicable
Specific Gravity	1.35	**Evaporation Rate**	<1 (Butyl acetate=1)
Percent Volatile (Volume)	> 0.1	**VOC Content (%)**	> 0.1
VOC Content (g/L)	1.35	**Vapor Pressure**	13 mmHg @ 70°F
Vapor Density	>1 (Air = 1.0)	**Solubility**	Negligible
Boiling Point/Range	250 °F / 121 °C		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	Keep away from open flames, hot surfaces, and sources of ignition
Incompatible Products	Strong oxidizing agents
Hazardous Decomposition Products	Carbon oxides, Halogenated hydrocarbon.
Possibility of Hazardous Reactions	None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information	No information available.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Tetrachloroethylene	= 2629 mg/kg (Rat)	no data available	= 4000 ppm (Rat) 4 h	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Tetrachloroethylene	no data available	no data available	no data available	no data available	liver, kidneys, eyes, central nervous system, respiratory system, skin, cardiovascular system

Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Other
Tetrachloroethylene	A3	Group 2A	Reasonably Anticipated	X	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Tetrachloroethylene	EC50 > 500 mg/L Pseudokirchneriella subcapitata 96 h	LC50 11.0 - 15.0 mg/L Lepomis macrochirus 96 h LC50 12.4 - 14.4 mg/L Pimephales promelas 96 h LC50 4.73 - 5.27 mg/L Oncorhynchus mykiss 96 h LC50 8.6 - 13.5 mg/L Pimephales promelas 96 h	EC50 = 100 mg/L 24 h EC50 = 112 mg/L 24 h EC50 = 120.0 mg/L 30 min	6.1 - 9.0: 48 h Daphnia magna mg/L EC50 Static	2.53 - 2.88

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO

Proper Shipping Name Tetrachloroethylene, solution
Hazard Class 6.1
Subsidiary Hazard Class P
UN-No UN1897
Packing Group III
EmS No. F-A, S-A
Marine Pollutant This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO
Shipping Description UN1897, Tetrachloroethylene, solution, 6.1, PG III, LTD QTY, MARINE POLLUTANT

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies
U.S. Federal Regulations
SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Tetrachloroethylene	127-18-4	60-100	0.1

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	No	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Tetrachloroethylene	100 lb	Not applicable

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D1B Toxic materials D2A Very toxic materials D2B Toxic materials



16. OTHER INFORMATION

Prepared By Angela Hutson
Supercedes Date 05/27/2011
Issuing Date 04/15/2014
Reason for Revision No information available.
Glossary No information available.
List of References. No information available.

CHEMSEARCH DIV. OF NCH CORP.assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this document is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

MANUFACTURER'S NAME / ADDRESS

FLAME CONTROL COATINGS LLC
4120 HYDE PARK BLVD.
NIAGARA FALLS, N.Y. 14305

TRADE NAME: 130 FLAT
COLOR: CLEAR
MAIN USE: CLASS B VARNISH TOP COAT

EMERGENCY TELEPHONE NUMBER: 800-535-5053

ISSUE DATE: FEBRUARY 7, 2011 **REVISION DATE:** JANUARY 10, 2012 **PREPARED BY:** D. LONG

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	Wt. %	CAS Number
ALIPHATIC HYDROCARBONS (STODDARD TYPE)	30-60	008052-41-3
*1,2,4 TRIMETHYL BENZENE	0.1-1.0	000095-63-6
FLUX CALCINED DIATOMACEOUS EARTH**	5-10	068855-54-9
** CRYSTOBALITE		014464-46-1
* *QUARTZ		014808-60-7
ANTIMONY PENTOXIDE	1-5	001314-60-9
COBALT 2-ETHYLHEXANOATE	0.1-1.0	000136-52-7
ZIRCONIUM 2-ETHYLHEXANOATE	0.1-1.0	022464-99-9

* COMPONENT PRESENT WITHIN CAS #008052-41-3
** This product may contain up to 72.5% crystalline silica

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER!
HARMFUL OR FATAL IF SWALLOWED
HARMFUL IF INHALED
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: BLOOD, KIDNEYS, LIVER, GASTROINTESTINAL TRACT, RESPIRATORY TRACT, SKIN, NERVOUS SYSTEM, EYE, LENSE OR CORNEA
COMBUSTIBLE LIQUID AND VAPOR
VAPOR MAY CAUSE FLASH FIRE
MAY BE HARMFUL IF ABSORBED THROUGH SKIN
POSSIBLE CANCER HAZARD
CONTAINS MATERIAL WHICH CAN CAUSE CANCER

PRIMARY ROUTES OF ENTRY: EYE CONTACT, SKIN CONTACT, INHALATION, INGESTION

HEALTH HAZARDS (ACUTE AND CHRONIC EXPOSURES)

EYES:
ACUTE – LIQUID, AEROSOLS OR VAPORS ARE SEVERELY IRRITATING AND CAN CAUSE PAIN, TEARING, REDDENING AND SWELLING. IF LEFT UNTREATED, CORNEAL DAMAGE CAN OCCUR AND INJURY IS SLOW TO HEAL. HOWEVER, DAMAGE IS USUALLY REVERSIBLE.
CHRONIC – PROLONGED VAPOR CONTACT MAY CAUSE CONJUNCTIVITIS.

SKIN CONTACT:
ACUTE – REPEATED OR PROLONGED SKIN CONTACT CAN RESULT IN DRY, DEFATTED AND CRACKED SKIN CAUSING INCREASED SUSCEPTIBILITY TO INFECTION. IN ADDITION IRRITATION MAY DEVELOP INTO DERMATITUS. SOLVENTS CAN PENETRATE THE SKIN AND MAY CAUSE EFFECTS SIMILAR TO THOSE IDENTIFIED UNDER ACUTE INHALATION SYMPTOMS.
CHRONIC – MAY CAUSE EFFECTS SIMILAR TO THOSE IDENTIFIED UNDER CHRONIC INHALATION EFFECTS.

SKIN ABSORPTION:
ACUTE – ND
CHRONIC – ND

SECTION 3: HAZARDS IDENTIFICATION (CON'T)

INHALATION:
ACUTE – SOLVENT VAPORS ARE IRRITATING TO THE EYES NOSE AND THROAT. SYMPTOMS OF IRRITATION MAY INCLUDE RED, ITCHY EYES, DRYNESS OF THE THROATAND A FEELING OF TIGHTNESS IN THE CHEST. OTHER POSSIBLE SYMPTOMS OF OVEREXPOSURE INCLUDE: HEADACHE, DIZZINESS, NAUSEA, NARCOSIS, FATIGUE AND LOSS OF APPETITE.
CHRONIC – CHRONIC EXPOSURE TO ORGANIC SOLVENTS HAS BEEN ASSOCIATED WITH VARIOUS NEUROTOXIC EFFECTS INCLUDING PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. SYMPTOMS INCLUDE LOSS OF MEMORY, LOSS OF INTELLECTUAL ABILITY AND LOSS OF COORDINATION.

INGESTION:
ACUTE – CAN RESULT IN IRRITATION OF THE DIGESTIVE TRACT. SYMPTOMS CAN INCLUDE SORE THROAT ABDOMINAL PAIN NAUSEA, VOMITING AND DIARRHEA. VOMITING MAY CAUSE ASPIRATION OF SOLVENT RESULTING IN CHEMICAL PNEUMONITIS.
CHRONIC – ND

CONDITIONS AGGRAVATED BY EXPOSURE: SKIN DISORDERS AND ALLERGIES

SECTION 4: FIRST AID MEASURES

GENERAL: REMOVE PERSON FROM AFFECTED AREA AND MAKE COMFORTABLE. TREAT SYMPTOMATICALLY.

EYES: FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION.

SKIN: REMOVE PRODUCT AND FLUSH AFFECTED AREA WITH WATER FOR 15 MINUTES. IF IRRITATION PERSISTS SEEK MEDICAL ATTENTION.

INHALATION: MOVE TO FRESH AIR. GIVE ASSISTED RESPIRATION IF BREATHING HAS STOPPED OR IS LABORED (CALL A PHYSICIAN).

INGESTION: GIVE 3 – 4 GLASSES OF WATER OR MILK IF PERSON CONSCIOUS. **DO NOT INDUCE VOMITING!** OBTAIN MEDICAL CARE AND TREATMENT.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: 40.6°C (105°F) TCC **CONDITIONS OF FLAMMABILITY**: NA

FLAMMABLE LIMITS: **LEL**: 1.0% **UEL:** 6.0%

OSHA CLASS: COMBUSTIBLE LIQUID, PACKING GROUP III **AUTO IGNITION TEMP**: 232°C (450°F)

HAZARDOUS COMBUSTION PRODUCTS: CO, CO_2, ALDEHYDES, ACIDS

SENSITIVITY TO IMPACT: ND

SENSITIVITY TO STATIC DISCHARGE: STATIC DISCHARGE MAY CAUSE MATERIAL TO IGNITE.

EXTINGUISHNG MEDIA: IGNITION MAY GIVE RISE TO A CLASS B FIRE. IN CASE OF FIRE USE: WATER FOG, CARBON DIOXIDE, DRY CHEMICAL, OR ALCOHOL FOAM.

SPECIAL FIRE FIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING. WATER SPRAY IS USEFUL IN COOLING FIRE-EXPOSED VESSELS AND IN DISPERSING VAPORS.

UNUSUAL FIRE AND EXPLOSIVE HAZARDS: MAY GENERATE TOXIC OR IRRITATING COMBUSTION PRODUCTS. SUDDEN REACTION AND FIRE MAY RESULT IF PRODUCT IS MIXED WITH AN OXIDIZING AGENT. SOLVENT VAPORS MAY BE HEAVIER THAN AIR. UNDER CONDITIONS OF STAGNANT AIR, VAPORS MAY BUILD UP AND TRAVEL ALONG THE GROUND TO AN IGNITION SOURCE.

SECTION 6: ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: SHUT OFF SOURCES OF IGNITION. COVER SPILLS WITH ABSORBENT. PLACE IN METAL CONTAINERS FOR RECOVERY OR DISPOSAL. PREVENT ENTRY INTO SEWERS, STORM DRAINS, AND WATERWAYS.

SECTION 7: HANDLING AND STORAGE

GENERAL: STORE IN COOL, WELL VENTILATED AREAS. KEEP AWAY FROM HEAT AND OPEN FLAMES. AVOID PROLONGED INHALATION OF HEATED VAPORS OR MISTS. AVOID PROLONGED SKIN CONTACT. USE NON-SPARKING TOOLS AND GROUNDING CABLES WHEN TRANSFERRING. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY.

STORAGE: AVOID TEMPERATURE EXTREMES. STORE AWAY FROM EXCESSIVE HEAT, FROM SOURCES OF IGNITION AND FROM REACTIVE MATERIALS. MATERIAL CAN BURN; LIMIT INDOOR STORAGE TO AREAS EQUIPPED WITH AUTOMATIC SPRINKLERS. STORE OUT OF DIRECT SUNLIGHT IN A COOL PLACE. KEEP CONTAINERS TIGHTLY CLOSED. GROUND ALL METAL CONTAINERS DURING STORAGE AND HANDLING.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

	EXPOSURE LIMITS (ppm)				
INGREDIENTS (CAS)	**OSHA**		**ACGIH**		**OTHER**
	TWA	**STEL**	**TWA**	**STEL**	
008052-41-3*	100	NE	400	NE	
* 000095-63-6	25	NE	25	NE	
068855-54-9*	NE	NE	NE	NE	
*014464-46-1	0.025mg/m^3	ND	0.025mg/m^3	ND	(SEE NOTE 1)
*014808-60-7	0.025mg/m^3	ND	0.025mg/m^3	ND	(SEE NOTE 1)
001314-60-9	0.5mg/m^3	ND	0.5mg/m^3	ND	(SEE NOTE 1)
000136-52-7	0.1mg/m^3	ND	0.02mg/m^3	ND	(SEE NOTE 1)
022464-99-9	5mg/m^3	ND	10mg/m^3	ND	(SEE NOTE 1)

LEGEND: (M) MAX. EXPOSURE LIMIT; (S) OCCUPATIONAL EXP. LIMIT; (R) SUPPLIERS REC. LIMIT, (+) PERCUTANEOUS RISK
* THIS PRODUCT MAY CONTAIN THE FOLLOWING
NOTE 1: VALUES MEANINGFUL ONLY WHEN HARDENED PRODUCT IS ABRADED, GROUND, ETC.

ENGINEERING CONTROLS: EXHAUST VENTILATION IS SUFFICIENT TO KEEP AIRBORNE CONCENTRATION OF THE SOLVENTS BELOW THEIR RESPECTIVE TLV'S. EXHAUST AIR MAY NEED TO BE CLEANED BY SCRUBBERS OR FILTERS TO REDUCE ENVIRONMENTAL CONTAMINATION.

RESPIRATORY PROTECTION: NONE REQUIRED IN ADEQUATELY VENTILATED AREAS. IF VAPOR CONCENTRATION EXCEEDS 20ppm FOR LONGER THAN 15 MINUTES, A NIOSH APPROVED RESPIRATOR FOR ORGANIC VAPORS IS RECOMMENDED.

PROTECTIVE GLOVES: NITRILE RUBBER

EYE PROTECTION: SPLASH-PROOF GOGGLES OR CHEMICAL SAFETY GLASSES

OTHER PROTECTIVE EQUIPMENT: LONG SLEEVED SHIRTS AND TROUSERS. EMERGENCY SHOWERS AND EYE WASH STATIONS SHOULD BE READILY ACCESSIBLE.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 157°C (315°F)

SPECIFIC GRAVITY: 0.9-1.0

VAPOR PRESSURE: 2.0mm Hg

MELTING POINT: ND

VAPOR DENSITY: 4.9 (AIR = 1)

EVAPORATION RATE: .11 (BUTYL ACETATE = 1)

SOLUBILITY IN WATER: INSOLUBLE

pH: NA

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (CON'T)

COEFFICIENT of WATER/OIL DISTRIBUTION: ND **ODOR THRESHOLD**: ND

APPEARANCE AND ODOR: CLEAR LIQUID, AROMATIC SOLVENT ODOR

% VOLATILES BY VOLUME: 67% **%SOLIDS BY WEIGHT:** 45%

SECTION 10: STABILITY AND REACTIVITY

STABILITY: STABLE; HOWEVER MAY FORM PEROXIDES OF UNKNOWN STABILITY

CONDITIONS TO AVOID: NOT APPLICABLE (MATERIAL IS STABLE)

INCOMPATIBILITY (MATERIAL TO AVOID): OXIDIZING AGENTS (PERCHLORATES, NITRATES), STRONG ACIDS, HYPOCHLORITES, AND PEROXIDES SHOULD NOT BE COMBINED WITH PHOSPHOROUS CONTAINING MATERIALS BECAUSE HIGHLY TOXIC FUMES CAN BE EMITTED IN A FIRE SITUATION.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO_2

HAZARDOUS POLYMERIZATION (REACTIVITY): WILL NOT OCCUR.

SECTION 11: TOXICOLOGICAL INFORMATION

CARCINOGENIC DATA: SILICA IS LISTED WITH IARC AS A CLASS 2A CARCINOGEN. ALSO CONTAINS CRYSTALLINE SILICA WHICH CAN CAUSE LUNG DAMAGE AND CANCER. RISK DEPENDS ON DURATION AND LEVEL OF EXPOSURE. RISK OF SILICA EXPOSURE ONLY MEANINGFUL WHEN HARDENED PRODUCT IS GROUND, ABRADED ETC.

TERATOGENICITY: NO MUTAGENICITY: NO
EMBRYOTOXICITY: NO SYNERGISTIC MATERIAL: NO

OVEREXPOSURE EFFECTS: LACRIMATION OF EYES, SKIN IRRITATION, DIZZINESS.
IRRITANCY: YES
SENSITIZER: YES

ACUTE TOXICITY EFFECTS: ORAL LD_{50}: 5.6g/kg (Rats); DERMAL LD_{50}: >4g/kg (Rabbit); INHALATION: ND

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: NOT READILY BIODEGRADABLE

ECOTOXICITY: ND

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: INCINERATION IS PREFERRED. COMPLY WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. RCRA CLASSIFIED HAZARDOUS WASTE WITH CHARACTERISTIC OF IGNITABILITY.

SECTION 14: TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: COMBUSTIBLE LIQUID, N.O.S. (MINERAL SPIRITS) **HAZARD CLASS:** 3

UN NUMBER: NA1993 **PACKAGING GROUP**: III

REF: CFR49 173.150 (f) 1, 2 **DOT PRODUCT RQ LBS (KGS):** 800 LBS. (362.9 KGS)

IMO SHIPPING DATA: PAINT, HAZARD CLASS 3, UN1263, PACKING GROUP III, FLAMMABLE LIQUID

ICAO/IATA SHIPPING DATA: PAINT, HAZARD CLASS 3, UN1263, PACKING GROUP III, FLAMMABLE LIQUID

PASSENGER AIR MAX QUANTITY: 60L **PASSENGER PACKING INSTRUCTION:** 355

CARGO AIR- MAX QTY.: 220L **CARGO AIR INSTRUCTION NUMBER:** 366

SECTION 15: REGULATORY INFORMATION

MATERIAL VOC = 518 gram / liter **COATING VOC** = 518 gram/liter

TSCA (TOXIC SUBSTANCE CONTROL ACT): ALL COMPONENTS ARE LISTED IN THE TSCA CHEMICAL SUBSTANCE INVENTORY.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION and LIABILITY ACT): NA

SARA TITLE III

SECTION 312 HAZARD CLASS: IMMEDIATE (ACUTE) HEALTH HAZARD, DELAYED (CHRONIC) HEALTH HAZARD; FIRE HAZARD.

SECTION 313 LISTED INGREDIENTS: 1,2,4-TRIMETHYL BENZENE (CAS #000095-65-6), ANTIMONY PENTOXIDE (CAS #001314-60-9)

CALIFORNIA PROPOSITION 65: THE BELOW LIST OF COMPOUNDS IS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCIVE HARM: SILICA, BENZENE, ETHYL BENZENE.

SECTION 16: OTHER INFORMATION

HAZARD RATING

HMIS: HEALTH 2 FLAMMABILITY 2 REACTIVITY 0

LEGEND

ACGIH:	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGEIENISTS
OSHA:	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
STEL:	SHORT TERM EXPOSURE LIMIT
TWA:	TIME WEIGHTED AVERAGE
PEL:	PERMISSABLE EXPOSURE LIMIT
TLV:	THRESHOLD LIMIT VALUE
NA:	NOT APPLICABLE
NE:	NOT ESTABLISHED
ND:	NO DATA

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MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

MANUFACTURER'S NAME / ADDRESS

FLAME CONTROL COATINGS LLC
4120 HYDE PARK BLVD.
NIAGARA FALLS, N.Y. 14305

TRADE NAME: NO. 133A FLAT
COLOR: CLEAR
MAIN USE: CLASS B WATERBASE VARNISH

EMERGENCY TELEPHONE NUMBER: 800-535-5053

ISSUE DATE: JUNE 22, 2010 **REVISION DATE:** JANUARY 14, 2011 **PREPARED BY:** DAVE LONG

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	Wt. %	CAS Number
DIPROPYLENE GLYCOL METHYL ETHER	1-5	034590-94-8
AMORPHOUS SILICON DIOXIDE, CHEMICALLY TREATED	1-5	007631-86-9
HYDROCARBON WAX, CLAY TREATED, MICROCRYSTALLINE	0.1-1.0	064742-42-3
TRIETHYLAMINE	0.1-1.0	000121-41-8

SECTION 3: HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY: EYE CONTACT, SKIN CONTACT, INHALATION, INGESTION.

HEALTH HAZARDS (ACUTE AND CHRONIC EXPOSURES)

EYES:
ACUTE – MAY CAUSE MILD IRRITATION WITH BLURRED VISION.
CHRONIC– ND

SKIN CONTACT:
ACUTE – TRANSIENT IRRITATION AND REDNESS.
CHRONIC – ND

SKIN ABSORPTION:
ACUTE – ND
CHRONIC – ND

INHALATION:
ACUTE – INHALATION OF MISTS MAY CAUSE MILD RESPIRATORY TRACT IRRITATION.
CHRONIC – EXCESSIVE EXPOSURE TO HEATED VAPORS CAN CAUSE IRRITATION OF EYES, NOSE AND THROAT.

INGESTION:
ACUTE – MAY CAUSE MILD IRRITATION OF GASTRO-INTESTINAL TRACT
CHRONIC – ND

CONDITIONS AGGRAVATED BY EXPOSURE: NONE KNOWN.

OVEREXPOSURE EFFECTS: IRRITATION
IRRITANCY: YES - REVERSIBLE
SENSITIZER: NO

SECTION 4: FIRST AID MEASURES

GENERAL: REMOVE AFFECTED PERSON FROM AREA. TREAT SYMPTOMATICALLY.

EYES: FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION.

SKIN: WASH WITH SOAP AND WATER. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.

INHALATION: MOVE TO FRESH AIR. IF BREATHING REMAINS OR BECOMES LABORED, SEEK MEDICAL ATTENTION.

INGESTION: GIVE 3 – 4 GLASSES OF MILK OR WATER. **DO NOT INDUCE VOMITING.** SEEK MEDICAL ATTENTION.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: NA

CONDITIONS OF FLAMMABILITY: NA

FLAMMABLE LIMITS: **LEL:** NE **UEL**: NE

OSHA CLASS: NONE SHOWN

AUTO IGNITION TEMP.: NA

HAZARDOUS COMBUSTION PRODUCTS: CO, CO_2

SENSITIVITY TO IMPACT: NONE

SENSITIVITY TO STATIC DISCHARGE: NONE

EXTINGUISHNG MEDIA: WATER, CO_2, DRY CHEMICAL

SPECIAL FIRE FIGHTING PROCEDURES: NONE LIKELY WITH SMALL QUANTITIES. FOR LARGE QUANTITIES, FIREFIGHTERS AND OTHERS EXPOSED TO VAPORS OR PRODUCTS OF COMBUSTION SHOULD WEAR BUTYL RUBBER BOOTS, GLOVES AND BODY SUIT. SELF-CONTANED BREATHING APPARATUS SHOULD BE WORN.

UNUSUAL FIRE AND EXPLOSIVE HAZARDS: POLYMER FILM CAN BURN, MATERIAL CAN SPLATTER ABOVE 100°C

SECTION 6: ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: COVER SPILLS WITH ABSORBENT. PLACE IN METAL CONTAINERS FOR RECOVERY OR DISPOSAL. PREVENT ENTRY INTO SEWERS, STORM DRAINS, AND WATERWAYS.

SECTION 7: HANDLING AND STORAGE

GENERAL: STORE IN COOL, WELL VENTILATED AREAS. KEEP AWAY FROM HEAT AND OPEN FLAMES. AVOID PROLONGED INHALATION OF HEATED VAPORS OR MISTS. AVOID PROLONGED SKIN CONTACT.

STORAGE: STORE BETWEEN 40ºF AND 100ºF PROTECTED FROM FROST AND DIRECT SUNLIGHT.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

EXPOSURE LIMITS (ppm)

INGREDIENTS (CAS)	OSHA		ACGIH		OTHER
	TWA	STEL	TWA	TLV	
034590-94-8	100	150	100	150	
007631-86-9	5 mg/m^3	ND	10 mg/m^3	ND	(SEE NOTE 1)
064742-42-3	2 mg/m^3	ND	2 mg/m^3	ND	(SEE NOTE 1)
000121-44-8	10	15	10	15	

LEGEND: (M) MAX. EXPOSURE LIMIT; (S) OCCUPATIONAL EXP. LIMIT; (R) SUPPLIERS REC. LIMIT, (+) PERCUTANEOUS RISK
NOTE 1: VALUES MEANINGFUL ONLY WHEN HARDENED PRODUCT IS ABRADED, GROUND, ETC.

ENGINEERING CONTROLS: NO SPECIFIC CONTROLS NEEDED. GENERAL AND LOCAL EXHAUST RECOMMENDED.

RESPIRATORY PROTECTION: NONE REQUIRED IN ADEQUATELY VENTILATED AREAS. IF CONCENTRATION EXCEEDS 20ppm FOR LONGER THAN 15 MINUTES, A NIOSH APPROVED RESPIRATOR FOR ORGANIC VAPORS IS RECOMMENDED.

PROTECTIVE GLOVES: NITRILE RUBBER

EYE PROTECTION: SPLASH-PROOF GOGGLES OR CHEMICAL SAFETY GLASSES

OTHER PROTECTIVE EQUIPMENT: LONG SLEEVED SHIRTS AND TROUSERS. EMERGENCY EYE WASH STATIONS SHOULD BE READILY ACCESSIBLE.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: >100°C (>212°F)

SPECIFIC GRAVITY: 1.0-1.1

VAPOR PRESSURE: ND

MELTING POINT: ND

VAPOR DENSITY: >1 (AIR = 1)

EVAPORATION RATE: <1 (BUTYL ACETATE = 1)

SOLUBILITY IN WATER: DILUTABLE

pH: 8.0 TO 11.5

COEFFICIENT of WATER/OIL DISTRIBUTION: ND

ODOR THRESHOLD: ND

APPEARANCE AND ODOR: MILKY WHITE LIQUID, MILD ODOR

% VOLATILES BY VOLUME: 77%

% SOLIDS BY WEIGHT: 28%

SECTION 10: STABILITY AND REACTIVITY

STABILITY: STABLE

CONDITIONS TO AVOID: AVOID ELEVATED TEMPERATURES

INCOMPATIBILITY (MATERIAL TO AVOID): NONE KNOWN

HAZARDOUS DECOMPOSITION PRODUCTS: NONE KNOWN

HAZARDOUS POLYMERIZATION (REACTIVITY): WILL NOT OCCUR

CONDITIONS TO AVOID: KEEP FROM FREEZING

SECTION 11: TOXICOLOGICAL INFORMATION

CARCINOGENIC DATA: **NTP**: NONE **OSHA**: NONE **IARC**: NONE
TERATOGENICITY: NO MUTAGENICITY: NO
EMBRYOTOXICITY: NO SYNERGISTIC MATERIAL: NO

ACUTE TOXICITY EFFECTS: NA
LONG TERM EXPERIENCE OF THIS PRODUCT TYPE INDICATES NO DANGER TO HEALTH WHEN PROPERLY HANDLED UNDER INDUSTRIAL CONDITIONS.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: NE

ECOTOXICITY: NE

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: AT THIS TIME, MATERIAL AND ITS CONTAINERS WOULD NOT BE CONSIDERED HAZARDOUS WASTE AS DEFINED UNDER RCRA REGUALTIONS. CHECK FOR DISPOSAL COMPLIANCE UNDER FEDERAL, STATE AND LOCAL AUTHORITIES.

SECTION 14: TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: LIQUID LATEX, NOT REGULATED BY DOT

HAZARD CLASS: NONE

PACKING GROUP: NOT APPLICABLE

UN NUMBER: NOT APPLICABLE

IMO SHIPPING DATA: NOT REGULATED

ICAO/IATA SHIPPING DATA: NOT REGULATED

SECTION 15: REGULATORY INFORMATION

MATERIAL VOC = 20gram / liter

COATING VOC = 80 gram/liter

TSCA (TOXIC SUBSTANCE CONTROL ACT): ALL COMPONENTS ARE LISTED IN THE TSCA CHEMICAL SUBSTANCE INVENTORY.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION and LIABILITY ACT): ND

SECTION 15: REGULATORY INFORMATION (CON'T)

SARA TITLE III

SECTION 312 HAZARD CLASS: SLIGHT HEALTH HAZARD
SECTION 313 LISTED INGREDIENTS: TRIETHYLAMINE (CAS #000121-44-8)

CALIFORNIA PROPOSITION 65: The below list of compounds is known to the State of California to cause cancer, birth defects or other reproductive harm: NONE

SECTION 16: OTHER INFORMATION

HAZARD RATING

HMIS:	**HEALTH**	**1**	**FLAMMABILITY**	**0**	**REACTIVITY**	**0**

LEGEND

ACGIH:	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGEIENISTS
OSHA:	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
STEL:	SHORT TERM EXPOSURE LIMIT
TWA:	TIME WEIGHTED AVERAGE
PEL:	PERMISSABLE EXPOSURE LIMIT
TLV:	THRESHOLD LIMIT VALUE
NA:	NOT APPLICABLE
NE:	NOT ESTABLISHED
ND:	NO DATA

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SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: FlameSafe® FS 900 Firestop Sealant
MSDS Number: Z-01660
Cancelled MSDS Number: Z-01643
MSDS Date: 09/18/2006
Chemical Family Name: Polyvinyl Acetate & Acrylic Latex Based Emulsion
Product Use: Acrylic, Endothermic Firestop
Chemical Formula: Mixture-NA
CAS # (Chemical Abstracts Service Number): Mixture-NA

Manufactured by:

W.R.Grace & Co.-Conn.
62 Whittemore Avenue
Cambridge, MA 02140

Grace Canada, Inc.
294 Clements Road West
Ajax, Ontario L1S 3C6

In Case of Emergency Call:

In USA: (617) 876-1400 In Canada: (905) 683-8561

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS#	Percent (max)
2-Propenoic acid, polymer...	052640-81-0	10-25
Aluminum oxide	001344-28-1	10-25
Ashes, residues	068131-74-8	10-25
Methenamine	000100-97-0	< 1
Phenol-formaldehyde polymer	009003-35-4	1-10
Titanium dioxide	013463-67-7	1-10
Zinc borate	001332-07-6	1-10

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview:

Warning!
Causes severe eye irritation.
Causes skin irritation.
Causes respiratory tract irritation.
May be harmful if ingested.
Causes digestive tract irritation if ingested.
Harmful if absorbed through skin.
May cause liver and kidney damage.

HMIS Rating:

Health:	2*
Flammability:	0
Reactivity:	0
Personal Protective Equipment:	B (See Section 8)

Potential Health Effects:

Inhalation: Causes respiratory tract irritation.
Prolonged inhalation may cause sensitization.
Effects include: Nausea, sneezing, coughing, tightness of chest, hypersensitive individuals may experience allergic respiratory reaction and wheezing.
Eye Contact: Eye contact can cause severe irritation.
Prolonged eye contact can result in tissue damage.
Skin Contact: Skin contact causes irritation.
Prolonged skin contact can result in burns.
May cause sensitization.
Hypersensitive individuals may develop an allergic reaction resulting in dermatitis, rash or hives.

Skin Absorption: Harmful if absorbed through the skin.
Ingestion: Harmful if ingested.
If ingested, causes irritation to the linings of the mouth, esophagus and stomach.
Effects include: No other effects expected unless listed below.
Reproductive and developmental effects have been reported for certain ingredients. Long-term repeated ingestion of small amounts of product may cause a decrease in red blood cells or liver and kidney damage. Phenol-formaldehyde polymer has tested positive as a mutagen.

SECTION 4 - FIRST AID MEASURES:

Skin Contact: Wash with soap and water.
Call a physician.
Remove contaminated clothing and wash before reuse.
Eye Contact: Flush eyes with water for at least 15 minutes while holding eyelids open.
Get immediate medical attention.
Ingestion: Do not induce vomiting.
Never give anything by mouth to an unconscious person.
If discomfort or irritation persists, consult a physician.
Inhalation: If symptoms develop, get fresh air. If symptoms persist, consult a physician.
If breathing has stopped, give artificial respiration then oxygen if needed.

SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

Flash Point:	>212°F/100°C
Flash Point Method:	Estimated
Lower Explosion Limit:	Not Available
Upper Explosion Limit:	Not Available
Auto-Ignition Temperature:	Not Available

NFPA Rating:

Health:	1
Flammability:	0
Reactivity:	0

Extinguishing Media: Product will not support combustion. Use alcohol foam, Carbon dioxide, dry chemical or water to treat surrounding fire.
Special Fire Fighting Procedures: Wear self-contained breathing apparatus and complete personal protective equipment when potential for exposure to vapors or products of combustion exist. Isolate area and keep unnecessary people away.
Unusual Fire and Explosion Hazards: During fire, oxides of nitrogen may be evolved

SECTION 6 - ACCIDENTAL RELEASE MEASURES:

Spills/Leaks: se proper personal protective equipment. Do not flush to sewer or allow to enter waterways. Keep unnecessary people away.

SECTION 7 - HANDLING AND STORAGE

Precautionary Measures: Avoid contact with eyes, skin and clothing.
Do not take internally.
Practice good personal hygiene to avoid ingestion.
Use only with adequate ventilation.
Wash clothing before reuse.
FOR PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT

EXPOSURE GUIDELINES (US)

Ingredient	ACGIH TLV			OSHA PEL			Other
	TWA	STEL	Ceiling	TWA	STEL	Ceiling	
2-Propenoic acid, polymer...	-	-	-	-	-	-	-
Aluminum oxide	10 mg/m3 TWA (as Al) (The value is for total dust containing no	-	-	total dust: 10 mg/m3 TWA; respirable fraction: 5 mg/m3 TWA	-	-	-

	asbestos and <						
Ashes, residues	-	-	-	-	-	-	-
Phenol-formaldehyde polymer	-	-	-	-	-	-	-
Titanium dioxide	10 mg/m3 TWA	-	-	total dust: 10 mg/m3 TWA	-	-	-
Zinc borate	-	-	-	-	-	-	-

*Contains formaldehyde below 0.1% threshold. Product is capable of releasing formaldehyde under certain conditions. Exposure during typical application is expected to be insignificant. Exposure to formaldehyde vapor is a potential concern if product is applied under confined space conditions. Consult appropriate exposure guidelines for formaldehyde. (OSHA: 0.75 ppm-TWA, 2.0 ppm - STEL, ACGIH 0.3 ppm Ceiling)
Titanium dioxide can result in lung disease (lung cancer). However due to the physical nature of this product (liquid) exposures are not expected unless after product dries it is abraded and airborne dust is created.

EXPOSURE GUIDELINES (CANADA)

Employers should consult local Provincial regulatory limits for exposure guidelines which may vary locally.

Engineering Controls: Not generally required.

Personal Protective Equipment:

Respiratory Protection: Respiratory protection is not normally required. Wear NIOSH approved dust mask if necessary to prevent exposures above the limits specified above.
A NIOSH approved respirator for Formaldehyde vapor is required whenever exposures exceed regulatory limits. For additional information, refer to US OSHA Regulations 29 CFR 1910.§ 134.
Skin Protection: Impervious (PVC, latex or nitrile) gloves should be worn anytime direct contact is possible.
Eye Protection: Safety glasses or goggles should be worn.
Work/Hygienic Practices: Use good personal hygiene practices.
This product contains compounds subject to exposure guidelines and/or identified as carcinogens. (See Sections 8 and 11). However, due to the physical nature of this product, these compounds are unlikely to reach exposure limits unless airborne dust or spray mist is created.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance/Odor:	Red mastic. Mild latex odor.
Odor Threshold: (ppm)	Not Determined
pH:	Not Available
Vapor Pressure: (Mm Hg)	Unknown
Vapor Density: (Air = 1)	Greater than 1
Solubility In Water:	Appreciable
Specific Gravity: (Water = 1)	Not Available
Evaporation Rate: (Butyl Acetate = 1)	1
Boiling Point:	>212°F/100°C
Viscosity:	Unknown
Bulk Density: (Pounds/Cubic Foot)(Pcf)	Not Applicable
% Volatiles: (70°F) (21°C)	26%

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:	Stable
Conditions To Avoid:	None known for this product.
Hazardous Polymerization:	Will not polymerize.
Hazardous Decomposition Products:	Carbon dioxide, Carbon monoxide and Low molecular weight hydrocarbons.

SECTION 11 - TOXICOLOGICAL INFORMATION

Ingredient(No data unless listed.) **CAS Number** **LD50 and LC50**

Carcinogenicity:

Ingredient	IARC Group 1	IARC Group 2A	IARC Group 2B	NTP Known	NTP Suspect	OSHA
2-Propenoic acid, polymer...	No	No	No	No	No	No
Aluminum oxide	No	No	No	No	No	No
Ashes, residues	No	No	No	No	No	No
Phenol-formaldehyde polymer	No	No	No	No	No	No
Titanium dioxide	No	No	Yes	No	No	No
Zinc borate	No	No	No	No	No	No

*Contains formaldehyde below 0.1% threshold. Product is capable of releasing formaldehyde under certain conditions. Exposures during typical applications are expected to be insignificant. Exposure to formaldehyde vapor is a potential concern if product is applied under confined space conditions. NTP: Suspect Carcinogen. IARC: Group 1. OSHA: Potential.
Titanium dioxide can result in lung disease (lung cancer). However due to the physical nature of this product (liquid) exposures are not expected unless after product dries it is abraded and airborne dust is created.

Mutagenicity: Phenol-formaldehyde polymer in this product has tested positive as a mutagen.
Teratogenicity: Not applicable.
Reproductive Toxicity: Borates have caused reproductive and developmental effects in animal studies.

SECTION 12 - ECOLOGICAL INFORMATION

Environmental Fate: No data available for product.
Ecotoxicity: No data available for product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Procedures: Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing waste for disposal. According to EPA (40 CFR § 261), waste of this product is not defined as hazardous. Dispose of waste in accordance with all applicable regulations.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Not Applicable
UN/NA Number: Not Applicable
Domestic Hazard Class: Nonhazardous
Surface Freight Classification: Compound fireproofing or retardant, flame
Label/Placard Required: Not Applicable

SECTION 15 - REGULATORY INFORMATION

REGULATORY CHEMICAL LISTS:

CERCLA (Comprehensive Response Compensation and Liability Act):
(None present unless listed below)

Chemical Name	CAS #	Wt %	CERCLA RQ
Zinc borate	001332-07-6	4	final RQ = 1000 pounds (454 kg)

SARA Title III (Superfund Amendments and Reauthorization Act)

SARA Section 312/Tier I & II Hazard Categories:

Health Immediate (acute)	Yes
Health Delayed (chronic)	Yes
Flammable	No
Reactive	No
Pressure	No

302 Reportable Ingredients (Identification Threshold 1%.):

Chemical Name	CAS #	Wt %	SARA 302 TPQ

313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

Chemical Name	CAS #	Wt %

Acetaldehyde	000075-07-0	.0016935
Acrylamide	000079-06-1	.0010161
Acrylonitrile	000107-13-1	.0003387
Aluminum oxide	001344-28-1	15.8388
Ethyl acrylate	000140-88-5	.0027096
Formaldehyde	000050-00-0	.0211180747
Glycol ethers	RR-00067-9	.002
Vinyl acetate	000108-05-4	.00447
Zinc Compounds	RR-00578-7	4.0
Phenol	000108-95-2	.2988

National Volatile Organic Compound Emission Standards For Architectural Coatings:

Volatile Organic Content: (gr/L) Not Applicable

WHMIS Classification(s): D2 B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR). This MSDS contains all the information required by the CPR.

State Regulatory Information:

California Proposition 65: WARNING! This product contains substances known to the state of California to cause cancer, birth defects or other reproductive harm.

Massachusetts Hazardous Substance List(Identification threshold 0.001%(1ppm)):

Chemical Name	CAS #	Wt %
Acetaldehyde	000075-07-0	.0016935
Acrylamide	000079-06-1	.0010161
Acrylonitrile	000107-13-1	.0003387
Ethyl acrylate	000140-88-5	.0027096
Formaldehyde	000050-00-0	.0211180747
Vinyl acetate	000108-05-4	.00447
Phenol	000108-95-2	.2988

New Jersey Hazardous Substance List(Identification threshold (0.1%)):

Chemical Name	CAS #	Wt %
Aluminum oxide	001344-28-1	15.8388
Phenol	000108-95-2	.2988
Zinc Compounds	RR-00578-7	4

Pennsylvania Hazardous Substance List(Identification threshold 0.01%):

Chemical Name	CAS #	Wt %
Formaldehyde	000050-00-0	.0211180747

CHEMICAL INVENTORY STATUS:

All chemicals in this product are listed or exempt from listing in the following countries:

US	CANADA		EUROPE	AUSTRALIA	JAPAN	KOREA	PHILIPPINES
TSCA	DSL	NDSL	EINECS/ELINCS	AICS	ENCS	ECL	PICCS
Yes	No	Yes	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined

SECTION 16 - OTHER INFORMATION

Non-Hazardous Ingredient Disclosure:

Chemical Name	CAS Number
Water	007732-18-5

Prepared by: EH&S Department
Approved by: EH&S Department
Approved Date: 09/18/2006

Disclaimer:

"The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical

hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection."

MPC™

Maintenance Solutions

CLASSIFIED UL®

FLOOR COATING AND FINISHING MATERIAL AS TO SLIP RESISTANCE ONLY 17SU

Flashback SB

Spray Buff



For Use On:

Vinyl Tile	Linoleum	Sealed Wood
Vinyl Asbestos	Rubber Tile	Quarry Tile
Asphalt Tile	Terrazzo	Marble

DESCRIPTION

This product removes all black heel marks and dirt, replacing them with a brilliant shine that will actually upgrade the original gloss of the finish. Saves time and money because less frequent recoating is necessary, as well as extending time spans between stripping.

DIRECTIONS

FOR SPRAY BUFFING: Remove all tar, gum, and excess soil from the floor. Spray a fine mist of concentrate onto the floor just prior to buffing. DO NOT OVERWET. Use a spray buff pad and buff to a high shine. Turn pad over or replace as necessary.

This product meets the maximum content requirements for Volatile Organic Compounds (VOCs) as established by state and Federal regulations.

Floor Maintainers

PRODUCT SPECIFICATIONS

Active Ingredients:	14.0 ± 0.5%	**Flash Point:**	None
Color:	Milky white	**Solubility:**	Complete with water
Odor:	Lemon-lime	**Black Mark Resistance:**	Excellent
Base:	Polymers, waxes, surfactants and mild solvents	**Sediment:**	0.01% max.
		Buffability:	Excellent
pH:	9.0 -9.5	**Storage/Stability:**	2 years
Viscosity:	Water thin	**Weight per Gallon:**	8.43 lbs./gal.
Slip Resistance:	Will not increase slip	**Freeze/Thaw Stability:**	Keep from freezing
Abrasives:	None		

Misco Products Corporation Reading, PA (800) 548-4568 FAX (610) 926-1194
www.miscoprod.com

FLS **MATERIAL SAFETY DATA SHEET** N/A=Not Applicable

Prepared by: Regulatory Affairs Dept. (Prepared According to 29 CFR 1910.1200) Effective Date: 5/99 Revision: 1/01

SECTION 1-PRODUCT IDENTIFICATION AND SUPPLIER INFORMATION

Manufacturer's Name:
Misco Products Corporation
Manufacturer's Address:
1048 Stinson Drive Reading, PA 19605
Manufacturer's Phone #: (610) 926-4106

Product Name: Flashback FS
Generic Name: Spray Buff
Chemical Family: Polymer/Detergent Blend
Formula: Proprietary

SECTION 2-INGREDIENT INFORMATION

CHEMICAL NAME	CAS NO.	WT. %	PEL	TWA-TLV	STEL-TLV
Water	7732-18-5	to 100			
Acrylic Copolymer Dispersion	63744-68-3	5 to 10			
Polyethylene Wax Emulsion	N/A	5 to 10			
Petroleum Distillates	64741-65-7	0 to 5	500 ppm	100 ppm	N/A
Anionic Surfactant	N/A	0 to 5			
Perfume Oils	N/A	0 to 5			

SECTION 3-PHYSICAL DATA

Boiling Point (°F): 212 F. **Specific Gravity:** 1.012
Vapor Pressure: 20mm Hg @ 68 F. **Vapor Density (Air=1):** >1
% Volatile: 85+ **pH:** 9.0-9.5
Solubility in Water: Complete **Evaporation Rate (Water=1):** <1
Physical Description: Thin milky white liquid with pleasant odor.

SECTION 4-FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): N/A
Upper Explosion Limit: N/A **Lower Explosion Limit:** N/A
Extinguishing Media: N/A
Special Firefighting Procedures: Non Flammable
Unusual Fire and Explosion Hazards: N/A

SECTION 5-REACTIVITY DATA

Stability: Stable
Hazards Decomposition Products: Will not occur.
Hazardous Polymerization: None
Incompatibility (Materials to Avoid): None

SECTION 6-STORAGE AND HANDLING INFORMATION

Keep out of reach of children. For use by trained personnel only. Keep unauthorized personnel away when applying to floor. Keep container closed during storage. For institutional and industrial use only. Avoid contact with eyes, skin and clothing. Avoid breathing of vapors. Use in well-ventilated area.

SECTION 7-HEALTH HAZARDS AND FIRST AID

Effects of Overexposure:
Skin: Prolonged or repeated contact may cause dermatitis.
Eyes: Eye irritant. May cause redness or swelling.
Inhalation: Mist may irritate nose, throat and lungs.
Ingestion: May be irritating to the mouth, throat, and gastrointestinal system. Vomiting and diarrhea expected with large doses.

First Aid Procedures:
Skin: Flush with water. Seek medical attention if irritation persists.
Eyes: Flush with large quantities of water, holding eyelids open. Seek medical attention.
Inhalation: Remove victim to fresh air and monitor.
Ingestion: Dilute with 2 glasses of water. Seek medical attention if symptoms persist.

SECTION 8-SPECIAL PROTECTION INFORMATION

Respiratory Protection: No special requirements.
Ventilation Requirements: Provide local exhaust to keep TLV of Section 2 ingredients below acceptable limit.
Protective Gloves: Chemical resistant rubber or neoprene.
Eye Protection: Safety glasses or chemical splash goggles.
Other Protective Equipment: N/A

SECTION 9-SPILL OR LEAK PROCEDURES

Steps to be taken in Case Material is Released or Spilled: Floors will become slippery. Avoid walking in product. Keep unessential personnel away. Mop up or otherwise absorb and hold disposal. Avoid discharge to sewer or open waterways.
Waste Disposal Method: Any method in accordance with local, state and federal laws. Best method is to recycle or reuse for intended purpose. Consult local authorities for disposal in public sewer. Do not dispose of into storm drain, stream, river or to ground. Rinse container thoroughly before discarding in trash.

SECTION 10-REGULATORY INFORMATION

SARA Title III - Section 311/312 -Hazard Categories:
No - Fire Hazard
No - Sudden Release of Pressure Hazard
No - Reactivity Hazard
Yes - Immediate (acute) Health Hazard
No - Delayed (chronic) Health Hazard

Shipping Information:
FOR CONTAINERS > 1 Gallon : Cleaning Compound
FOR 1 GALLON CONTAINERS : Cleaning Compound
FOR CONTAINERS < 1 GALLON : Cleaning Compound

HMIS Hazardous Materials Identification System

Health	**1**
Flammability	**0**
Reactivity	**0**
Personal Protection	**A**

FOR EMERGENCY MEDICAL OR TRANSPORT INFORMATION: CHEM-TEL, Inc. @ 800-255-3924 **(24 hours, 7 days per week)**

This product contains the following toxic chemical(s) subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

CAS#	Chemical Name	Percent by Weight
	None	

This product contains the following chemical(s) which have been established to be either a carcinogen or suspected carcinogen.

CAS#	Chemical Name	Percent by Weight
	None	

SECTION 11-OTHER INFORMATION

This company cannot anticipate all conditions of handling and use of this product. Therefore, this company accepts no responsibility for results obtained by the application of this information, or the safety and suitability of our products either alone or in combination with other products. It is the responsibility of the user to provide a safe workplace, using the health and safety information contained herein as a guide. This company will accept no liability for damages or loss incurred from the improper handling and use of this product

MATERIAL SAFETY DATA SHEET
(SIMILAR TO OSHA FORM 174)

N.A.=Not Applicable
Not Est.=Not Established
Prop.=Proprietary

SECTION 1-MANUFACTURER/DISTRIBUTOR INFORMATION

Product Name: Flashback Spray Buff Emulsion
Supplier's Name: INDCO, Inc.
Supplier's Address: N. Railroad & Essex St., Gloucester City, NJ 08030
HMIS Hazard Code: Health:1 Flammability:1 Reactivity:0 Other:0
Chemical Family: Spray Buff
D.O.T. Shipping Name: N/A

Emergency Phone #: (856)456-6100
Chemical Name: N.A. Proprietary Blend
Formula: N.A. Blended Product
Hazard Class: N/A **D.O.T. ID#:** N/A

SECTION 2-HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NO.	% Concentrate Range	Hazard Ratings (TLV/PEL)
None			

SECTION 3-PHYSICAL DATA

Boiling Point (F): 212°
Vapor Pressure: = To Water
Vapor Density: = To Water
Solubility in Water: Complete
Appearance: Milky White Liquid
Odor: Almond
Specific Gravity: 1.000
Evaporation Rate: = To Water

SECTION 4-FIRE AND EXPLOSION DATA

Flash Point (F): None To Boiling (TOC)
Flammable Limits: N.A.
Unusual Fire & Explosion Hazards: None

SECTION 5-HEALTH HAZARD DATA

Route(s) of Entry: Inhalation:No Skin:Yes Ingestion:Yes **Threshold Limit Value:** Not Est.
Effects of Overexposure: May cause skin and eye irritation. May be harmful if swallowed.
Emergency & First Aid Procedures: For Eyes: Flush thoroughly with water for at least fifteen minutes. Get medical aid. **For Skin:** Flush thoroughly with water. If irritation persists get medical aid. **If Ingested:** Do not induce vomiting. Give milk, egg white, gelatin, or if none of these are available give large quantities of water. Get medical aid.
Conditions Aggravated by Exposure: None

Listed Carcinogen, Mutagen, Teratogen (Ingredient, Source, Amount): None

SECTION 6-REACTIVITY DATA

Stability: Stable
Conditions to Avoid: None
Incompatibility: Strong Acids and Oxidizers
Hazardous Decomposition Products: Carbon Oxides and Amines
Hazardous Polymerization: Will not occur.

SECTION 7-SPILL OR LEAK PROCEDURES

Steps to be taken if material is released or spilled: Recontainerize by mopping, wet vacuum, or using a suitable absorbent. Rinse remaining material to drains. Be cautious of slippery floors.
Waste disposal method: Follow local, state, and federal regulations.

SECTION 8-SPECIAL PROTECTION INFORMATION

Respiratory Protection: Not Required.
Ventilation: Not Required.
Protective Gloves: Not Required.
Eye Protection: Not Required.
Other Protective Equipment: None

SECTION 9-SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Store between 40° and 120° F.
Other Precautions: Keep out of reach of children. For sale to, use and storage by service personnel only.

The information contained in this MSDS was obtained from current and reliable sources, however the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of this company, it is not responsible for loss, injury and expense arising out of the product's improper use. No warranty, expressed or inferred, regarding the product described in this MSDS shall be created or inferred by any statement in this MSDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

DATE PREPARED-10/5/00 By: G.C.

Material Safety Data

PRODUCT NAME Fleet US Line Stripe Marking Paint.
PRODUCT PURPOSE Line Marking (Outdoor)
COMPANY IDENTIFICATION: Fleet US LLC, 315 12th Street, PO Box 279, Dakota City, NE 68731-0279 USA
TELEPHONE: 402-987-1115
FAX: 402-987-1116
COMOSITION: Water-based line marking paint.
HAZARD IDENTIFICATION:
PRIMARY ROUTES OF EXPOSURE Eye Contact, Skin Contact
EYE CONTACT: Direct contact with this material may cause irritation.
SKIN CONTACT: Prolonged or repeated contact may cause irritation of the skin.
FIRST AID MEASURES**:**
EYE CONTACT: Flush eyes with large amounts of water, before marking fluid dries, for at least 10 minutes. Seek medical advise if irritation persists.
SKIN CONTACT: Remove contaminated clothing. Wash with soap and water before fluid dries.
INGESTION: Drink plenty of water. Do not induce vomiting. Seek medical advise.
FIRE FIGHTING MEASURES: Aqueous dispersions will not burn. Material will spatter above **212*F.**
FLASH POINT: Non-combustible
AUTO-IGNITION TEMPERATURE Not Applicable
EXTINGUISHING AGENTS: Water, foam, carbon dioxide or dry powder Extinguishers are all suitable.
ACCIDENTAL RELEASE MEASURES: Spillage should not be washed into any drain unless it leads to a suitable efficient treatment process Residues and spillage should be soaked up with an insert absorbent (e.g, sand, earth,) for disposal.
HANDLING AND STORAGE
HANDLING: Handle in accordance with good industrial safety and hygiene practices.
STORAGE: Keep from freezing; product may coagulate. Store in sealed containers between **40*F** and **75*F.**

EXPOSURE CONTROLS AND PERSONAL PROTECTION : Local exhaust ventilation may be required in circumstances where the product is sprayed in enclosed areas.
PERSONAL PROTECTION: Respiratory: if sprayed in confined spaces e.g. indoors, masks may be required. Hand: Gloves if risk of skin contact. Eye: Goggles, if risk of splashing. Skin: Standard industrial overalls if risk of splashing.
REGULATORY INFORMATION: Hazard Classification: None.

PHYSICAL AND CHEMICAL PROPERTIES: Appearance: Flowable Liquid .Odor: Slight pH: 6.0 to 8.0. Boiling point Approx. 121*F. Specific Gravity: 1:5 to 1:7. Water Solubility: Fully miscible.
STABILITY AND REACTIVITY: Fleet US is stable under normal conditions of use- also see Handling and Storage.
TOXICOLOGICAL INFORMATION: Acute oral toxicity: LD50 (RAT)>2000 mg/kg Method; EEC 64/449, B.1
Irritant effect on skin: Slight (Rabbit) Method;84/499, B4
Irritant effect on skin: Slight (Rabbit) Method: 84/449, B5
The product is therefore considered to be of low acute oral toxicity to mammals. Frequent contact may lead to skin and eye irritation, especially if the product is allowed to dry out. Long term experience of handling of this product under industrial conditions indicates the absence of any chronic or acute effects. This product is considered to be non-harmful to health if used in the correct manner. The toxicological data given are determined by analogy.
ECOLOGICAL INFORMATION: Chemical Oxygen Demand (C.O.D.) 800 mg/l (washdown, l.e. low concentration @<500mg/l). Severn Trent Water Authority determined the ecological data given. Fleet US paint is totally miscible with water and at low concentration, exhibits low toxicity to fish. According to experience this product has no harmful effect to the environment if used in the correct manner.
DISPOSAL INFORMATION: Fleet US is not classified as hazardous waste. This product can be coagulated and separated from the aqueous phase for landfill or incineration. The residual liquid should not be discharged without prior consent Existing National and Local Regulations must always be complied with.
TRANSPORT INFORMATION: Fleet US is not classified as hazardous for transportation.

MATERIAL SAFETY DATA SHEET

THE FLOOD COMPANY • P.O. BOX 2535 • HUDSON, OHIO 44236-0035
PH: 1-800-321-3444 • FAX: 330-650-1453

CWF-UV / ALL TONES

SECTION I - PRODUCT IDENTIFICATION

NAME OF MANUFACTURER	The Flood Company 1212 Barlow Road P.O. Box 2535 Hudson, Ohio 44236-0035 U.S.A.
EMERGENCY TELEPHONE NO.	800-321-3444 or your local poison control center
TRANSPORTATION	Chemtrec 800-424-9300 (24 hours)
PRODUCT NAME	CWF-UV / ALL TONES
PRODUCT CLASS	Exterior Wood Finish
DATE OF PREPARATION/CHANGE	January 11, 2000 / September 1, 2002
PREPARED BY	Safety & Compliance Officer

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT Chemical Name Common Name	PERCENT	OCCUPATIONAL EXPOSURE LIMIT TLV	 PEL	VAPOR PRESSURE	LD50 ORAL - RAT	LC50 IHL - RAT
Solvent Naphtha Medium Aliphatic Petroleum Distillate CAS # 64742-47-8	<36	100ppm	100ppm	<3mm Hg @ 100°F	N/A	N/A
Ethylene Glycol Ethylene Glycol CAS #107-21-1	<5	50ppm (ACGIH)		<0.05mm Hg @ 74°F	4700 mg/kg	N/A
Stoddard Solvent Mineral Spirits CAS #8052-41-3	<5	100ppm	100ppm	Not available	N/A	N/A
Ethyl Benzene Ethyl Benzene CAS #100-41-4	<0.1	100ppm	100ppm	10mmHg @ 26° F	3500 mg/kg	N/A

SECTION III - PHYSICAL DATA

BOILING RANGE	300-550 DEGREES F.
VAPOR DENSITY	HEAVIER THAN AIR
EVAPORATION RATE	SLOWER THAN ETHER
VOLATILE VOLUME	59%
WEIGHT/GALLON	7.90 LBS/GAL
PHYSICAL STATE	LIQUID

CWF-UV / ALL TONES

APPEARANCE & ODOR	OPAQUE, CREAMY, MILD SOLVENT ODOR
ODOR THRESHOLD	NOT AVAILABLE
FREEZING POINT	25°F
pH	NOT APPLICABLE

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 175° F. T.C.C. 190° F T.O.C. LEL: NO DATA AVAILABLE

EXTINGUISHING MEDIA: (X) FOAM ( ) ALCOHOL FOAM (X) CO2

(X) DRY CHEMICAL (X) WATER FOG ( ) OTHER

UPPER FLAMMABLE LIMIT: NOT AVAILABLE

LOWER FLAMMABLE LIMIT: NOT AVAILABLE

UNUSUAL FIRE AND EXPLOSION HAZARDS: Dense smoke. Firefighters should wear an approved self-contained breathing apparatus. Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, pilot lights, other flames and ignition sources at locations distant from material handling point. Do not flush into public sewer system.

SPECIAL FIREFIGHTING PROCEDURES: Water may cause frothing. Exposed material may be cooled with water. Avoid breathing fumes. Wear adequate respiratory protection. Respiratory protection should be self-contained, breathing apparatus type with a full face piece operated in a pressure demand or other positive pressure mode.

SECTION V - TRANSPORTATION DATA

DOT - COMBUSTIBLE LIQUID.

Not regulated by ground transportation in non-bulk packaging (450 L or 119 gallons or less) per 49 CFR 173.150 (f)(2).

SECTION VI -TOXICOLOGICAL PROPERTIES

EFFECTS OF OVEREXPOSURE:

SKIN: May cause skin irritation.

Prolonged or repeated contact can result in defatting and drying of the skin which may result in dermatitis.

EYE: May cause eye irritation. Symptoms include stinging, tearing, redness.

INHALATION: May be irritating to the nose and respiratory tract. Prolonged or repeated contact can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness, and even asphyxiation.

SWALLOWING: Can cause gastrointestinal irritation, vomiting. Aspiration (breathing) of vomitus into lungs must be avoided; can enter lungs and cause severe damage. Ingesting large amounts of ethylene glycol causes liver and kidney damage

None of the ingredients of this mixture are listed as a carcinogen or potential carcinogen by the National Toxicology Program (NTP), International Agency for Research on Cancer (IARC), or the Occupational safety and Health Administration (OSHA).

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: Preexisting eye, skin, and respiratory disorders may be aggravated by exposure to this product.

PRIMARY ROUTE (S) OF ENTRY: (X) DERMAL (X) INHALATION (X) INGESTION (X) EYE

CWF-UV / ALL TONES

SECTION VII - FIRST AID PROCEDURES

SKIN: Wash affected area with soap and water, flush with large amounts of water. If irritation persists, get medical attention. Do not continue to wear oil-soaked clothing. Discard oil-soaked leather goods.
EYES: Flush immediately with large amounts water for at least 15 minutes while holding eyelids open. Get medical attention.
INHALATION: Remove victim to fresh air. Seek medical attention if symptoms persist.
SWALLOWING: DO NOT INDUCE VOMITING due to danger of aspirating oil into lungs. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. DO NOT give anything by mouth if the person is unconscious or having convulsions. Get medical attention immediately.
NOTES TO PHYSICIAN: Aspiration of liquid petroleum products into lungs may cause severe pneumonitis (oil pneumonia). Vomiting should not be induced.

SECTION VIII - REACTIVITY DATA

STABILITY: ( ) UNSTABLE (X) STABLE
HAZARDOUS POLYMERIZATION: ( ) MAY OCCUR (X) WILL NOT OCCUR
HAZARDOUS DECOMPOSITION PRODUCTS: Combustion in restricted environments can produce carbon monoxide, carbon dioxide, and various hydrocarbons.
CONDITIONS TO AVOID: Storage of combustible materials wetted with liquid can produce heat and spontaneous combustion.
INCOMPATIBILITY (MATERIALS TO AVOID): Stable under normal conditions of use. Avoid contact with strong oxidizers.

SECTION IX - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of vapor ignitions. Ventilate area. Remove liquid waste with oil-absorbing compounds and non-sparking tools.
WASTE DISPOSAL METHOD: Do not incinerate closed containers. Do not dispose of waste material in sewers or waterways. Dispose in accordance with all local, State and Federal regulations.

SECTION X - PREVENTATIVE MEASURES

RESPIRATORY PROTECTION: If TLV of the product or any component is exceeded, a NIOSH/OSHA jointly approved, air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/OSHA respirators under specified conditions (see your safety equipment supplier). Engineering or administrative controls should be implemented to reduce exposure.
VENTILATION: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).
PROTECTIVE GLOVES: Oil resistant if prolonged liquid contact is likely.
EYE PROTECTION: Goggles with side shields when spraying or where splashing is likely.
OTHER PROTECTIVE EQUIPMENT: Oil repellent, protective clothing if prolonged liquid contact is likely.
HYGIENIC PRACTICES: Wash hands with soap and water thoroughly after use. Launder contaminated clothing before reuse.

SECTION XI - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: COMBUSTIBLE. Prevent contact with flames or hot surfaces. Do not store near heat. Keep containers closed when not in use. Avoid prolonged contact with skin. Avoid breathing concentrated vapors.
OTHER PRECAUTIONS: Store only in well-ventilated areas. Store out of sun and away from heat.
DANGER: Rags, steel wool or waste soaked with this product may spontaneously catch fire if improperly discarded. Immediately after use, place rags, steel wool or waste in a sealed water filled metal container to prevent this.

CWF-UV ALL TONES

SECTION 313 - SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372:

CAS #	Chemical Name	% by Weight
107-21-1	Ethylene Glycol	<2.5
100-41-4	Ethylbenzene	<0.1

This information is furnished without warranty, except it is accurate to the best of The Flood Company's knowledge or obtained from sources believed to be accurate. This information is not to be construed as representation for which The Flood Company assumes legal responsibility expressed or implied.

Last update 01/11/00, Section I, V, VI, VII

MATERIAL SAFETY DATA SHEET

SECTION 1 – PRODUCT/MANUFACTURER'S IDENTITY

Product Name: Flowtron Enzyme Drain Treatment

Synonyms: ST-731
Flowtron III

Company: Stearns Packaging Corporation
4200 Sycamore Avenue (53714)
PO Box 3216
Madison, WI 53704-0216

Phone: 800-655-5008
Fax: 608-246-5149

Formula ID Number: BP-10
MSDS File Name: FLOWTRON
EPA Reg #: None
DOT Hazard Class: None
DOT Shipping Name: Compound, Cleaning, NOI, Powder. Item 48581, Class 55

USDA Acceptance Date & Category Code: None

Concentrate		In Dilution
0	Flammability	0
1	Health	1
0	Reactivity	0
None	Special Hazard	None

HAZARD RATING
4 = Extreme
3 = High
2 = Moderate
1 = Slight
0 = Insignificant

Emergency Contact: CHEM-TEL, 800-255-3924

Abbreviation Key: N.A.=Not Applicable, N.D.=Not Determined

SECTION 2 – HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

CHEMICAL IDENTIFICATION	CAS NO.	HAZARD	PEL(ppm)	TLV(ppm)	%(Optional)
Sodium sulfate	7757-82-6	Irritant			
Bacteria/Enzyme blend	N.A.				

SARA Section 313 Title III Notification Required: No

SECTION 3 – PHYSICAL DATA

Appearance and Odor: Tan, speckled powder with brown flecks

Solubility in water: Appreciable

Boiling Point: N.A.

Melting Point: N.D.

Vapor Pressure (mm Hg): N.D.

Vapor Density (Air=1): N.D.

Evaporation Rate (Water=0.3): N.A.

pH (Concentrate): N.D.

pH (1% Solution): N.D.

Specific Gravity: 0.6

SECTION 4 – FIRE AND EXPLOSION HAZARD DATA

Flash Point and Method: N.A.

Flammable Limits LEL: N.A.
UEL: N.A.

Extinguishing Media: N.A.

Special Fire Fighting Procedures: Use full protective clothing and self-contained breathing apparatus.

Unusual Fire & Explosion Hazards: None

SECTION 5 – REACTIVITY DATA

Chemical Stability: Stable: X Unstable: _____

Conditions to Avoid: Freezing and extreme heat.

Incompatibility (Materials to Avoid): Combination with acids will give off carbon dioxide.

Hazardous Polymerization: May Occur _____ Will Not Occur X

Conditions to Avoid: None known

Hazardous Decomposition or By-Products: Carbon dioxide

SECTION 6 – HEALTH HAZARD DATA/FIRST AID PROCEDURES

Health Hazards (Acute and Chronic): Irritation of exposed tissues, especially eyes, skin, throat, nasal cavities and other mucous membranes.

Signs and Symptoms of Exposure: Eye and skin irritation. Diarrhea. Irritation of mucous membranes.

Medical Conditions Aggravated by Exposure: No data available

Carcinogenicity: IARC Monographs? Yes_____ No X

NTP? Yes_____ No X OSHA Regulated? Yes_____ No X

Emergency and First Aid Procedures:

Eyes: Flush with plenty of cool water for at least 15 minutes. Consult a physician.

Skin: May be irritating to skin. Flush with water and wear gloves in the future to minimize exposure. Wash hands thoroughly after handling. Discontinue use if irritation persists and consult a physician.

Inhalation: Remove from exposure. Obtain medical attention immediately.

Ingestion: May be harmful if swallowed. Drink large amounts of water or milk. **DO NOT** induce vomiting. Get medical attention immediately. Avoid contamination of foods.

NOTE TO PHYSICIAN: No specific antidote. Use supportive care. Treatment should be based on judgment of the physician in response to the reactions of the patient.

SECTION 7 – PREVENTATIVE AND CONTROL MEASURES

Ventilation: Local Exhaust: Strongly recommended.
Mechanical: Strongly recommended.

Skin Protection: Use neoprene, rubber, or other chemical resistant gloves.

Eye Protection: Splash goggles, or safety glasses if splashing is not a concern.

Respirator Protection: In general, respirators are not needed if the product is used in a well-ventilated area.

Other Precautions: Keep out of the reach of children.

Steps to be Taken if Material is Spilled or Released: Avoid contact with skin. Sweep up for salvage or disposal in an approved landfill. Take care to avoid contact with large amounts of dust.

Waste Disposal: Comply with all local, state and federal regulations. Consult your state DNR or the EPA for specific questions. Wastewater should never enter a fresh water body without treatment.

Handling and Storage: Wear all recommended safety gear. Do not mix with other chemicals or cleaning agents. Avoid contact with dust.

SECTION 8 – OTHER REGULATORY INFORMATION

rev. 04/01/03

This MSDS data relates only to the material designated and does not relate to its use with any other material or process. The data is believed to be accurate. However, since use conditions vary and are outside our control, Stearns Packaging Corporation makes no warranties, expressed or implied, and assumes no liability for failure to follow directions and safety precautions.

FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 351.00

Revision Date: April 29, 2005

Section 1 — Chemical Product and Company Identification

Fluorescein, Sodium Salt

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Fluorescein, uranin, disodium salt
Synonym: C.I. 45350, D&C Yellow No. 7

CAS#: 518-47-8

Section 3 — Hazards Identification

Orange-red, crystalline powder. Odorless.
Irritant to body tissues. Mildly toxic by ingestion. Avoid all body tissue contact.

FLINN AT-A-GLANCE

Health-0
Flammability-0
Reactivity-0
Exposure-1
Storage-0

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give large quantities of water. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non flammable solid.

NFPA CODE

None
Established

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Organic #9. Store with dyes, indicators, and stains.
Store in a cool dry place. Use and dispense in a hood.

Section 8 — Exposure Controls, Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.
Use exhaust ventilation to keep airborne concentrations low.

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Section 9 — Physical and Chemical Properties

Orange-red, crystalline powder. Odorless.
Solubility: Insoluble in water. Soluble in alkali hydroxides or carbonates.
Formula: C20H10O5Na2
Formula Weight: 376.26

Melting Point: (Dec.) at 314-316

Section 10 — Stability and Reactivity

Avoid contact with strong oxidizers.
Shelf Life: Indefinite.

Section 11 — Toxicological Information

Acute effects: Irritant
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD50: 6721 mg/kg
IHL-RAT LC50: N.A.
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #24a is one option.

Section 14 — Transport Information

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A

N/A = Not applicable

Section 15 — Regulatory Information

TSCA-listed, EINECS-listed (219-031-8).

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

FLINN SCIENTIFIC INC.
"Your Safer Source for Science Supplies"

Improve Safety--Use Flinn Chemicals

flinn@flinnsci.com www.flinnsci.com
P.O. Box 219 Batavia IL 60510
(800) 452-1261 Fax (866) 452-1436

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Atlantic Chemical Equipment Co.
3471 Atlanta Industrial Parkway
Suite 200
Atlanta, GA 30331
404-505-6626
Toll Free: 1-800-929-2436

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: (FNC) FOAM N' CLEAN COIL CLEANER

EMERGENCY PHONE: 1-800-424-9300

May be used to comply with OSHA'S Hazard Communications Standard (HSC) 29 CRF 1910, 1200. Standard must be consulted for specific requirements. This product contains no substances subject to SARA TITLE III and 40 CRF.

HMIS SYMBOLS

HEALTH	**3**
FLAMMABILITY	**0**
REACTIVITY	**0**

1 - IDENTIFICATION

PRODUCT NAME: **Foam N' Clean Coil Cleaner (FNC)**

PACKAGE TYPE: 32oz, 1, 2.5, 5, & 55 gallon units

PREPARED BY GENE HUNT/CHEMIST - SUPERSCEEDES MAY 2002 MSDS

DATE PREPARED: June 2010

II - HAZARDOUS INGREDIENTS

PRINCIPLE HAZARDOUS COMPONENT(S) (CHEMICAL NAMES)	CAS NO	ACGIH TLV	OSHA PEL	% or RANGE
Sodium Metasilicate	6834-92-0	N/E	N/E	< 1.5
Sodium Hydroxide 50%	1310-73-2	2mg/m^2	2mg/m^3	< 38
Potassium Hydroxide 45%	1310-58-3	2mg/m^3	NE	< 4

III - PHYSICAL DATA

BOILING POINT (^{0}F) : 212^{0}F	SPECIFIC GRAVITY (H_20= 1) : 1.20
VAPOR PRESSURE (mm Hg) : 17	MELTING POINT: N/A
VAPOR DENSITY (Air = 1) : 2	EVAPORATION RATE (H_20 = 1) : 1.0
pH : 11.6 - 13.0 @ 20^{0}C	APPEARANCE AND ODOR : Clear brown liquid, Herbal Odor
SOLUBILITY IN WATER : Complete	

IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per CPSC FLAME EXTENTION TEST: Flash Point: Not Combustible

SPECIAL FIRE FIGHTING PROCEDURES: Standard fire fighting techniques / Wear impervious to strong Alkaline Products clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Avoid mixing with acids and soft metals.

CHEMICAL STABILITY	UNSTABLE		**CONDITIONS TO AVOID:**
	STABLE	X	

INCOMPATIBILITY (Materials to avoid): Acids and acid products

HAZARDOUS DECOMPOSITION PRODUCTS: Heat

HAZARDOUS POLYMERIZATION	MAY OCCUR		**CONDITIONS TO AVOID:**
	WILL NOT OCCUR	X	

VI - HEALTH HAZARD AREA

ROUTE(S) OF ENTRY: **EYES** Yes **SKIN** Yes **INGESTION** Yes **INHALATION** Yes

EFFECTS OF OVER EXPOSURE: Very corrosive to skin, eyes, and mucous membranes; causes deep immediate burns, any cause blindness.

INHALATION: Irritation to nasal passages

SKIN CONTACT/ABSORPTION: Severe burns to exposed skin.

INGESTION: Nausea, Corrosive to digestive tract.

EYES: Corrosive to eyes/Blindness may occur.

CARCINOGENICITY: No **NTP?** Not listed **IARC MONOGRAPHS?** Not listed **OSHA REGULATED?** See s_s II for exposure

EMERGENCY AND FIRST AID PROCEDURES:

EYES AND SKIN: EYES - Wash with plenty of water for 15 minutes. GET IMMEDIATE MEDICAL ATTENTION **SKIN -** Neutralize with very diluted vinegar solution, wash with soap and water, apply skin cream. For large burns - GET IMMEDIATE MEDICAL ATTENTION.

INHALATION: Remove to fresh air. If breathing stops, start artificial respiration, GET IMMEDIATE MEDICAL ATTENTION

INGESTION: Drink water. DO NOT induce vomiting. SEEK IMMEDIATE MEDICAL ATTENTION. NOTE: Vomiting may cause aspiration of material to lungs causing Pulmonary Edema.

VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE CONTAINER IS PUNCTURED AND MATERIAL IS RELEASED:
SMALL SPILLS: Neutralize with water and vinegar. Wash to drain **.**
LARGE SPILLS: Due to packaging, large spills cannot occur.

WASTE DISPOSAL METHOD: Deposit in landfill in accordance with local, state, and federal regulations

VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY: Keep face away from spray mist. Do not breathe vapors.

EYE: Use tight fitting, splash proof safety goggles. Contact lenses should no be worn when handling this material.

SKIN: Wear impervious clothing and footwear to prevent all skin contact. Use of face shield is recommended.

PROTECTIVE GLOVES: Chemical resistant rubber/neoprene

OTHER: Avoid contact with eyes, skin, and clothing. Wash hands and face thoroughly after handling

VENTILATION REQUIREMENTS: If vapors are detected, ventilate work area by opening windows and using exhaust fans. Always work with wind from behind.

IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed when not in use

SPECIAL PRECAUTIONARY STATEMENTS: Keep this and all chemicals out of reach of children.

NOTICE: We believe that the information contained on this material safety data sheet is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily nor fully adequate in every circumstance. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulations, rules or insurance requirements. No warranty, expressed or implied, of merchantability fitness or otherwise is made.

SARA Title III Reporting Requirements

302	(Extremely Hazardous Substances): **Reporting not required.**
304/CERCLA	(Spills Notification): **Reporting required for spills above RQ. Sodium hydroxide and Potassium hydroxide are listed by CERCLA. Spills in excess of 1000 lbs. Each must be reported.**
311	Community Right-To-Know, RTK): **Reporting required. Acute & chronic health hazard, corrosive, toxic.**
312	(RTK Inventory Data): **Reporting required for inventories above threshold planning quantity.**
313	(Emissions and Releases): **Reporting not required.**
DOT	**Corrosive liquid, basic, inorganic, N.O.S. (contains sodium hydroxide) 8, UN3266, PGII**

References

PERMISSIBLE EXPOSURE REFERENCES:
Registry of Toxic Effects of Chemical Substances.
Title 29 Code of Federal Regulations.
National Toxicology Program (NTP) Report on Carcinogens.
International Agency for Research on Cancer (IARC) Monographs.

Title 40 Code of Federal Regulations

REGULATORY STANDARDS:
DOT Title 49 Code of Federal Regulations 172.101
SARA Title III

Nuclear Regulatory Commission

MATERIAL SAFETY DATA SHEET

Date Printed: 06/14/16

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODE: MS-660
PRODUCT NAME: FOLK ART PURE GOLD

PLAID ENTERPRISES, INC.
3225 WESTECH DRIVE
NORCROSS, GA 30092

PHONE: 678-291-8100 CHEMTREC 24-HOUR PHONE: 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT/EXPOSURE LIMITS	CAS#	% BY WT.
*COPPER POWDER	7440-50-8	13.1
OSHA PEL: 1 MG/M3 (as dust), ACGIH TLV: 1 MG/M3 (as dust)		
*ZINC POWDER	7440-66-6	4.3
OSHA PEL: 15 MG/M3 (as dust), ACGIH TLV: 10 MG/M3 (as dust)		

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYE: Direct contact with material may cause slight irritation.

SKIN: Prolonged or repeated contact may cause slight skin irritation.

INGESTION: Swallowing can cause gastrointestinal irritation, nausea, and vomiting.

INHALATION: Exposure to vapors in poorly ventilated areas may cause irritation of the nose, throat, and respiratory tract.

CHRONIC (CANCER) INFORMATION: No anticipated chronic effects. This product does not contain regulated levels of NTP, IARC, ACGIH or OSHA listed carcinogens.

TERATOLOGY (BIRTH DEFECT) INFORMATION: Product does not contain chemicals at levels known to cause birth defects.

REPRODUCTION INFORMATION: Product does not contain chemicals at levels known to cause reproductive toxicity.

4. FIRST AID MEASURES

EYES: Flush eyes with a large amount of water for at least 15 minutes. Consult a physician if irritation persists.

SKIN: Wash affected skin areas thoroughly with soap and water. Consult a physician if irritation persists.

INGESTION: Small amounts are not anticipated to be harmful. Give 2 glasses of water to drink. If large amounts are ingested, get prompt medical attention.

INHALATION: Remove to fresh air. Get medical attention if breathing is difficult.

NOTE TO PHYSICIANS: Please contact your local poison control center for information regarding this product.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT: Not Determined METHOD: Not Determined

FLAMMABLE LIMITS:

LOWER FLAMMABLE LIMIT: Not Determined
UPPER FLAMMABLE LIMIT: Not Determined

AUTOIGNITION TEMPERATURE: Not Applicable.

HAZARDOUS COMBUSTION PRODUCTS: Not Applicable

EXTINGUISHING MEDIA: Use dry chemical.

FIREFIGHTING INSTRUCTIONS: Never use water or fire extinguishers containing halogenated hydrocarbons to fight a fire in this product, since it contains zinc, may react with water to liberate hydrogen gas which will spread the fire.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Absorb spill with inert material.

LARGE SPILL: Floor may be slippery, use care to avoid falling. Contain spills immediately with inert materials (e.g. sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. Caution: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

HANDLING: Avoid employee exposure through the use of appropriate engineering controls, adequate personal protective equipment, and good industrial hygiene practices. Wash thoroughly after handling. Handle in well ventilated work space.

STORAGE: Store in a moderate cool, dry, well ventilated area away from direct sources of heat. Avoid freezing (32F). Position containers so that any labeling information is visible. Keep containers closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: The use of local exhaust ventilation is recommended to control emissions near the source. Additional engineering controls should be used as necessary.

RESPIRATORY PROTECTION: Respiratory protection is generally not required. A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

SKIN PROTECTION: Impervious clothing should be worn when gross contact is likely, such as when cleaning up large spills. Neoprene gloves may provide protection against permeation.

EYE PROTECTION: Use safety glasses with side shields (ANSI Z87.1 or approved equivalent).

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 212 Deg. F
MELTING POINT: Not determined.
VAPOR PRESSURE: Not Determined
VAPOR DENSITY: Not Determined.
SOLUBILITY IN WATER: 100% Soluble or dispersible.
SPECIFIC GRAVITY: 1.18
PH: 8.5 to 9.5
ODOR: Acrylic odor
APPEARANCE: Colored dispersion.
COATING VOC: .15 lb/gl
MATERIAL VOC: .05 lb/gl

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY (CONDITIONS TO AVOID): This material is considered stable. However, avoid temperatures above 177C/350F, the onset of polymer decomposition. Thermal decomposition is dependent on time and temperature.

INCOMPATIBILITY: There are no known materials which are incompatible with this product.

HAZARDOUS DECOMPOSITION PRODUCTS: Hazardous decomposition will not occur.

HAZARDOUS POLYMERIZATION: Product will not undergo polymerization.

11. TOXICOLOGICAL INFORMATION

May be harmful if swallowed. Exposure may cause damage to the kidneys or liver.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No applicable data.

CHEMICAL FATE INFORMATION: Appreciable evaporation from water to air is expected in the environment. No appreciable bioconcentration is expected in the environment.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Local, State, and Federal waste disposal regulations.

14. TRANSPORT INFORMATION:

NOT MEANT TO BE ALL INCLUSIVE

US DOT Hazard Class.....Nonregulated

15. REGULATORY INFORMATION:

NOT MEANT TO BE ALL INCLUSIVE - SELECTED REGULATIONS REPRESENTED

U.S. FEDERAL REGULATIONS: The components of this product are included on the TSCA inventory.

OSHA: This product is considered non-hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200)

CERCLA: SARA HAZARD CATEGORY: Release of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental

Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

SECTION 313: * Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

INTERNATIONAL REGULATIONS:

CANADIAN WHMIS: This product is not a controlled product under the Canadian Workplace Hazardous Materials Information System (WHMIS).

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): All components of this product are on the Domestic Substances List (DSL), and acceptable for use under the provisions of CEPA.

EINECS: All the components of this product are on the European Inventory of Existing Commercial Chemical Substances.

STATE REGULATIONS:

VOLATILE ORGANIC COMPOUNDS: The Volatile Organic Compounds (VOCs) are below the emission limits as regulated by The Environmental Protection Agency (EPA) and state regulations.

16. OTHER INFORMATION

NAME OF PREPARER: Dewey Wright

REVISION DATE: 07/19/04

HMIS CODES: H F R P
1 0 0 A

HMIS HAZARD RATINGS: H=HEALTH, F=FIRE, R=REACTIVITY, P=PERSONAL

SCALE: 0=MINIMAL, 1=SLIGHT, 2=MODERATE, 3=SERIOUS, 4=SEVERE
PERSONAL PROTECTION: See Section 8, Exposure Controls/Personal Protection for recommended handling of material as supplied; check with supervisor for your actual use condition.
HMIS is a registered trademark of the National Paint and Coatings Association.

LIST OF ACRONYMS:
ACGIH: American Conference of Government Industrial Hygienists

Date Printed: 06/14/16

IARC: International Agency for Research on Cancer
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
PPM: Parts Per Million
SARA: Superfund Amendment Reauthorization Act
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act

Please note that this MSDS applies to industrial handling of this material. Consumers should read product label. The information and recommendations set forth herein are believed to be accurate, The data is derived from information provided to Plaid Enterprises, Inc. from its raw material suppliers. Plaid Enterprises, Inc. makes no guarantee or warranty, expressed or implied, regarding the accuracy, reliability, or completeness of the data or the results to be obtained from the use thereof. It is the responsibility of the user of the product to comply with all applicable federal, state, and local laws and regulations.

FLINN SCIENTIFIC, INC.
Material Safety Data Sheet (MSDS)

MSDS #: 843.40
Revision Date: November 24, 2010

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FD&C Yellow 5 Food Dye

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

FD&C Yellow 5 Food Dye
Synonyms: Acid Yellow 23; Atul Tartrazine; Tartran Yellow; Tartrazine
CAS#: 1934-21-0

SECTION 3 — HAZARDS IDENTIFICATION

Slightly hazardous by skin contact (sensitizer). Irritating to skin and eyes.
The dye has been stored with other, non-food grade chemicals and is not for consumption.

FLINN AT-A-GLANCE
Health-0
Flammability-0
Reactivity-0
Exposure-1
Storage-0
0 is low hazard, 3 is high hazard

SECTION 4 — FIRST AID MEASURES

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash with mild soap and water.
Internal: Rinse mouth with water and give large quantities of water.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition emits carbon monoxide, carbon dioxide, sulfur oxides, nitrogen oxides, and some metal oxides.
Fire Fighting Instructions: Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area and ventilate area. Place spilled solid in sealed bag or appropriate waste disposal container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic Miscellaneous or Organic #9. Store with dyes, indicators, and stains.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron.

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SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Yellow solid. Odorless.
Solubility: Water
Formula: $C_{16}H_9N_4Na_3O_9S_2$
Formula Weight: 534.37

SECTION 10 — STABILITY AND REACTIVITY

Shelf Life: Indefinite.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Skin sensitizer, irritating to eyes and skin.
Chronic effects: N.A.
Target organs: May be reproductive hazard based on animal data.

ORL-RAT LD_{50}: 12,750 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please consult with state and local regulations.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A
N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed: FD&C Yellow 5

SECTION 16 — OTHER INFORMATION

This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

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Material Safety Data Sheet

Date Prepared/Revised: 3/13/14 Version no.: 02 Supersedes: (11/30/2010)

1.) Identification of the Mixture and of the Company

Product identifier**: Crown Food Grade Silicone Lubricant**

Product name:
8036 Food Grade Silicone Lubricant

Relevant identified uses of the substance: Use for lubricating slides, containers, belts, and other machinery in food processing plants, dairies, bottling plants, and breweries, grocery stores, restaurants, packing houses, packing plants, paper converters, and other industries related to food processing and preparation. Use on surfaces that do not require post decorating.
Uses advised against: Poorly ventilated areas

CAS No.:	**Not Applicable (mixture)**
Manufacturer/Supplier:	**Aervoe Industries Incorporated**
Street address/P.O. Box:	**1100 Mark Circle**
Country ID/Postcode/Place	**Gardnerville, Nevada 89410**
Telephone number:	**001 (0) 1-775-782-0100**
e-mail:	**mailbox@aervoe.com**
National contact:	**Aervoe industries Incorporated**
For Product Information:	00**1 (0) 1-800-227-0196**
Emergency telephone number:	**001 (0) 1-800-424-9300 (CHEMTREC – 24 hrs)**
	English Language Service

2. Hazards identification

This product does not meet the criteria for classification according to Directive 1999/45/EC
Potential health effects: **See Section 11**
Primary routes of entry: **Inhalation, Skin, Eyes, Ingestion**

3. Composition / Information on Ingredients

Material	CAS Number	EINECS Number	Weight Percent	Risk and Safety Phrases	Notes
Hydrocarbon Propellant	68476-86-8	270-705-8	20-30%	R12, R45, R46, S45, S53	
Solvent naphtha (petroleum), light aliph.	64742-89-8	265-192-2	>70%	R45, R46, R65, S45, S53	

For full text of R&S- phrases: see section 16.

R Code Summation: R12, R45, R46, R65
S Code Summation: S45, S53

4.) First Aid Measures

General Advice: If symptoms persist, always call a doctor.
Inhalation First Aid: Remove victim to fresh air and provide oxygen if breathing is

	difficult. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention immediately.
Skin Contact First Aid:	Wash with soap and water. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.
Eye Contact First Aid:	If contact with eyes, immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids open. Get medical attention immediately.
Ingestion First Aid:	If swallowed, wash out mouth with water provided the person is conscious. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. Fire Fighting Measures

Flammable Properties:	Aerosol
Flash Point:	<0° F (-18° C)
Auto Ignition Temperature:	Not Available
Flammable Limits in Air:	
% by Volume:	LEL: 1.2% UEL: 9.5%
Suitable extinguishing media:	Carbon dioxide, dry chemical, water spray.
Unsuitable extinguishing media:	None known
Special hazards arising from the substance or mixture:	None known
Hazardous combustion products:	Carbon dioxide, Carbon monoxide
Fire & Explosion Hazards:	Closed Containers may rupture due to the buildup of pressure from extreme temperatures.

Advice for fire-fighters: Use water spray to cool containers exposed to heat or fire to prevent pressure build up. In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

PERSONAL PRECAUTIONARY MEASURES:

1) Follow personal protective equipment recommendations found in section 8.
2) Maintain adequate ventilation.

SPILL CLEAN-UP PROCEDURES:

1.) Evacuate unprotected personnel from the area.
2.) Remove sources of ignition if safe to do so.
3.) Pickup spilled materials using non-sparking tools and place in an appropriate container for disposal.
4.) Contain spill to prevent material from entering sewage or ground water systems.
5.) Always dispose of waste materials in accordance with all EU, National and Local Regulations.

7. Handling and Storage

Flammable Aerosol, use in a well ventilated area.
Do not use near sources of ignition.
Store out of direct sunlight.
Storage Temperature: 32° to 120°F (0° to 49°C)
Do not to eat, drink and smoke while working with this material.
Wash hands after use.

8. Exposure Controls / Personal Protection

Appropriate engineering controls:
Ensure adequate ventilation. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.
Keep away from sources of ignition.
Take precautionary measures against static discharge.

Personal Protection:
Eye & face protection devices such as safety glasses, safety goggles or face shield are recommended.

Skin protection
Wear the appropriate protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection:
Use only in an adequately ventilated area. For unknown vapor concentrations use a positive-pressure, pressure-demand, self-contained breathing apparatus (SCBA).

Hazardous Ingredient	CAS Number	TWA	STEL
Hydrocarbon Propellant	68476-86-8	N/AV	N/AV
Solvent naphtha (petroleum), light aliph.	64742-89-8	N/AV	N/AV

9. Information on Basic Physical and Chemical Properties

Appearance: Clear and coloress	Odor: Hydrocarbon odor
Odor Threshold: N/AV	pH: Not Applicale (solvent Base)
Melting Point: N/AV	Freezing Point: N/AV
Initial Boiling Point: N/AV	Boiling Point Range: N/AV
Flash Point: <0° F (-18° C)	Evaporation Rate: Slower than ether
Flammability Solid/Gas: Flammable gas	Upper LEL: 1.2% Lower LEL: 9.5%
Vapor Pressure: N/AV	Vapor Density: Heavier Than Air
Relative Density: N/AV	Solubility: Negligible
Partition Coefficient: n-octanol/ water: N/AV	Auto-ignition Temperature: N/AV
Decomposition Temperature: N/AV	Viscosity: N/AV
Explosive Properties: N/AV	Oxidizing Properties: N/AV

10. Stability & Reactivity

Possibility of hazardous reactions: Hazardous polymerization will not occur under normal conditions
Conditions to avoid: Heat and ignition sources
Incompatible materials: Strong Oxidizing Agents
Hazardous decomposition products: Will not occur

11. Toxicological Information

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart and blood

12. Ecological Information

Toxicity: **No Data Available**
Persistence and degradability: **No Data Available**
Bioaccumulative potential: **No Data Available**
Mobility in soil: **No Data Available**
Results of PBT and vPvB assessment: **No Data Available**
Other adverse effects: **No Data Available**

13. Disposal Considerations

Waste Disposal: Dispose of material in accordance with EU, national and local requirements. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or laws governing your location.
Product / Packaging disposal: Dispose of packaging in accordance with federal, state and local requirements, regulations and/or laws governing your location.

14. Transportation Information

US DOT

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1950	Aerosols	2.1	Not Applicable	Not Applicable	Not Applicable

IMDG

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1950	Aerosols	2.1	Not Applicable	Not Applicable	Not Applicable

IATA:

UN	Proper Shipping Name	Hazard	Packing	Marine	Special

Date Prepared/Revised: 3/13/14 Version no.: 02 Supersedes: (11/30/2010)

Number		Class	Group	Pollutant	Provisions
UN1950	Aerosols	2.1	Not Applicable	Not Applicable	Not Applicable

15. Regulatory Information

Workplace classification:
This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200). The Occupational Safety and Health Administration's interpretation of the product's hazard to workers.
SARA Title 3:
Section 311/312 Categorizations (40 CFR 372): This product is a hazardous chemical under 29 CFR 1910.1200, and is categorized as an immediate and delayed health, and flammability physical hazard. Superfund Amendment and Reauthorization Act (SARA) category. SARA requires reporting any spill of any hazardous substance.
TSCA status: All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.
PROP 65 (CA): Warning: This product may contain chemicals know to the state of California to cause cancer, birth defects or other reproductive harm.

16. Other Information

List of relevant Risk and Safety phrases:

R Phrases:

R12: Extremely flammable
R45: May cause cancer
R46: May cause heritable genetic damage
R65: Harmful may cause lung damage if swallowed

S Phrases:

S45: In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)
S53: Avoid exposure - obtain special instructions before use

National Fire Protection Association (NFPA) ratings
Health = 2 Flammability = 4 Reactivity = 1

This SDS has been completed in accordance with Regulation (EC) No. 1907/2006

Date of Preparation/Revision: 3/13/2014
Supersedes: (11/30/2010)

Material Safety Data Sheet

Date Prepared/Revised: 3/13/14 Version no.: 02 Supersedes: (11/30/2010)

To the best of our knowledge, the information contained herein is believed to be accurate. However, the above data does not imply any guarantee or warranty of any kind, expressed or implied. The final determination of the suitability of any material is the sole responsibility of the user. All materials made present un-known hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee these are the only hazards existing.

MATERIAL SAFETY DATA SHEET

Printed: 11/14/11

FORANE® 22

PRODUCT IDENTIFICATION AND USE

MANUFACTURER:	ARKEMA CANADA INC. 1100 BURLOAK DRIVE BURLINGTON, ONT. L7L 6B2
EMERGENCY PHONE NUMBER:	(800) 567-5726 (ARKEMA) (613) 996-6666 (CANUTEC)
PRODUCT IDENTIFIER:	FORANE® 22
PRODUCT CODE:	AP9166
PRODUCT USE:	REFRIGERANT
WHMIS CLASSIFICATION:	A - COMPRESSED GAS. D2B - TOXIC MATERIAL CAUSING OTHER TOXIC EFFECTS.

HAZARDOUS INGREDIENTS

	%W/W	CAS #	TLV
CHLORODIFLUOROMETHANE (HCFC-22) LC50: 220,000 PPM (4 HR INHALATION -RAT)	100	75-45-6	ACGIH TWA = 1000 PPM

ADDITIONAL INGREDIENT INFORMATION (WHMIS NOT CONTROLLED):
NA

PHYSICAL DATA

PHYSICAL STATE:	LIQUID AND GAS.
ODOUR AND APPEARANCE:	COLOURLESS LIQUIFIED GAS WITH FAINT ETHER ODOUR.
ODOUR THRESHOLD:	NE
SPECIFIC GRAVITY/DENSITY (G/ML):	1.19 @ 25℃
VAPOUR PRESSURE:	7033 MMHG @ 25 ℃
VAPOUR DENSITY (AIR=1):	3.00
VOLATILITY/VOL(%):	NE
SOLUBILITY IN H20:	SLIGHT
EVAPORATION RATE:	NE
BOILING POINT:	-40.8℃ (-41.4℉)
FREEZING POINT:	-160℃ (-256℉)
PH:	NA
LOG KOW:	1.08 (LOG POW)

SHIPPING INFORMATION

UN 1018, 2.2, CHLORODIFLUOROMETHANE

FIRE AND EXPLOSION HAZARD

FLAMMABILITY:	NOT FLAMMABLE.
CONDITIONS:	NA
MEANS OF EXTINCTION:	USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.
FLASHPOINT:	NA – GAS
UPPER EXPLOSION LIMIT (% V):	NA
LOWER EXPLOSION LIMIT (%V):	NA
AUTO-IGNITION TEMPERATURE:	632℃ (1,170℉)
HAZARDOUS COMBUSTION PRODUCTS:	HALOGENS, HALOGEN ACIDS, CARBON HALIDES.

MATERIAL SAFETY DATA SHEET

Printed: 11/14/11

FORANE® 22

EXPLOSION DATA:	CONTAINER MAY EXPLODE IF HEATED DUE TO RESULTING PRESSURE RISE.
SENSITIVITY TO IMPACT:	NO
SENSITIVITY TO STATIC DISCHARGE:	NO

REACTIVITY

CHEMICAL STABILITY:	STABLE
INCOMPATIBLE MATERIALS:	STRONG ALKALINE, ALKALINE EARTH METALS, POWDERED ALUMINUM, MAGNESIUM, ZINC, STRONG OXIDIZERS.
CONDITIONS OF REACTIVITY:	NE
HAZARDOUS DECOMPOSITION PRODUCTS:	MAY DECOMPOSE ON CONTACT WITH FLAME OR EXTREMELY HOT METAL SURFACE TO PRODUCE TOXIC AND CORROSIVE PRODUCTS.

HEALTH HAZARD INFORMATION

ROUTE OF ENTRY

SKIN CONTACT:	CONTACT WITH LIQUID MAY CAUSE TISSUE TO FREEZE (FROST BITE).
SKIN ABSORPTION:	NE
EYE:	VAPOUR MAY BE IRRITATING TO EYES.
INGESTION:	NE
INHALATION:	MAY BE HARMFUL. IN HIGH CONCENTRATIONS
ACUTE OVER EXPOSURE EFFECTS:	MAY CAUSE AN INCREASE IN THE SENSITIVITY OF THE HEART TO ADRENALINE WHICH COULD RESULT IN IRREGULAR HEART BEATS AND REDUCED HEART FUNCTION. VAPOUR IS HEAVIER THAN AIR AND CAN CAUSE SUFFOCATION BY REDUCING OXYGEN AVAILABLE FOR BREATHING.
CHRONIC OVER EXPOSURE EFFECTS:	NE
SENSITIZATION:	DOES NOT MEET WHMIS CRITERIA.
CARCINOGENICITY:	DOES NOT MEET WHMIS CRITERIA.
TERATOGENICITY:	DOES NOT MEET WHMIS CRITERIA.
MUTAGENICITY:	DOES NOT MEET WHMIS CRITERIA.
REPRODUCTIVE TOXICITY:	DOES NOT MEET WHMIS CRITERIA.

PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:	WEAR SAFETY GLASSES AND USE IMPERVIOUS GLOVES.
SPECIFIC ENGINEERING CONTROLS:	LOCAL EXHAUST IS RECOMMENDED.
LEAK AND SPILL PROCEDURES:	REMOVE OR EXTINGUISH IGNITION OR COMBUSTION SOURCES. EVACUATE SPACES UNTIL GAS IS DISPERSED. KEEP UPWIND. STOP LEAK IF POSSIBLE WITH-OUT RISK. DISPERSE GAS WITH FLOOR-LEVEL FORCED-AIR VENTILATION. EXHAUST VAPOURS OUTSIDE.
WASTE DISPOSAL:	HAZARDOUS WASTE. DO NOT ALLOW PRODUCT TO ENTER THE ENVIRONMENT. CONSULT FEDERAL OR LOCAL AUTHORITIES FOR APPROVED DISPOSAL METHODS.
HANDLING PROCEDURES AND EQUIPMENT:	DO NOT ENTER CONFINED SPACES UNLESS ADEQUATELY VENTILATED. WASH BEFORE EATING, DRINKING, USING TOBACCO PRODUCTS OR REST ROOMS.
STORAGE REQUIREMENTS:	KEEP IN A CLOSED, LABELED CONTAINER IN A

MATERIAL SAFETY DATA SHEET

Printed: 11/14/11

FORANE® 22

VENTILATED AREA. KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAMES. DO NOT STORE CYLINDER IN DIRECT SUN OR EXPOSE IT TO HEAT ABOVE 120℉.

FIRST AID MEASURES

EYE	FLUSH EYES WITH LARGE AMOUNT OF WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. SEEK MEDICAL ATTENTION IF IRRITATION OCCURS OR PERSISTS.
SKIN	WASH SKIN WITH WATER AND SOAP. SEEK MEDICAL ATTENTION IF IRRITATION OCCURS OR PERSISTS.
INGESTION	NA – GAS
INHALATION	REMOVE PERSON TO FRESH AIR IMMEDIATELY. IF BREATHING HAS STOPPED, APPLY ARTIFICIAL RESPIRATION AND ADMINISTER OXYGEN IF NECESSARY. SEEK MEDICAL ATTENTION.

PREPARATION DATE

PREPARED BY:	TECHNICAL DEPARTMENT.
PHONE NUMBER OF PREPARER:	(800) 567-5726
DATE PREPARED (MM/DD/YY):	07/26/93
DATE REVISED (MM/DD/YY):	11/14/11

MINIMUM CONTACT WITH THIS AND ALL CHEMICALS IS RECOMMENDED AS A GOOD GENERAL POLICY TO FOLLOW.

THE INFORMATION PRESENTED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED TO BE DEPENDABLE AND IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS, AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE AND THE CONDITIONS OF HANDLING AND USE, OR MISUSE ARE BEYOND OUR CONTROL, ARKEMA CANADA MAKES NO WARRANTY EXPRESSED OR IMPLIED, WITH RESPECT TO COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.

1 PRODUCT AND COMPANY IDENTIFICATION

DFO
2000 Market Street

Philadelphia, PA 19103

EMERGENCY PHONE NUMBERS:
Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison Control Center
(866) 767-5089 (24Hrs)

Information Telephone Numbers	Phone Number	Available Hrs
Product Information	800-245-5858	8:00 am - 5:30 pm (Eastern)

Product Name	Forane (R) 409A
Product Synonym(s)	R-409A, HCFC/HCFC/HCFC-409A, FORANE FX 56
Chemical Family	Hydrochlorofluorocarbon Blend
Chemical Formula	CHClF2/CHCLFCF3/CH3CClF2
Chemical Name	Chlorodifluoromethane /1-chloro-1,1-difluoroethane /2-chloro-1,1,1,2-tetrafluoroethane
EPA Reg Num	
Product Use	Refrigerant

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical Wt. %	OSHA
chlorodifluoromethane (HCFC-22)	75-45-6	60%	Y
2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)	2837-89-0	25%	Y
1-chloro-1,1-difluoroethane (HCFC-142b)	75-68-3	15%	Y

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

This material is classified as hazardous under Federal OSHA regulation.

The components of this product are all on the TSCA Inventory list.

3 HAZARDS IDENTIFICATION

Emergency Overview
Colorless liquified gas with faint ether odor.
WARNING!
LIQUID AND GAS UNDER PRESSURE, OVERHEATING AND OVERPRESSURIZING MAY CAUSE GAS RELEASE OR VIOLENT CYLINDER BURSTING. MAY DECOMPOSE ON CONTACT WITH FLAMES OR EXTREMELY HOT METAL SURFACES TO PRODUCE TOXIC AND CORROSIVE PRODUCTS. VAPOR REDUCES OXYGEN AVAILABLE FOR BREATHING AND IS HEAVIER THAN AIR. HARMFUL IF INHALED AND MAY CAUSE HEART IRREGULARITIES, UNCONSCIOUSNESS OR DEATH. LIQUID CONTACT WITH EYES OR SKIN MAY CAUSE FROSTBITE.

Potential Health Effects

Skin contact and inhalation are expected to be the primary routes of occupational exposure to this material. As with most liquefied gases, contact with the rapidly volatilizing liquid can cause frostbite to any tissue. High vapor concentrations are irritating to the eyes and respiratory tract and may result in central nervous system (CNS) effects such as headache, dizziness, drowsiness and, in severe exposure, loss of consciousness and death. The dense vapor

of this material may reduce the available oxygen for breathing. Prolonged exposure to an oxygen-deficient atmosphere may be fatal. Inhalation may cause an increase in the sensitivity of the heart to adrenaline, which could result in irregular or rapid heartbeats. Medical conditions aggravated by exposure to this material include heart disease or compromised heart function.

4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water. Get medical attention if irritation persists.

IF ON SKIN, Flush exposed skin with lukewarm water (not hot), or use other means to warm skin slowly. Get medical attention if frostbitten by liquid or if irritation occures.

IF SWALLOWED, Not applicable - product is a gas at ambient temperatures.

IF INHALED, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. Do not give adrenaline, epinephrin or similar drugs following exposure to this product.

5 FIRE FIGHTING MEASURES

Fire and Explosive Properties

Auto-Ignition Temperature	NE	
Flash Point	NA - GAS	Flash Point Method
Flammable Limits- Upper	NONE	
Lower	NONE	

Extinguishing Media

Use extinguishing media appropriate to surrounding fire conditions.

Fire Fighting Instructions

Stop the flow of gas if possible. Use water spray on person making shut-off. Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

Fire and Explosion Hazards

May decompose on contact with flames or extremely hot metal surfaces to produce toxic and corrosive products. Liquid and gas under pressure, overheating or overpressurizing may cause gas release and/or violent cylinder bursting. Container may explode if heated due to resulting pressure rise. Some mixtures of HCFCs and/or HFCs, and air or oxygen may be combustible if pressurized and exposed to extreme heat or flame.

6 ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Use Halogen leak detector or other suitable means to locate leaks or check atmosphere. Keep upwind. Evacuate enclosed spaces and disperse gas with floor-level forced-air ventilation. Exhaust vapors outdoors. Do not smoke or operate internal combustion engines. Remove flames and heating elements.

7 HANDLING AND STORAGE

Handling

Avoid breathing gas. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Do not enter confined spaces unless adequately ventilated.

7 HANDLING AND STORAGE

Storage

Do not apply direct flame to cylinder. Do not store cylinder in direct sun or expose it to heat above 120 F. Do not drop or refill this cylinder. Keep away from heat, sparks and flames.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Eye / Face Protection

Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment available.

Skin Protection

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Rinse contaminated skin promptly. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

Respiratory Protection

Avoid breathing gas. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components (full facepiece recommended). Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Airborne Exposure Guidelines for Ingredients

Exposure Limit		Value
2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)		
WEEL TWA	-	1000 ppm
chlorodifluoromethane (HCFC-22)		
ACGIH TWA	-	1000 ppm 3540 mg/m3
1-chloro-1,1-difluoroethane (HCFC-142b)		
WEEL TWA	-	1000 ppm 4100 mg/m3

-Only those components with exposure limits are printed in this section.
-Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.
-ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.
-WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor	Colorless liquified gas with faint ether odor.
pH	NA
Specific Gravity	1.21 @ 25 C
Vapor Pressure	(BUBBLE) 104.2 PSIA @ 21.1 C (70 F)
Vapor Density	(AIR = 1) 3.38
Melting Point	NE
Freezing Point	NE
Boiling Point	-31 F
Solubility In Water	Negligible
Percent Volatile	100
Molecular Weight	97.43

10 STABILITY AND REACTIVITY

Stability

This material is chemically stable under specified conditions or storage, shipment and/or use. See HANDLING AND STORAGE section of this MSDS for specified conditions.

Incompatibility

Avoid contact with strong alkali or alkaline earth metals, finely powdered metals such as aluminum, magnesium or zinc and strong oxidizers, since they may react or accelerate decomposition.

Hazardous Decomposition Products

Thermal decomposition products could include Halogen acids (HCl and HF), Halogens, Carbon Monoxide, Carbon Dioxide, and Carbon Halides.

11 TOXICOLOGICAL INFORMATION

Toxicological Information

Chlorodifluoromethane

Several accidental deaths have been associated with exposure to this material or mixtures with other fluorocarbons. Death was generally attributed to oxygen deficiency. Microscopic examination of the tissues of some of the victims showed effects on the lungs and fatty deposits in liver cells. An increase in the incidence of heart palpitations has been claimed by individuals occupationally exposed. Monitoring of workers during occupational exposure showed no connection to exposure and cardiac arrhythmia or neurologic disorders. Other epidemiological studies have reported similar results. Repeated skin application of a 10 second spray caused reddening and slight swelling of the skin and a delay in hair growth.

No skin allergy was observed in guinea pigs following repeated exposure. Studies with mice, dogs, rats, rabbits, cats and monkeys have shown that inhalation exposure can cause cardiac arrhythmias. Inhalation causes an initial stimulation and then depression of the central nervous system (CNS). Symptoms in animals include loss of equilibrium, tremors, convulsions and narcosis and death, usually attributed to asphyxiation. At levels that caused anesthesia, dogs exhibited convulsions. Acute exposure by inhalation was fatal to rabbits, also causing hemorrhages and effects on the liver. Following repeated inhalation exposure, no effects were reported in guinea pigs, dogs and cats; mild liver effects were reported in rabbits; and, effects on the lungs, CNS, heart, liver, kidney, spleen were reported in rats, mice and rabbits. An increase in malignant tumors of the salivary glands was reported in male rats but not in female rats or mice of either sex after long-term inhalation exposure. Long-term oral dosing produced no adverse effects in rats. Inhalation exposure produced no adverse effects on male reproductive performance in rats and mice. Eye malformations were reported in the offspring of rats exposed by inhalation during pregnancy. In rabbits, rats and humans, a small portion of inhaled material was

11 TOXICOLOGICAL INFORMATION

distributed into the brain, heart, lungs, liver, kidneys and fat. It was rapidly eliminated from the body in the inhaled air. No significant metabolism occurs in humans or rats. The results of the tests for genetic changes were mixed. Single exposure (acute) studies indicate:
Inhalation - Practically Non-toxic to Rats (2 hr-LC50 300,000 ppm)
Eye Irritation - Slightly Irritating to Rabbits (5-30 sec. exposure to gas spray)
Skin Irritation - Moderately Irritating to Rabbits (liquefied gas with patch applied)

1-Chloro-1,1-difluoroethane, HCFC-142b
Inhalation exposure can cause cardiac arrhythmias and effects on the cardiac and respiratory system in dogs. Dogs treated with adrenalin then exposed by inhalation exhibited cardiac sensitization. Inhalation exposure causes an initial stimulation and then depression of the central nervous system. Symptoms in animals include loss of equilibrium, tremors, convulsions and narcosis. Death was usually attributed to respiratory failure and animals that died from inhalation exposure generally showed lung irritation. Following repeated inhalation exposure, effects on the lungs were noted in rats. No birth defects were noted in rats exposed by inhalation during pregnancy. The results of tests for genetic changes were mixed. Following repeated inhalation exposure, no increases in urinary fluoride was reported and this material was not detected in tissues. Single exposure (acute) studies indicate:
Inhalation - Practically Non-toxic to Rats (6-hr LC50 >200,000 ppm)
Eye Irritation -Slightly Irritating to Rabbits (dry ice cooled liquid)

2-Chloro-1,1,1,2-tetrafluoroethane
Acute inhalation of high concentrations has produced a rapid anesthetic effect in mice and dogs. Inhalation , followed by intravenous injection of epinephrine to simulate stress reactions, resulted in cardiac sensitization in dogs. Following repeated inhalation exposure, drowsiness and loss of coordination were observed in rats (at high dose levels) and slight central nervous system effects and minor blood chemistry changes were observed in rats and mice. Long-term inhalation produced no increased incidence of tumors in rats. No birth defects were noted in the offspring of rats or rabbits exposed by inhalation during pregnancy, even at dosages which produced adverse effects in the mother. No genetic changes were observed in tests using bacteria, animal cells or animals. Single exposure (acute) studies indicate:
Inhalation - Practically Non-toxic to Rats (4-hr LC50 230,000 to 300,000 ppm)

12 ECOLOGICAL INFORMATION

Ecotoxicological Information

Chlorodifluoromethane
The toxicity threshold for fish is 180 mg/l (24-hrs) and for bacteria under anaerobic conditions is >400 mg/l (24-hrs). No effects were reported on the growth of aerobic and anaerobic microorganisms over a 24 hour period, including gram-positive and gram-negative species, from exposure to a media that contained this material at 5 mg/ml.

1-Chloro-1,1-difluoroethane, HCFC-142b
This material is slightly toxic rainbow trout (96-hr LC50 36 ppm) and practically non-toxic to guppies (96-hr LC50 220 ppm) and Daphnia magna (48-hr EC50 160- >190 mg/l).

Chemical Fate Information

Chlorodifluoromethane
This material is not readily biodegradable (0% after 28-days) and is practically not bioaccumulable (log Pow 1.08). In air, it has a half-life in the atmosphere of 8.4 years, an ozone depletion potential (ODP) of 0.055, and a halocarbon global warming potential (HGWP) of 0.33. It is moderately adsorbed in soils and sediments (log Koc 1.8).

1-Chloro-1,1-difluoroethane, HCFC-142b
This material is not readily biodegradable (5% after 20-days) and is practically not bioaccumulable (log Pow 1.64-2.05). In air, it has a half-life in the atmosphere of 12.8 years, an ozone depletion potential (ODP) of 0.065,

12 ECOLOGICAL INFORMATION

a halocarbon global warming potential (HGWP) of 0.42, and a global warming potential with respect to CO2 of 1800.

2-Chloro-1,1,1,2-tetrafluoroethane
When released into the environment, this material may be expected to partition almost exclusively into the atmosphere. Bioaccumulation is considered unlikely (log Pow 1.9-2.0). This material is not readily biodegradable (2% after 28-days)..

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Recover, reclaim or recycle when practical. Dispose of in accordance with federal, state and local regulations. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14 TRANSPORT INFORMATION

DOT Name	Liquefied Gas, NOS
DOT Technical Name	(Chlorodifluoromethane, Chlorodifluoroethane)
DOT Hazard Class	2.2
UN Number	UN 3163
DOT Packing Group	PG NA
RQ	

15 REGULATORY INFORMATION

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health	Y	Fire	N
Delayed (Chronic) Health	N	Reactive	N
		Sudden Release of Pressure	Y

The components of this product are all on the TSCA Inventory list.

Ingredient Related Regulatory Information:

SARA Reportable Quantities	CERCLA RQ	SARA TPQ
2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)	NE	
chlorodifluoromethane (HCFC-22)	NE	
1-chloro-1,1-difluoroethane (HCFC-142b)	100 LBS	

SARA Title III, Section 313

This product does contain chemical(s) which are defined as toxic chemicals under and subject to the reporting requirements of, Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. See Section 2

1-chloro-1,1-difluoroethane (HCFC-142b)

2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)

chlorodifluoromethane (HCFC-22)

Massachusetts Right to Know
This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

1-chloro-1,1-difluoroethane (HCFC-142b)
chlorodifluoromethane (HCFC-22)

New Jersey Right to Know
This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

1-chloro-1,1-difluoroethane (HCFC-142b)
2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)
chlorodifluoromethane (HCFC-22)

Pennsylvania Environmental Hazard
This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Environmental Hazard List.

chlorodifluoromethane (HCFC-22)

Pennsylvania Right to Know
This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

1-chloro-1,1-difluoroethane (HCFC-142b)
chlorodifluoromethane (HCFC-22)

16 OTHER INFORMATION

Revision Information

Revision Date	11 OCT 2004	Revision Number 10
Supercedes Revision Dated	30-SEP-2004	

Revision Summary
ATOFINA Chemicals, Inc. has changed its name to Arkema Inc..

Key
NE= Not Established NA= Not Applicable (R) = Registered Trademark

Arkema Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of Arkema Inc., Arkema Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

1 PRODUCT AND COMPANY IDENTIFICATION

DFO
2000 Market Street

Philadelphia, PA 19103

EMERGENCY PHONE NUMBERS:
Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison Control Center
(866) 767-5089 (24Hrs)

Information Telephone Numbers	Phone Number	Available Hrs
Product Information	800-245-5858	8:00 am - 5:30 pm (Eastern)

Product Name	Forane (R) 410A
Product Synonym(s)	R-410A, HFC/HFC-410A, FORANE FX 41
Chemical Family	Hydrofluorocarbon Blend
Chemical Formula	CH2F2/CHF2CF3
Chemical Name	Pentafluoroethane / Difluoromethane
EPA Reg Num	
Product Use	Refrigerant

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical Wt. %	OSHA
pentafluoroethane (HFC-125)	354-33-6	50	Y
difluoromethane (HFC-32)	75-10-5	50	Y

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

This material is classified as hazardous under Federal OSHA regulation.

The components of this product are all on the TSCA Inventory list.

3 HAZARDS IDENTIFICATION

Emergency Overview
Clear, Colorless liquid and vapor with a faint etheral odor.
WARNING!
LIQUID AND GAS UNDER PRESSURE, OVERHEATING AND OVERPRESSURIZING MAY CAUSE GAS RELEASE OR VIOLENT CYLINDER BURSTING. MAY DECOMPOSE ON CONTACT WITH FLAMES OR EXTREMELY HOT METAL SURFACES TO PRODUCE TOXIC AND CORROSIVE PRODUCTS. VAPOR REDUCES OXYGEN AVAILABLE FOR BREATHING AND IS HEAVIER THAN AIR. HARMFUL IF INHALED AND MAY CAUSE HEART IRREGULARITIES, UNCONSCIOUSNESS OR DEATH. LIQUID CONTACT WITH EYES OR SKIN MAY CAUSE FROSTBITE.

Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. As with most liquified gases, contact with the rapidly volatilizing liquid can cause frostbite to any tissue. High vapor concentrations are irritating to the eyes and respiratory tract and may result in central nervous system (CNS) effects such as headache, dizziness, drowsiness and, in severe exposure, loss of consciousness and death. The dense vapor of this material may reduce the available oxygen for breathing. Prolonged exposure to an oxygen-deficient atmosphere may be fatal. Inhalation may cause an increase in the sensitivity of the heart to adrenaline, which could result in

irregular or rapid heartbeats. Medical conditions aggravated by exposure to this material include heart disease or compromised heart function.

4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water. Get medical attention if irritation persists.

IF ON SKIN, Flush exposed skin with lukewarm water (not hot), or use other means to warm skin slowly. Get medical attention if frostbitten by liquid or if irritation occures.

IF SWALLOWED, Not applicable - product is a gas at ambient temperatures.

IF INHALED, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. Do not give adrenaline, epinephrin or similar drugs following exposure to this product.

5 FIRE FIGHTING MEASURES

Fire and Explosive Properties

Auto-Ignition Temperature	NE	
Flash Point	NA - Gas	Flash Point Method
Flammable Limits- Upper	NONE	
Lower	NONE	

Extinguishing Media

Use extinguishing media appropriate to surrounding fire conditions.

Fire Fighting Instructions

Stop the flow of gas if possible. Use water spray on person making shut-off. Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

Fire and Explosion Hazards

May decompose on contact with flames or extremely hot metal surfaces to produce toxic and corrosive products. Liquid and gas under pressure, overheating or overpressurizing may cause gas release and/or violent cylinder bursting. Container may explode if heated due to resulting pressure rise. Some mixtures of HCFCs and/or HFCs, and air or oxygen may be combustible if pressurized and exposed to extreme heat or flame.

6 ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Use Halogen leak detector or other suitable means to locate leaks or check atmosphere. Keep upwind. Evacuate enclosed spaces and disperse gas with floor-level forced-air ventilation. Exhaust vapors outdoors. Do not smoke or operate internal combustion engines. Remove flames and heating elements.

7 HANDLING AND STORAGE

Handling

Avoid breathing gas. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Do not enter confined spaces unless adequately ventilated.

7 HANDLING AND STORAGE

Storage

Do not apply direct flame to cylinder. Do not store cylinder in direct sun or expose it to heat above 120 F. Do not drop or refill this cylinder. Keep away from heat, sparks and flames.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Eye / Face Protection

Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment available.

Skin Protection

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Rinse contaminated skin promptly. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

Respiratory Protection

Avoid breathing gas. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components (full facepiece recommended). Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Airborne Exposure Guidelines for Ingredients

Exposure Limit		Value
pentafluoroethane (HFC-125)		
WEEL TWA	-	4900 mg/m3 1000 ppm
difluoromethane (HFC-32)		
WEEL TWA	-	2200 mg/m3 1000 ppm

-Only those components with exposure limits are printed in this section.
-Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.
-ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.
-WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor	Clear, Colorless liquid and vapor with a faint etheral odor.
pH	NE
Specific Gravity	1.06 @ 25 C
Vapor Pressure	(BUBBLE) 213.9 PSIA @ 21.1C (70 F)
Vapor Density	(AIR = 1) 2.52
Melting Point	NE
Freezing Point	NE
Boiling Point	- 52.8 C
Solubility In Water	Unknown
Molecular Weight	72.59

10 STABILITY AND REACTIVITY

Stability

This material is chemically stable under specified conditions or storage, shipment and/or use. See HANDLING AND STORAGE section of this MSDS for specified conditions.

Incompatibility

Avoid contact with strong alkali or alkaline earth metals, finely powdered metals such as aluminum, magnesium or zinc and strong oxidizers, since they may react or accelerate decomposition.

Hazardous Decomposition Products

Thermal decomposition products could include Halogen acid (HF), Carbon monoxide, Carbon dioxide, and Carbonyl halide.

11 TOXICOLOGICAL INFORMATION

Toxicological Information

Ethane, pentafluoro-
Inhalation followed by intravenous injection of epinephrine to simulate stress reactions resulted in cardiac sensitization in dogs. Following repeated inhalation exposure, no adverse effects were observed in rats. No birth defects were noted in the offspring of rats or rabbits exposed by inhalation during pregnancy. No genetic changes were observed in tests using bacteria, animal cells or animals. Single exposure (acute) studies indicate:
Inhalation - Practically Non-toxic to Rats (4-hr LC50 >800,000 ppm)
Methane, difluoro-
Inhalation of this material, followed by intravenous injection of epinephrine to simulate stress reactions, resulted in cardiac sensitization in dogs. Acute inhalation of high concentrations has produced an anesthetic effect in rats. Following repeated inhalation exposure, no adverse effects were observed in rats. No birth defects were noted in the offspring of rats or rabbits exposed by inhalation during pregnancy, even at dosages which produced significant adverse effects in the mother. No genetic changes were observed in tests using bacteria, animal cells or animals. Single exposure (acute) studies indicate:
Inhalation - Practically Non-toxic to Rats (4-hr LC50 >520,000 ppm)

12 ECOLOGICAL INFORMATION

Ecotoxicological Information

No data are available.

12 ECOLOGICAL INFORMATION

Chemical Fate Information

Ethane, pentafluoro-
When released into the environment, this material is expected to partition almost exclusively into the atmosphere. Based on its low n-octanol/water partition coefficient (log Pow 1.48), bioaccumulation is considered unlikely. In a 28-day ready biodegradability closed bottle test, it appeared to be stable (about 10% degraded). This material does not dissociate in water.

Methane, difluoro-
The log Pow for this material is 1.62 indicating a low bioconcentration factor. In a 28-day ready biodegradability closed bottle test, this material appeared to be stable.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Recover, reclaim or recycle when practical. Dispose of in accordance with federal, state and local regulations. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14 TRANSPORT INFORMATION

DOT Name	Liquefied Gas NOS
DOT Technical Name	(Pentafluoroethane, Difluoromethane)
DOT Hazard Class	2.2
UN Number	UN 3163
DOT Packing Group	PG NA
RQ	

15 REGULATORY INFORMATION

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health	Y	Fire	N
Delayed (Chronic) Health	N	Reactive	N
		Sudden Release of Pressure	Y

The components of this product are all on the TSCA Inventory list.

Ingredient Related Regulatory Information:

New Jersey Right to Know
This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.
difluoromethane (HFC-32)

Pennsylvania Environmental Hazard
This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Environmental Hazard List.
difluoromethane (HFC-32)

Pennsylvania Right to Know
This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.
difluoromethane (HFC-32)

16 OTHER INFORMATION

Revision Information

Revision Date	11 OCT 2004	Revision Number 9
Supercedes Revision Dated	30-SEP-2004	

Revision Summary

ATOFINA Chemicals, Inc. has changed its name to Arkema Inc.

Key

NE= Not Established NA= Not Applicable (R) = Registered Trademark

Arkema Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of Arkema Inc., Arkema Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

Material Safety Data Sheet

Product Name: MERCON V AUTOMATIC TRANSMISSION FLUID
FIR No. 157262 **Level:** 1
Version Number: US-US-1 **Release Date:** 2004-07-30

1. Product and Company Identification

Product Name: MERCON V AUTOMATIC TRANSMISSION FLUID
Product Code See Attachment
Application: Fill for automatic transmissions requiring MERCON V fluid
Supplier: Ford Motor Company
Attention: MSDS Information, P.O. Box 1899
Dearborn, Michigan 48121
1-800-392-3673
Emergency Telephone: Poison Control Center: 1-800-959-3673
CHEMTREC: U.S. and Canada: 1-800-424-9300
CHEMTREC: International: 1-703-527-3887

2. Composition/Information on Ingredients

This chemical product is a preparation.

Chemical Name	CAS Number	Percent Concentration	Hazard Classification
PETROLEUM DISTILLATES, HYDROTREATED LIGHT PARAFFINIC	64742-55-8	>60	HAZCOM
PETROLEUM DISTILLATES HYDROTREATED HEAVY PARAFFINIC	64742-54-7	>10-30	HAZCOM
BUTYL ACRYLATE-METHYL METHACRYLATE-STYRENE POLYMER	25767-47-9A	5-10	
PETROLEUM DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC	64741-88-4	>5-10	HAZCOM
DISTILLATES (PETROLEUM), SOLVENT REFINED LIGHT NAPHTHENIC	64741-97-5	>5-10	HAZCOM
PETROLEUM DISTILLATES, HYDROTREATED MIDDLE	64742-46-7	>5-10	HAZCOM RSMSREP RSMSREST
PETROLEUM DISTILLATES, HYDROTREATED HEAVY NAPHTHENIC	64742-52-5	>5-10	HAZCOM
PETROLEUM DISTILLATES, HYDROTREATED LIGHT NAPHTHENIC	64742-53-6	>5-10	HAZCOM
PETROLEUM DISTILLATES, SOLVENT DEWAXED HEAVY PARAFFINIC	64742-65-0	>5-10	HAZCOM
LUBRICATING OILS (PETROLEUM) C15-30 HYDROTREATED, NEUTRAL	72623-86-0	>5-10	HAZCOM

OIL BASED

3. Hazards Identification

CAUTION

Health: This product may cause irritation to the respiratory system.

Environment: Material contains a chemical which is a Hazardous Air Pollutant (HAP), regulated by the United States Clean Air Act.

4. First-Aid Measures

Inhalation: If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air.

Skin Contact: For skin contact, wash immediately with soap and water.
If irritation persists, get medical attention.

Eye Contact: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ingestion: If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting.

Notes to a Physician: This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately.

5. Fire-Fighting Measures

Extinguishing Media: Dry chemical, foam, carbon dioxide, water fog.

Specific Methods: A fine spray or fog of water will reduce the intensity of flames. Do not use a solid stream of water, as this could spread the fire. Firemen should wear a self-contained breathing apparatus.
Use water to flush spills from the area of the fire.
Water may be used to cool exposed containers to prevent pressure build-up and explosion when exposed to extreme heat.

Specific Hazards: Empty containers may retain product residue including Flammable or Explosive vapors. Do not cut, drill, grind, or weld near full, partially full, or empty product containers.
Irritating and/or toxic fumes and gases may be emitted upon heating of this product.

Material Safety Data Sheet

Product Name: MERCON V AUTOMATIC TRANSMISSION FLUID
FIR No. 157262 **Level:** 1
Version Number: US-US-1 **Release Date:** 2004-07-30

6. Accidental Release Measures

Personal Precautions:
Avoid excessive skin contact with the spilled material.
Avoid inhalation of vapor, fumes, dust and/or mist from the spilled material.
Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.
Wear appropriate protective equipment and clothing during clean-up.

Environmental Precautions:
Do not allow the spilled product to enter public drainage system or open water courses.

Methods for Cleaning Up:
Dike the spilled material, where this is possible.
Absorb the spilled material with an inert absorbent (nonflammable) material.
Thoroughly wash the area after a spill or leak clean-up.

7. Handling and Storage

Handling:

Technical Measures:
Keep this product from heat, sparks, or open flame.

Precautions and Advice for Safe Handling:
Avoid getting this material into contact with your eyes.
Avoid prolonged or repeated breathing of this material.
Avoid prolonged or repeated skin contact with this material.

Storage:

Technical Measures:
No special precautions.

Storage Conditions:
Keep the container tightly closed and in a cool, well-ventilated place.

8. Exposure Controls/Personal Protection

Engineering Measures:
Local exhaust is suggested for use, where possible, in enclosed or confined spaces.
Use general ventilation.

Control Parameters:
If oil mist is generated, observe the OSHA exposure limit of 5 mg/m3.
Ford Motor Company recommends an exposure limit of 1.0 mg/m3.

Personal Protective Equipment:

Respiratory Protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of OSHA Respiratory Protection Standard 29 CFR 1910.134 and/or Canadian Standard CSA Z94.4.

Hand Protection: The use of neoprene gloves is recommended.

Eye Protection: Wear safety glasses with side shields.

Skin and Body Protection: Use of protective coveralls and long sleeves is recommended.
Remove contaminated clothing and wash before reuse.

Hygiene Measures: Wash thoroughly after handling.

9. Physical and Chemical Properties

Specific Gravity: 0.86-0.87

Physical State: LIQUID

Odor: HYDROCARBON

Color: RED

pH: N.AV

Temperature Range which changes in Physical State occur:

Boiling Point: N.AV

Flash Point: >+177.222 °C COC

Explosion Properties:

UEL: N.AV

LEL: N.AV

Vapor Density: >1 (AIR = 1)

Solubility: INSOLUBLE IN WATER

Evaporation Rate: N.AV

10. Stability and Reactivity

Stability: This is a stable material.
Hazardous polymerization will not occur.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, and other low molecular weight hydrocarbons.
Irritating and toxic gases or fumes may be released during a fire.

Material Safety Data Sheet

Product Name:	MERCON V AUTOMATIC TRANSMISSION FLUID		
FIR No.	157262	**Level:**	1
Version Number:	US-US-1	**Release Date:**	2004-07-30

11. Toxicological Information

Inhalation: Exposure to oil mist/fume/vapor may cause respiratory tract irritation.

Skin Contact: Prolonged or repeated contact with this product may dry and/or defat the skin.

12. Ecological Information

No specific aquatic data available for this product.

13. Disposal Considerations

Waste from Residues: Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulation.

Contaminated Packaging: No available information.

Material Safety Data Sheet

Product Name:	MERCON V AUTOMATIC TRANSMISSION FLUID		
FIR No.	157262	**Level:**	1
Version Number:	US-US-1	**Release Date:**	2004-07-30

14. Transport Information

U.S. Department of Transportation (DOT) 49 - CFR 172.101
This product is not regulated as a dangerous good.

Canadian Transportation of Dangerous Goods (T.D.G.) -TDGR Schedule II
This product is not regulated as a dangerous good.

Secretary of Communication and Transportation (SCT)- NOM-002-SCT2/1994 (Mexico)
This product has not been reviewed for this regulation.

International and Domestic Air Transportation - ICAO & IATA Section 4.2
This product has not been reviewed for this regulation.

International Water Transportation - IMDG Code Amendment 31-02
This product has not been reviewed for this regulation.

15. Regulatory Information

This product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.
This product contains trace amounts of chemicals (<0.01%) being listed on California Prop 65 list.
Material contains a chemical which is a Ford Motor Company Material of Concern. Use and release of this material should be minimized to the greatest extent possible.

16. Other Information

Petroleum distillate base oils used in the product are severely hydrotreated and/or solvent refined.
Key/Legend: N.AP = Not applicable; N.AV = not available; ND = Not determined or No data; TLV = Threshold limit value; TWA = Time-weighted average; STEL = Short-term exposure limit; C = Ceiling limit

Preparation Information:	The chemical identification and properties for this material were provided by the manufacturer. For Canadian locations, a manufacturer's MSDS is available upon request. Health and safety information has been evaluated by the Occupational and Environmental Health Sciences Department, Ford Motor Company, Central Laboratory Building - Room S-120, 15000 Century Drive, Dearborn, MI 48120
Disclaimer	The information on this data sheet represents our current data and is accurate to the best of our knowledge as to the proper handling of this product under normal conditions and in accordance with the application specified on the packaging and/or technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

Material Safety Data Sheet

Product Name: MERCON V AUTOMATIC TRANSMISSION FLUID
FIR No. 157262 **Level:** 1
Version Number: US-US-1 **Release Date:** 2004-07-30

Attachment

Product Code	Container Size	Part of Kit	Kit Product Code
XT-5-5QM	5 qt		
XT-5-BM	Bulk		
XT-5-DMC	55 U.S. gal		
XT-5-QMC	1 qt		
XT-5-RM	Rail Car		
XT-5-TM	275 U.S. gal		

Formula 720 Multi-Surface Rinse

MATERIAL SAFETY DATA SHEET

Tennant
701 North Lilac Drive
P.O. Box 1452
Minneapolis, MN 55440-1452

This Material Safety Data Sheet (MSDS) has been prepaired in compliance with Federal OSHA Hazard Communication Standard 29 CFR 1910, 1200. The information and recommendations contained herin are based upon data beleived to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contaied herin.

Emergency Phone Numbers:

CHEMTREC (800) 424-930 (24 Hrs)
Canada CANUTEC (613) 996-6666 (24hrs)
District of Columbia (202) 483-7616 (24 hrs)
MSDS Requests: (800) 553-8033

Preparation Info: By:Judy Wagner
(763) 540-1556 (days)
(763) 767-8875 (nights)

Issue Date: 3/24/00 **Supercedes: 3/8/00** **Printed: 8/16/00**

HAZARD RATING	NFPA	HMIS
Health	2	2
Fire	1	1
Reactivity	0	0
Special	0	X

4 = Extreme 3 = High 2 = Moderate
1 = Slight 0 = Insignificant COR = Corrosive
X = Ask supervisor for guidance

****** I. IDENTIFICATION ******

Product Name:
Formula 720 Multi-Surface Rinse

Part Number: 609802, 609803
Chemical Family: Alkaline Detergent
Material Use: Industrial Detergent

US Dept of Transporation(Ground):
UN#: N.Ap. **Packing Group:** N.Ap.
Hazard Classification: Not Regulated
Shipping Name: N.Ap.

****** II. PHYSICAL DATA ******

Boiling Point:	N.Av. / N.Av.	Freeze Point:	N.Av. / N.Av.
Density:	1.0kg/L	% Volatile:	85% by wt.
Solubility in Water:	Complete	Vapor Pressure:	N.Av. mm Hg at 20º C.
Odor Threshold:	N.AV.	pH:	7.5
Physical Form:	Liquid	Vapor Density:	Heavier than Air
Appearance and Odor	Clear/Mild-soapy	Coefficient Water/Oil Distribution:	N.Av.
Evaporation Rate:	Slower	VOC g/L (lb/gal):	203 (1.69)
Mechanical Impact:	N.Av.	Static Discharge:	N.Av.

****** III. INGREDIENTS ******

CHEMICAL	CAS #:	%W	OSHA PEL ppm	ACGHI TVL TWA ppm	ACGIH TVL STEL ppm	LD50	LC50 INHALATION
Ethoxylated Alcohol	*	10 - 30	N.Av.	N.Av.	N.Av.	>5000 mg.kg (dermal rabbit) 1400 mg/kg (oral rat)	N.Av.
Surfactant	*	1 - 10	N.Av.	N.Av.	N.Av.	N.Av.	N.Av.
Tripoylene Glycol Monomethyl Ether (HZD)	25498-49-1	1 - 10	N.Av.	N.Av.	N.Av.	3300 mg/kg (ral rat)	N.Av.

*proprietary - Listed in TSCA C.S. Inventory:

SARA Title III Section 313 Information:
Components presented in this product at a level which could require reporting under this statute are:
None

California Proposition 65 Information:
This product contains the following chemicals that have been designated as cancer and/or reporductive hazard under California Proposition 65.
Ethylene Oxide - CAS #75-21-8 <1ppm

****** IV. FIRE AND EXPLOSIVE HAZARD DATA ******

FLAMMABLE: No **FLASH POINT:** >200ºF / >93ºC
FLAMMABLE LIMITS %LEL: N.Av. % ULE: N.Av.
AUTOIGNITION TEMPERATURE N.Av.
EXTINGUISHING MEDIA: N.Av.
SPECIAL FIRE FIGHTING PROCEDURES: N.Av.
UNUSUAL FIRE EXPLOSION HAZARD: N.Av.

****** V. REACTIVITY DATA ******

STABILITY: Stable **HAZARDOUS POLYMERIZATION:** Will Not Occur
CONDITIONS TO AVOID: N.Av.
INCOMPATIBILITY (materials to avoid): Strongly acidic materials and strong oxidizers.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide, carbon monoxide.

****** VI. HEALTH HAZARD DATA ******

EFFECTS OF OVEREXPOSURE: THRESHOLD LIMIT VALUE - See Section III for individual ingredients
PRIMARY ROUTES OF ENTRY: Skin Contact
SKIN CONTACT/ABSORPTION: Contains materials that may cause irritation upon repeated/ prolonged contact
EYE CONTACT: Immediate severa irritation, inflamation with possoble eye injury.
INGESTION (swallowing): Contains materials which will cfause a burning sensation, gastric upset, diarrhea and severe inflamation to the mucous membranes.
INHALATION (breathing): Slight headache. May burn nasal passages.
SUPPLEMENTAL HEALTH INFORMATION:
Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentinal misuse by deliberately concentrating this product may be harmful or fatal.

****** VII. EMERGENCY AND FIRST AID PROCEDURES ******

SKIN CONTACT:	Wash immediately with mild soap and water. Rinse thoroughly with cool water. Pat Dry. DO NOT RUB SKIN
EYE CONTACT:	Flush immediately with water for 15 minutes: CALL A PHYSICIAN.
INGESTION (swallowing):	if Conscious, immediately give a large quantity of water or milk. Induce vomiting. Get medical attention.
INHALATION (breathing):	Remove to fresh air.

**** VIII. PREVENTATIVE MEASURES ****

SPILL OR LEAK PROCEDURE:

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Absorb with inert material (sand, vermiculite, etc.). Sweep or scoop up and put in dispose container. Flush area with water; prevent washings from entering waterways.

WASTE DISPOSAL METHOD

Dispose of in accordance with federal, state and local regualtions.

SPECIAL PROTECTION INFORMATION: RESPIRATORY PROTECTION (specify type) and VENTILATION (local exhaust):

Use with adequate ventilation.

local exhaust.

PROTECTIVE GLOVES (specify type): for sensitive skin or prolonged contact use impervious gloves; i.e, rubber

EYE PROTECTION (specify type): Chemical splash goggles. Have eye fountain available.

Do not wear contact lenses when working with this material.

SPECIAL PERCAUTIONS:

PERCAUTIONS TO BE TAKEN IN HANDELING AND STORAGE:

Store in a cool (below 100ºF, 37.5ºC), dry place. KEEP FROM FREEZING.

Store seperate from oxidizers.

OTHER PERCATUIONS:

Do not take internally. Avoid prolonged contact with skin; contaminated clothing should be removed immediately. Avoid free fall of liquid in excess of a few inches.

SAFETY DATA SHEET

1. Identification

Product identifier: BLUESIL CA-45 FC

Other means of identification
Synonyms: RHODORSIL CA-45 FC

Recommended use and restriction on use
Recommended use: Catalyst
Restrictions on use: None known.

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer

Company Name:	Bluestar Silicones USA Corp.
Address:	7979 Park Place Road 29745 York, SC
Telephone:	+1 (803) 792-3000
Fax:	+1 (803) 684-7202
Contact Person:	
e-mail:	product.stewardship@bluestarsilicones.com

Supplier

Company Name:	Bluestar Silicones USA Corp.
Address:	Two Tower Blvd, Suite 1601 08816-1100 East Brunswick, NJ
Telephone:	+1 (732) 227-2060
Fax:	+1 (732) 249-7000
Contact Person:	
e-mail:	product.stewardship@bluestarsilicones.com

Emergency telephone number: +1 (800) 424-9300 CHEMTREC

2. Hazard(s) identification

Hazard Classification

Health Hazards

Toxic to reproduction — Category 2

Label Elements

Hazard Symbol:



Signal Word: Warning

Hazard Statement: Suspected of damaging fertility or the unborn child.

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Precautionary Statement

Prevention: Use personal protective equipment as required.

Response: If exposed or concerned: Get medical advice/attention.

Storage: Store in well-ventilated place.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: Chemical compounds containing silicon - hydrogen bonds (SiH). This product may generate hydrogen gas. For further information, refer to Section 10: "Stability and Reactivity".

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
Octamethylcyclotetrasiloxane	D4,	556-67-2	0.1 - 1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition Comments: Mixture of Polyorganosiloxanes, fillers.

4. First-aid measures

General information: For further information refer to section 8 "Exposure-controls/personal protection".

Ingestion: Do not induce vomiting. Rinse mouth thoroughly. Get medical attention if symptoms occur.

Inhalation: Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin Contact: Remove contaminated clothing and shoes. Immediately wipe excess material off skin with a dry cloth; then wash skin with plenty of soap and water. Seek medical attention if irritation develops or persists.

Eye contact: In case of contact, immediately absorb excess with clean absorbent cloth or cotton. Then, hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention if irritation develops or persists or if visual changes occur.

Most important symptoms/effects, acute and delayed

Symptoms: None known.

Hazards: No specific recommendations.

Indication of immediate medical attention and special treatment needed

Treatment: No specific recommendations.

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5. Fire-fighting measures

General Fire Hazards: Water spray should be used to cool containers.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Dry chemical, alcohol resistant foam or carbon dioxide (CO2).

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire. Do not use alkaline powders.

Specific hazards arising from the chemical: Product will burn under fire conditions. This product may generate hydrogen gas. Vapors may form explosive mixtures with air. For further information, refer to Section 10: "Stability and Reactivity". Hazardous Decomposition Products : formaldehyde, oxides of carbon and silica.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Water spray should be used to cool containers.

Special protective equipment for fire-fighters: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear appropriate personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment. Avoid contact with bases. Eliminate all sources of ignition.

Methods and material for containment and cleaning up: Ventilate the area. Use only non-sparking tools. Absorb with inert material. Avoid contact with bases. Scrape up and place in appropriate vented container.

Notification Procedures: Caution: Contaminated surfaces may be slippery. For waste disposal, see section 13 of the MSDS.

Environmental Precautions: Do not allow to enter drains, sewers or watercourses.

7. Handling and storage

Precautions for safe handling: Provide adequate ventilation if fumes or vapors are generated. Do not mix with incompatible materials. For further information, refer to Section 10: "Stability and Reactivity". Read and follow manufacturer's recommendations.

Conditions for safe storage, including any incompatibilities: Store in original vented container. Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

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Appropriate Engineering Controls No specific recommendations.

Individual protection measures, such as personal protective equipment

General information: Provide sufficient ventilation during operations which cause vapor formation. This product can form formaldehyde vapors when heated to temperatures above 150 degrees C in the presence of air.

Eye/face protection: Wear approved safety glasses.

Skin Protection

Hand Protection: Protective gloves are recommended.

Other: Wear suitable protective clothing.

Respiratory Protection: No protection is ordinarily required under normal conditions of use and with adequate ventilation.

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance

Physical state:	Liquid
Form:	Viscous.
Color:	Violet
Odor:	Slight odor
Odor threshold:	No data available.
pH:	Not applicable
Melting point/freezing point:	No data available.
International Inventories:	No data available.
Flash Point:	> 201 °F (94 °C)
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability limit - upper (%):	74 %(V) Hydrogen.
Flammability limit - lower (%):	4 %(V) Hydrogen.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	1.04 (77 °F (25 °C))
Solubility(ies)	
Solubility in water:	Practically Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	> 752 °F (400 °C)
Decomposition temperature:	No data available.
Viscosity:	400 - 800 mm2/s (77 °F (25 °C))

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10. Stability and reactivity

Reactivity: No data available.

Chemical Stability: Material is stable under normal conditions.

Possibility of Hazardous Reactions: This product may generate hydrogen gas.

Conditions to Avoid: Avoid heat, sparks, open flames and other ignition sources.

Incompatible Materials: A fire or explosion hazard arises because highly flammable gas (hydrogen) is released when it is in contact with : Strong oxidizers, strong bases and chemical compounds with mobile hydrogen, in the presence of metal salts and complexes.

Hazardous Decomposition Products: Thermal decomposition may liberate dimethylcyclosiloxanes. This product can form formaldehyde vapors when heated to temperatures above 150 degrees C in the presence of air.

11. Toxicological information

Information on likely routes of exposure

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: No data available.

Dermal
Product: No data available.

Inhalation
Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	LC 50 (Rat, 4 h): 36 mg/l

Repeated Dose Toxicity

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Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	NOAEL (Rat, Inhalation, 24 months): 1.820 mg/l NOAEL (Rabbit, Dermal, 3 weeks): 960 mg/kg

Skin Corrosion/Irritation

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	(Rabbit, 24 h): Not irritating

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	(Rabbit, 24 h): Not irritating

Respiratory or Skin Sensitization

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	(Pig)Not a skin sensitizer.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	Bacteria: No mutagenic components identified Chromosomal aberration: No mutagenic components identified

In vivo

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	(Rat)No mutagenic components identified

Reproductive Toxicity

Product: No data available.

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Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other Effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):
Octamethylcyclotetrasiloxane — LC 50 (Oncorhynchus mykiss, 96 h): >= 0.022 mg/l

Aquatic Invertebrates
Product: No data available.

Specified substance(s):
Octamethylcyclotetrasiloxane — EC 50 (Water flea (Daphnia magna), 48 h): > 0.015 mg/l

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):
Octamethylcyclotetrasiloxane — NOEC (Oncorhynchus mykiss, 93 d): >= 0.0044 mg/l

Aquatic Invertebrates
Product: No data available.

Specified substance(s):
Octamethylcyclotetrasiloxane — NOEC (Water flea (Daphnia magna), 21 d): 0.0079 mg/l

Toxicity to Aquatic Plants
Product: No data available.

Specified substance(s):
Octamethylcyclotetrasiloxane — EC 50 (Green algae (Selenastrum capricornutum), 96 h): > 0.022 mg/l

Persistence and Degradability

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Biodegradation
Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	3.7 % (29 d)

BOD/COD Ratio
Product: No data available.

Bioaccumulative Potential
Bioconcentration Factor (BCF)
Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	Fathead Minnow, Bioconcentration Factor (BCF): 12,400

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in Soil: No data available.

Known or predicted distribution to environmental compartments

Octamethylcyclotetrasiloxane	No data available.

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Waste of this material should not be mixed with other waste. Provide measures such as vented bungs to ensure pressure relief in the waste container.

14. Transport information

This material is not subject to transport regulations.

Environmental hazards: Not regulated.

Special precautions for user: Packaging with a breathing/venting bung are FORBIDDEN for transport by air.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

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CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

[ ] Acute (Immediate) [X] Chronic (Delayed) [ ] Fire [X] Reactive [ ] Pressure Generating

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act
No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List
No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances
No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

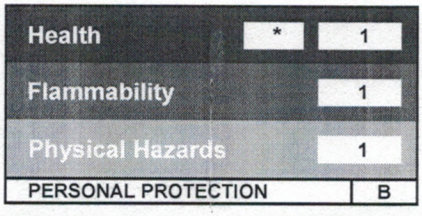
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Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EU EINECS List:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory

16.Other information, including date of preparation or last revision

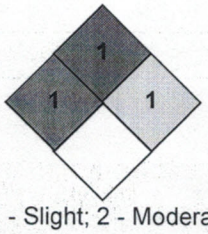
HMIS Hazard ID

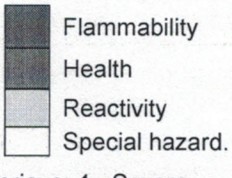


B - Safety Glasses & Gloves

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; *Chronic health effect

NFPA Hazard ID





Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Issue Date:	05/23/2015
Revision Date:	No data available.
Version #:	3.0

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Further Information: No data available.

Disclaimer: The information given is based on data available for the material, the components of the material, and similar materials. The information is believed to be correct. It is given in good faith. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

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SAFETY DATA SHEET

1. Identification

Product identifier: BLUESIL CA-45 BLUE

Other means of identification
Synonyms: RHODORSIL CA-45 BLUE

Recommended use and restriction on use
Recommended use: Catalyst
Restrictions on use: None known.

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer

Company Name:	Bluestar Silicones USA Corp.
Address:	7979 Park Place Road 29745 York, SC
Telephone:	+1 (803) 792-3000
Fax:	+1 (803) 684-7202
Contact Person:	
e-mail:	product.stewardship@bluestarsilicones.com

Supplier

Company Name:	Bluestar Silicones USA Corp.
Address:	Two Tower Blvd, Suite 1601 08816-1100 East Brunswick, NJ
Telephone:	+1 (732) 227-2060
Fax:	+1 (732) 249-7000
Contact Person:	
e-mail:	product.stewardship@bluestarsilicones.com

Emergency telephone number: +1 (800) 424-9300 CHEMTREC

2. Hazard(s) identification

Hazard Classification

Health Hazards

Toxic to reproduction — Category 2

Label Elements

Hazard Symbol:



Signal Word: Warning

Hazard Statement: Suspected of damaging fertility or the unborn child.

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Precautionary Statement

Prevention: Use personal protective equipment as required.

Response: If exposed or concerned: Get medical advice/attention.

Storage: Store in well-ventilated place.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: Chemical compounds containing silicon - hydrogen bonds (SiH). This product may generate hydrogen gas. For further information, refer to Section 10: "Stability and Reactivity".

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
Octamethylcyclotetrasiloxane	D4,	556-67-2	0.1 - 1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition Comments: Mixture of Polyorganosiloxanes, fillers.

4. First-aid measures

General information: For further information refer to section 8 "Exposure-controls/personal protection".

Ingestion: Do not induce vomiting. Rinse mouth thoroughly. Get medical attention if symptoms occur.

Inhalation: Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin Contact: Remove contaminated clothing and shoes. Immediately wipe excess material off skin with a dry cloth; then wash skin with plenty of soap and water. Seek medical attention if irritation develops or persists.

Eye contact: In case of contact, immediately absorb excess with clean absorbent cloth or cotton. Then, hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention if irritation develops or persists or if visual changes occur.

Most important symptoms/effects, acute and delayed

Symptoms: None known.

Hazards: No specific recommendations.

Indication of immediate medical attention and special treatment needed

Treatment: No specific recommendations.

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5. Fire-fighting measures

General Fire Hazards: Water spray should be used to cool containers.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Dry chemical, alcohol resistant foam or carbon dioxide (CO2).

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire. Do not use alkaline powders.

Specific hazards arising from the chemical: Product will burn under fire conditions. This product may generate hydrogen gas. Vapors may form explosive mixtures with air. For further information, refer to Section 10: "Stability and Reactivity". Hazardous Decomposition Products : formaldehyde, oxides of carbon and silica.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Water spray should be used to cool containers.

Special protective equipment for fire-fighters: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear appropriate personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment. Avoid contact with bases. Eliminate all sources of ignition.

Methods and material for containment and cleaning up: Ventilate the area. Use only non-sparking tools. Absorb with inert material. Avoid contact with bases. Scrape up and place in appropriate vented container.

Notification Procedures: Caution: Contaminated surfaces may be slippery. For waste disposal, see section 13 of the MSDS.

Environmental Precautions: Do not allow to enter drains, sewers or watercourses.

7. Handling and storage

Precautions for safe handling: Provide adequate ventilation if fumes or vapors are generated. Do not mix with incompatible materials. For further information, refer to Section 10: "Stability and Reactivity". Read and follow manufacturer's recommendations.

Conditions for safe storage, including any incompatibilities: Store in original vented container. Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

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Appropriate Engineering Controls No specific recommendations.

Individual protection measures, such as personal protective equipment

General information: Provide sufficient ventilation during operations which cause vapor formation. This product can form formaldehyde vapors when heated to temperatures above 150 degrees C in the presence of air.

Eye/face protection: Wear approved safety glasses.

Skin Protection

Hand Protection: Protective gloves are recommended.

Other: Wear suitable protective clothing.

Respiratory Protection: No protection is ordinarily required under normal conditions of use and with adequate ventilation.

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance	
Physical state:	Liquid
Form:	Viscous.
Color:	Blue
Odor:	Slight odor
Odor threshold:	No data available.
pH:	Not applicable
Melting point/freezing point:	No data available.
International Inventories:	No data available.
Flash Point:	> 201 °F (94 °C)
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability limit - upper (%):	74 %(V) Hydrogen.
Flammability limit - lower (%):	4 %(V) Hydrogen.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	1.04 (77 °F (25 °C))
Solubility(ies)	
Solubility in water:	Practically Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	> 752 °F (400 °C)
Decomposition temperature:	No data available.
Viscosity:	400 - 600 mm2/s (77 °F (25 °C))

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10. Stability and reactivity

Reactivity: No data available.

Chemical Stability: Material is stable under normal conditions.

Possibility of Hazardous Reactions: This product may generate hydrogen gas.

Conditions to Avoid: Avoid heat, sparks, open flames and other ignition sources.

Incompatible Materials: A fire or explosion hazard arises because highly flammable gas (hydrogen) is released when it is in contact with : Strong oxidizers, strong bases and chemical compounds with mobile hydrogen, in the presence of metal salts and complexes.

Hazardous Decomposition Products: Thermal decomposition may liberate dimethylcyclosiloxanes. This product can form formaldehyde vapors when heated to temperatures above 150 degrees C in the presence of air.

11. Toxicological information

Information on likely routes of exposure

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: No data available.

Dermal
Product: No data available.

Inhalation
Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	LC 50 (Rat, 4 h): 36 mg/l

Repeated Dose Toxicity

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Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	NOAEL (Rat, Inhalation, 24 months): 1.820 mg/l NOAEL (Rabbit, Dermal, 3 weeks): 960 mg/kg

Skin Corrosion/Irritation

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	(Rabbit, 24 h): Not irritating

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	(Rabbit, 24 h): Not irritating

Respiratory or Skin Sensitization

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	(Pig)Not a skin sensitizer.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	Bacteria: No mutagenic components identified Chromosomal aberration: No mutagenic components identified

In vivo

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	(Rat)No mutagenic components identified

Reproductive Toxicity

Product: No data available.

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Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other Effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):
Octamethylcyclotetrasiloxane — LC 50 (Oncorhynchus mykiss, 96 h): >= 0.022 mg/l

Aquatic Invertebrates
Product: No data available.

Specified substance(s):
Octamethylcyclotetrasiloxane — EC 50 (Water flea (Daphnia magna), 48 h): > 0.015 mg/l

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):
Octamethylcyclotetrasiloxane — NOEC (Oncorhynchus mykiss, 93 d): >= 0.0044 mg/l

Aquatic Invertebrates
Product: No data available.

Specified substance(s):
Octamethylcyclotetrasiloxane — NOEC (Water flea (Daphnia magna), 21 d): 0.0079 mg/l

Toxicity to Aquatic Plants
Product: No data available.

Specified substance(s):
Octamethylcyclotetrasiloxane — EC 50 (Green algae (Selenastrum capricornutum), 96 h): > 0.022 mg/l

Persistence and Degradability

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Biodegradation
Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	3.7 % (29 d)

BOD/COD Ratio
Product: No data available.

Bioaccumulative Potential
Bioconcentration Factor (BCF)
Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	Fathead Minnow, Bioconcentration Factor (BCF): 12,400

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in Soil: No data available.

Known or predicted distribution to environmental compartments

Octamethylcyclotetrasiloxane	No data available.

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Waste of this material should not be mixed with other waste. Provide measures such as vented bungs to ensure pressure relief in the waste container.

14. Transport information

This material is not subject to transport regulations.

Environmental hazards: Not regulated.

Special precautions for user: Packaging with a breathing/venting bung are FORBIDDEN for transport by air.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

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CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

☐	Acute (Immediate)	☒	Chronic (Delayed)	☐	Fire	☒	Reactive	☐	Pressure Generating

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act
No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List
No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances
No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

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Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EU EINECS List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory

16.Other information, including date of preparation or last revision

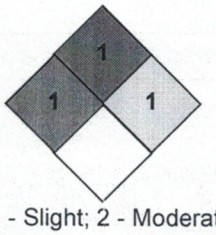
HMIS Hazard ID

Health	*	1
Flammability		1
Physical Hazards		1
PERSONAL PROTECTION		B

B - Safety Glasses & Gloves

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; *Chronic health effect

NFPA Hazard ID



Flammability
Health
Reactivity
Special hazard.

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Issue Date:	05/21/2015
Revision Date:	No data available.
Version #:	7.0
Further Information:	No data available.

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Disclaimer:

The information given is based on data available for the material, the components of the material, and similar materials. The information is believed to be correct. It is given in good faith. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

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Safety Data Sheet

Repro 83 White Part A

Date of Preparation: June 1, 2015

Section 1 Chemical Product and Company Identification

HMIS	
H	1
F	2
R	0
PPE	Sec. 8

1.1 Product identifiers

Product name: Repro 83 White Part A

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: N/A

1.3 Details of the supplier of the safety data sheet

Freeman Manufacturing and Supply Company
1101 Moore Road, Avon, OH 44011
Phone (440) 934-1902
FAX (440) 934-7200

1.4 Emergency telephone number

Emergency Phone (800) 424-9300

Section 2 Hazards Identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

Eye irritation, Category 2B
Flammable Liquid, Category 4

2.2 GHS Label elements, including precautionary statements



Signal word Warning

Hazard statements

Combustible liquid.
Causes eye irritation.

Not classified as an environmental hazard under GHS criteria

Precautionary statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed when not in use.
Wear protective gloves/ eye protection/ face protection.
Avoid breathing mist, vapors or spray.
Do not eat, drink or smoke when using this product.

Response

If on skin: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical attention.
Wash contaminated clothing before reuse.
If in eyes: Rinse continuously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Section 2 Hazards Identification cont.

If eye irritation persists: Get medical attention.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

Dispose of contents and container to an appropriate waste site in accordance with local and national regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None

Section 3 Composition/Information on Ingredients

3.1 Substance

Ingredient Name	CAS Number
Urethane Polyol	Proprietary
Aromatic Solvent	Blend
Titanium Dioxide	13463-67-7

Section 4 First Aid Measures

4.1 Description of first aid measures

If inhaled

Move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

In case of eye contact

Flush eyes with water for at least 15 minutes. Get medical attention immediately

If swallowed

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water. Get medical attention if symptoms appear.

4.2 Most important symptoms and effects, both acute and delayed

Eye contact: Causes eye irritation.

Inhalation: May cause irritation

Skin contact: Causes skin irritation

Ingestion: May cause irritation of the gastrointestinal tract.

4.3 Indication of any immediate medical attention and special treatment needed

Inhalation: No specific data

Ingestion: No specific data.

Skin contact: Adverse symptoms may include the following:

Irritation

Redness

Eye contact: Adverse symptoms may include the following:

Pain or irritation

Watering

Redness

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Symptomatic treatment and supportive therapy as indicated.

Section 5 Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Nature of decomposition products not known.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available.

Section 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, or mist.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7 Handling and Storage

7.1 Precautions for safe handling

Use normal precautions when handling flammable materials. Do not breathe fumes or vapor. Do not allow material to contact skin. Provide appropriate exhaust ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Store at ambient temperatures in closed containers. Do not heat this material above the flash point. No chemical incompatibilities.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

Ingredient	OSHA		ACGIH	
	PEL	STEL	TWA	STEL
Aromatic Solvent	100 ppm	none estab.	25 ppm	none estab.
Titanium Dioxide	5 mg/m^3	15 mg/m^3	10 mg/m^3	none estab.

8.2 Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. An eye wash station and safety shower should be located near the workstation.

8.3 Personal protective equipment

Eye/face protection

With product at ambient temperatures, use safety glasses equipped with side shields.

Section 8 Exposure Controls/Personal Protection cont

8.4 Skin protection

Hand Protection

With product at ambient temperatures, use disposable nitrile gloves. Contaminated gloves should be replaced.

Body Protection

Prevent skin contact when handling material.

8.5 Respiratory Protection

The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used.

8.6 Safety Stations

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

8.7 General Hygienic Practices

Avoid breathing vapor or mist. Avoid contamination of food, beverages, or smoking materials. Wash thoroughly after handling, and before eating, drinking or smoking. Remove contaminated clothing promptly and clean thoroughly before reuse.

Section 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Opaque white liquid
Odor	Mild
Odor Threshold	No data available
pH	No data available
Melting Point	No data available
VOC Content	1.15lbs/gal
Initial boiling point & boiling range	No data available
Flash Point(COC)	66°C (150°F)
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability	No data available
Vapor Pressure	No data available
Vapor density	No data available
Relative density (g/cc)	1.90±0.05
Water Solubility	Slight
Coefficient: n-octanol/ water	No data available
Auto-ignition temperature	No data available
Viscosity	2000 cps @ RT
Explosive Properties	None
Oxidizing Properties	None
% Volatile	5-10%

Section 10 Stability and Reactivity

10.1 Reactivity
No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
None

10.4 Conditions to avoid
Heat and open flames.

10.5 Incompatible materials
Water, alcohols, amines, bases, and acids.

10.6 Hazardous decomposition products
Thermal oxidative decomposition can produce CO, and CO_2.

Section 11 Toxicological Information

11.1 Information on toxicological effects

Acute Oral toxicity	Low toxicity
Acute Inhalation toxicity	Low toxicity
Acute Dermal toxicity	Low toxicity
Skin corrosion/irritation	Mild skin irritant
Serious eye damage/eye irritation	Mild eye irritant
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available

Carcinogenicity

IARC	Titanium Dioxide (CAS #13463-67-7) is considered a class 2B suspect human carcinogen.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.

Reproductive toxicity	Not expected to be a hazard
Specific target organ toxicity - single exposure	None expected
Specific target organ toxicity - repeated exposure	None expected

Section 12 Ecological Information

12.1 Toxicity	No data available
12.2 Persistence and degradability	No data available
12.3 Bioaccumulative potential	No data available
12.4 Mobility in soil	No data available
12.5 Results of PBT & vPvB assessment	No data available

Section 13 Disposal Considerations

13.1 Disposal

Use safety containers for disposal. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

Section 14 Transport Information

14.1 Shipping Name

DOT: Liquid Resin N.O.I Not Regulated
TDG: Liquid Resin N.O.I Not Regulated
IMDG: Liquid Resin N.O.I Not Regulated
IATA: Liquid Resin N.O.I Not Regulated

Section 15 Regulatory Information

15.1 US Federal Regulations

RCRA Hazardous Waste Number (40 CFR 261.33): Not listed
RCRA Hazardous Waste Classification (40 CFR 261): Not classified
CERCLA Hazardous Substance (40 CFR 302.4): Listed/unlisted specific per RCRA Sec. 3001
SARA 311/312 Codes: Acute Health, Fire
SARA Toxic Chemical (40 CFR 372.65): None
TSCA Inventory Status: All ingredients listed on TSCA inventory requirements.

15.2 State Regulations

This product is not known to contain any components for which the State of California has found to cause cancer, birth defects or other reproductive harm.

Titanium dioxide (CAS #13463-67-7) and barium sulfate (CAS #7727-43-7) may be found on both the New Jersey and the Pennsylvania Right to Know lists.

Section 16 Other Information

16.1 Disclaimer

The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.

Safety Data Sheet

Repro 83 White Part B
Date of Preparation: June 1, 2015

Section 1 Chemical Product and Company Identification

HMIS	
H	3
F	2
R	1
PPE	Sec. 8

1.1 Product identifiers
Product name: Repro 83 White Part B
1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: N/A
1.3 Details of the supplier of the safety data sheet
Freeman Manufacturing and Supply Company
1101 Moore Road, Avon, OH 44011
Phone (440) 934-1902
FAX (440) 934-7200
1.4 Emergency telephone number
Emergency Phone (800) 424-9300

Section 2 Hazards Identification

2.1 Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)
Acute toxicity (Inhalation), Category 4
Specific target organ toxicity, single exposure Category 3 (Respiratory System)
Respiratory sensitization, Category 1
Specific target organ toxicity, repeated exposure Category 1 (Respiratory Tract)
Skin irritation, Category 2
Skin sensitization, Category 1
Eye irritation, Category 2B
Flammable Liquid, Category 4

2.2 GHS Label elements, including precautionary statements



Signal word Danger

Hazard statements
Combustible liquid.
Harmful if inhaled.
May cause respiratory irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Causes damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.
Causes skin irritation.
May cause an allergic skin reaction.
Causes eye irritation.

Not classified as an environmental hazard under GHS criteria

Section 2 Hazards Identification cont.

Precautionary statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed when not in use.
Wear protective gloves/eye protection/face protection.
Avoid breathing mist, vapors or spray.
Do not eat, drink or smoke when using this product.
Wash skin and face thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
In case of inadequate ventilation wear respiratory protection

Response

If on skin: Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
If inhaled: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
If experiencing respiratory symptoms: Get medical attention.
If in eyes: Rinse continuously with water for at least 15 minutes. Remove contact lenses, if present and easy to do.
If eye irritation persists: Get medical attention.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

Dispose of contents and container to an appropriate waste site in accordance with local and national regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None

Section 3 Composition/Information on Ingredients

3.1 Substance

Ingredient Name	CAS Number
Polymeric Diphenylmethane Diisocyanate	9016-87-9
4,4'-Diphenylmethane Diisocyanate	101-68-8
Aromatic Solvent	Blend
Titanium Dioxide	13463-67-7

Section 4 First Aid Measures

4.1 Description of first aid measures

If inhaled

Move person into fresh air. If not breathing, give artificial respiration. The onset of the respiratory symptoms may be delayed for several hours after exposure.

In case of skin contact

Wash off with soap and plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Section 4 First Aid Measures cont.

In case of eye contact
Flush eyes with water for at least 15 minutes. Get medical attention immediately
If swallowed
Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water. Get medical attention if symptoms appear.

4.2 Most important symptoms and effects, both acute and delayed

Eye contact: Causes eye irritation.
Inhalation: Harmful if inhaled. May cause respiratory irritation. This product is a respiratory irritant and potential respiratory sensitizer: repeated inhalation of vapor at levels above the occupational exposure limit could cause respiratory sensitization.
Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty in breathing
Skin contact: Causes skin irritation. May cause sensitization by skin contact. Animal studies have shown that respiratory sensitization can be induced by skin contact with known respiratory sensitizers.
Ingestion: Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.

4.3 Indication of any immediate medical attention and special treatment needed

Inhalation: Adverse symptoms may include the following:
Respiratory tract irritation
Coughing
Wheezing and breathing difficulties
Asthma
Ingestion: No specific data.
Skin contact: Adverse symptoms may include the following:
Irritation
Redness
Eye contact: Adverse symptoms may include the following:
Pain or irritation
Watering
Redness

Indication of immediate medical attention and special treatment needed, if necessary
Notes to physician: Symptomatic treatment and supportive therapy as indicated. Following severe exposure the patient should be kept under medical review for at least 48 hours.

Section 5 Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Nature of decomposition products not known.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available.

Section 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7 Handling and Storage

7.1 Precautions for safe handling

Use normal precautions when handling flammable materials. Do not breathe fumes or vapor. Do not allow material to contact skin.

Provide appropriate exhaust ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Store at ambient temperatures in closed containers. Do not heat this material above the flash point. No chemical incompatibilities.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

Ingredient	OSHA		ACGIH	
	PEL	STEL	TWA	STEL
Polymeric Diphenylmethane Diisocyanate	None estab.	None estab.	None estab.	None estab.
4,4'-Diphenylmethane Diisocyanate	0.02 ppm	None estab.	0.005 ppm	None estab.
Aromatic Solvent	100 ppm	None estab.	25 ppm	None estab.
Titanium Dioxide	5 mg/m^3	15 mg/m^3	10 mg/m^3	None estab.

8.2 Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. An eye wash station and safety shower should be located near the workstation.

8.3 Personal protective equipment

Eye/face protection

With product at ambient temperatures, use safety glasses equipped with side shields.

8.4 Skin protection

Hand Protection

With product at ambient temperatures, use disposable nitrile gloves. Contaminated gloves should be replaced.

Body Protection

Prevent skin contact when handling material.

Section 8 Exposure Controls/Personal Protection cont.

8.5 Respiratory Protection

The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used.

8.6 Safety Stations

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

8.7 General Hygienic Practices

Avoid breathing vapor or mist. Avoid contamination of food, beverages, or smoking materials. Wash thoroughly after handling, and before eating, drinking or smoking. Remove contaminated clothing promptly and clean thoroughly before reuse.

Section 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Opaque tan liquid
Odor	Mild
Odor Threshold	No data available
pH	No data available
Melting Point	No data available
VOC Content	0.84 lbs/gal
Initial boiling point & boiling range	No data available
Flash Point(COC)	66°C (150°F)
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability	No data available
Vapor Pressure	No data available
Vapor density	No data available
Relative density (g/cc)	1.90±0.05
Water Solubility	Insoluble-slowly reacts with water to produce CO_2
Coefficient: n-octanol/ water	No data available
Auto-ignition temperature	No data available
Viscosity	1000 cps @ RT
Explosive Properties	None
Oxidizing Properties	None
% Volatile	5-10%

Section 10 Stability and Reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

May occur. Avoid contact with moisture or other material, which react with isocyanates. May occur at temperatures above 400° F (204° C)

Section 10 Stability and Reactivity cont.

10.4 Conditions to avoid

Heat and open flames.

10.5 Incompatible materials

Water, alcohols, amines, bases, and acids.

10.6 Hazardous decomposition products

Thermal oxidative decomposition can produce CO, CO_2, oxides of nitrogen and traces of HCN.

Section 11 Toxicological Information

11.1 Information on toxicological effects

Acute Oral toxicity	Low toxicity
Acute Inhalation toxicity	Low toxicity
Acute Dermal toxicity	Low toxicity
Skin corrosion/irritation	Mild skin irritant
Serious eye damage/eye irritation	Moderate irritant
Respiratory or skin sensitization	Skin sensitizer and respiratory sensitizer
Germ cell mutagenicity	No data available
Carcinogenicity	

IARC	Titanium Dioxide (CAS #13463-67-7) is considered a class 2B suspect human carcinogen.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.

Reproductive toxicity	Not expected to be a hazard
Specific target organ toxicity - single exposure	Respiratory system
Specific target organ toxicity - repeated exposure	Respiratory system

Section 12 Ecological Information

12.1 Toxicity	No data available
12.2 Persistence and degradability	No data available
12.3 Bioaccumulative potential	No data available
12.4 Mobility in soil	No data available
12.5 Results of PBT & vPvB assessment	No data available

Section 13 Disposal Considerations

13.1 Disposal

Use safety containers for disposal. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

Section 14 Transport Information

14.1 Shipping Name

DOT: Liquid Resin N.O.I Not Regulated
TDG: Liquid Resin N.O.I Not Regulated
IMDG: Liquid Resin N.O.I Not Regulated
IATA: Liquid Resin N.O.I Not Regulated

Section 15 Regulatory Information

15.1 US Federal Regulations

RCRA Hazardous Waste Number (40 CFR 261.33): Not listed
RCRA Hazardous Waste Classification (40 CFR 261): Not classified
CERCLA Hazardous Substance (40 CFR 302.4): Listed/unlisted specific per RCRA Sec. 3001
SARA 311/312 Codes: Acute Health, Fire
SARA Toxic Chemical (40 CFR 372.65):

Polymeric Diphenylmethane Diisocyanate	CAS #9016-87-9	12.0 – 15.0 %
4, 4' Diphenylmethane Diisocyanate	CAS#101-68-8	3.0 – 4.0 %

TSCA Inventory Status: All ingredients listed on TSCA inventory requirements.

15.2 State Regulations

This product is not known to contain any components for which the State of California has found to cause cancer, birth defects or other reproductive harm.

4,4' Methylene bis(phenylisocyanate) CAS #101-68-8, titanium dioxide (CAS #13463-67-7) and barium sulfate (CAS #7727-43-7) may be found on both the New Jersey and the Pennsylvania Right to Know lists.

Section 16 Other Information

16.1 Disclaimer

The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.

SAFETY DATA SHEET

1. Identification

Product identifier: BLUESIL V-340

Other means of identification
Synonyms: RHODORSIL V-340

Recommended use and restriction on use
Recommended use: Molding diverse objects.
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer

Company Name:	Bluestar Silicones USA Corp.
Address:	7979 Park Place Road 29745 York, SC
Telephone:	+1 (803) 792-3000
Fax:	+1 (803) 684-7202
Contact Person:	
e-mail:	product.stewardship@bluestarsilicones.com

Supplier

Company Name:	Bluestar Silicones USA Corp.
Address:	Two Tower Blvd, Suite 1601 08816-1100 East Brunswick, NJ
Telephone:	+1 (732) 227-2060
Fax:	+1 (732) 249-7000
Contact Person:	
e-mail:	product.stewardship@bluestarsilicones.com

Emergency telephone number: +1 (800) 424-9300 CHEMTREC

2. Hazard(s) identification

Hazard Classification

Label Elements

Hazard Symbol:	No symbol
Signal Word:	No signal word.
Hazard Statement:	Quartz : When encapsulated in a polymer, is not expected to pose a health hazard when processed under normal conditions of use.
Precautionary Statement	
Prevention:	Not applicable
Response:	Not applicable
Storage:	Not applicable

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Other hazards which do not result in GHS classification:	No data available.

3. Composition/information on ingredients

Mixtures

Composition Comments:	Mixture of Polyorganosiloxanes, fillers, additives.

4. First-aid measures

General information:	For further information refer to section 8 "Exposure-controls/personal protection".
Ingestion:	Do not induce vomiting. Rinse mouth thoroughly. Get medical attention if symptoms occur.
Inhalation:	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin Contact:	Immediately wipe excess material off skin with a dry cloth; then wash skin with plenty of soap and water. Seek medical attention if irritation develops or persists.
Eye contact:	In case of contact, immediately absorb excess with clean absorbent cloth or cotton. Then, hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention if irritation develops or persists or if visual changes occur.

Most important symptoms/effects, acute and delayed

Symptoms:	None known.
Hazards:	No specific recommendations.

Indication of immediate medical attention and special treatment needed

Treatment:	No specific recommendations.

5. Fire-fighting measures

General Fire Hazards:	No specific recommendations.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Dry chemical, alcohol resistant foam or carbon dioxide (CO_2).
Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical:	Product will burn under fire conditions. Hazardous Decomposition Products : formaldehyde, oxides of carbon and silica.

Special protective equipment and precautions for firefighters

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Special fire fighting procedures:	Water spray should be used to cool containers.
Special protective equipment for fire-fighters:	Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Use water to keep fire exposed containers cool and disperse vapors.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment.
Methods and material for containment and cleaning up:	Absorb with inert material. Scrape up and place in appropriate closed container see Section 7 of the MSDS.
Notification Procedures:	Caution: Contaminated surfaces may be slippery. For waste disposal, see section 13 of the MSDS.
Environmental Precautions:	Do not allow to enter drains, sewers or watercourses.

7. Handling and storage

Precautions for safe handling:	See Section 8 of the MSDS for Personal Protective Equipment. For further information, refer to Section 10: "Stability and Reactivity".
Conditions for safe storage, including any incompatibilities:	Store in tightly closed original container in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Quartz : When encapsulated in a polymer, is not expected to pose a health hazard when processed under normal conditions of use.

Appropriate Engineering Controls	No specific recommendations.

Individual protection measures, such as personal protective equipment

General information:	Provide sufficient ventilation during operations which cause vapor formation. This product can form formaldehyde vapors when heated to temperatures above 150 degrees C in the presence of air.
Eye/face protection:	Wear approved safety glasses.
Skin Protection	
Hand Protection:	Protective gloves are recommended.
Other:	Wear suitable protective clothing.
Respiratory Protection:	No protection is ordinarily required under normal conditions of use and with adequate ventilation.

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Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance

Physical state:	Liquid
Form:	Viscous.
Color:	Beige.
Odor:	Slight odor
Odor threshold:	No data available.
pH:	Not applicable
Melting point/freezing point:	No data available.
International Inventories:	No data available.
Flash Point:	> 212 °F (100 °C) (Tagliabue Closed Cup)
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Vapor pressure:	< 0.013 hPa (68 °F (20 °C))
Vapor density:	No data available.
Relative density:	1.36 (77 °F (25 °C))
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	> 752 °F (400 °C)
Decomposition temperature:	No data available.
Viscosity:	50,000 - 70,000 mm2/s (77 °F (25 °C))

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Stable
Possibility of Hazardous Reactions:	Will not occur.
Conditions to Avoid:	None known.
Incompatible Materials:	Strong oxidizers, strong acids, and strong bases.
Hazardous Decomposition Products:	Thermal decomposition may liberate dimethylcyclosiloxanes. This product can form formaldehyde vapors when heated to temperatures above 150 degrees C in the presence of air.

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11. Toxicological information

Information on likely routes of exposure

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: No data available.

Dermal
Product: No data available.

Inhalation
Product: No data available.

Repeated Dose Toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Quartz (SiO2)	Overall evaluation: Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

Quartz (SiO2)	Known carcinogen.

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US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive Toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other Effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative Potential
Bioconcentration Factor (BCF)

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Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

14. Transport information

This material is not subject to transport regulations.

Environmental hazards: Not regulated.

Special precautions for user: No special precautions.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

☐ Acute (Immediate) ☐ Chronic (Delayed) ☐ Fire ☐ Reactive ☐ Pressure Generating

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

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US State Regulations

US. California Proposition 65

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

Quartz (SiO2)	Carcinogenic.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity
Quartz (SiO2)

US. Massachusetts RTK - Substance List

Chemical Identity
Quartz (SiO2)

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
Quartz (SiO2)

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

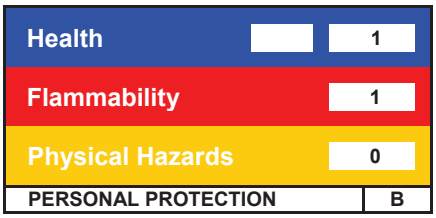
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Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EU EINECS List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory

16.Other information, including date of preparation or last revision

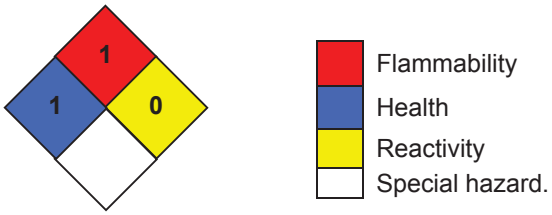
HMIS Hazard ID



Safety glasses and gloves

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; *Chronic health effect

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Issue Date:	04/24/2015
Revision Date:	No data available.
Version #:	11.0
Further Information:	No data available.

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Disclaimer:

The information given is based on data available for the material, the components of the material, and similar materials. The information is believed to be correct. It is given in good faith. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

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SAFETY DATA SHEET

1. Identification

Product identifier: BLUESIL CA-35 BLUE

Other means of identification
Synonyms: BLUESIL CA-35

Recommended use and restriction on use

Recommended use: Molding diverse objects.
Restrictions on use: None known.

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer

Company Name:	Bluestar Silicones USA Corp.
Address:	7979 Park Place Road 29745 York, SC
Telephone:	+1 (803) 792-3000
Fax:	+1 (803) 684-7202
Contact Person:	
E-mail:	product.stewardship@bluestarsilicones.com

Supplier

Company Name:	Bluestar Silicones USA Corp.
Address:	Two Tower Blvd, Suite 1601 08816-1100 East Brunswick, NJ
Telephone:	+1 (732) 227-2060
Fax:	+1 (732) 249-7000

Emergency telephone number: +1 (800) 424-9300 CHEMTREC

2. Hazard(s) identification

Hazard Classification

Health Hazards

Toxic to reproduction	Category 2

Label Elements

Hazard Symbol:



Signal Word: Warning

Hazard Statement: Suspected of damaging fertility.

Precautionary Statement

Prevention: Use personal protective equipment as required.

Response: If exposed or concerned: Get medical advice/attention.

Other hazards which do not result in GHS classification: Chemical compounds containing silicon - hydrogen bonds (SiH). This product may generate hydrogen gas. For further information, refer to Section 10: "Stability and Reactivity".

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Octamethylcyclotetrasiloxane	556-67-2	0.1 - 1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition Comments: Mixture of Polyorganosiloxanes, fillers, additives.

4. First-aid measures

General information: For further information refer to section 8 "Exposure-controls/personal protection".

Ingestion: Do not induce vomiting. Rinse mouth thoroughly. Get medical attention if symptoms occur.

Inhalation: Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin Contact: Immediately wipe excess material off skin with a dry cloth; then wash skin with plenty of soap and water. Seek medical attention if irritation develops or persists.

Eye contact: In case of contact, immediately absorb excess with clean absorbent cloth or cotton. Then, hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention if irritation develops or persists or if visual changes occur.

Most important symptoms/effects, acute and delayed

Symptoms: None known.

Hazards: No specific recommendations.

Indication of immediate medical attention and special treatment needed

Treatment: No specific recommendations.

5. Fire-fighting measures

General Fire Hazards: Water spray should be used to cool containers.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Dry chemical, alcohol resistant foam or carbon dioxide (CO2).
Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire. Do not use alkaline powders.
Specific hazards arising from the chemical:	Product will burn under fire conditions. This product may generate hydrogen gas. Vapors may form explosive mixtures with air. For further information, refer to Section 10: "Stability and Reactivity". Hazardous Decomposition Products : formaldehyde, oxides of carbon and silica.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	Water spray should be used to cool containers.
Special protective equipment for fire-fighters:	Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Wear appropriate personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment. Avoid contact with bases. Eliminate all sources of ignition.
Methods and material for containment and cleaning up:	Ventilate the area. Use only non-sparking tools. Absorb with inert material. Avoid contact with bases. Scrape up and place in appropriate vented container.
Notification Procedures:	Caution: Contaminated surfaces may be slippery. For waste disposal, see Section 13 of the SDS.
Environmental Precautions:	Do not allow to enter drains, sewers or watercourses.

7. Handling and storage

Precautions for safe handling:	Provide adequate ventilation if fumes or vapors are generated. Do not mix with incompatible materials. For further information, refer to Section 10: "Stability and Reactivity". Read and follow manufacturer's recommendations.
Conditions for safe storage, including any incompatibilities:	Store in original vented container. Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Appropriate Engineering Controls	No specific recommendations.

Individual protection measures, such as personal protective equipment

General information:	Provide sufficient ventilation during operations which cause vapor formation. This product can form formaldehyde vapors when heated to temperatures above 150 degrees C in the presence of air.
Eye/face protection:	Wear approved safety glasses.
Skin Protection	
Hand Protection:	Protective gloves are recommended.
Other:	Wear suitable protective clothing.
Respiratory Protection:	No protection is ordinarily required under normal conditions of use and with adequate ventilation.
Hygiene measures:	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance	
Physical state:	Liquid
Form:	Viscous
Color:	Blue
Odor:	Slight odor
Odor threshold:	No data available.
pH:	Not applicable.
Freezing point:	No data available.
Boiling Point:	No data available.
Flash Point:	> 201 °F (94 °C) (Tagliabue Closed Cup)
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability limit - upper (%):	75 %(V)
Flammability limit - lower (%):	4 %(V)
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	1.04 (77 °F (25 °C))
Solubility(ies)	
Solubility in water:	Practically Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	932 °F (500 °C) Hydrogen.
Decomposition temperature:	No data available.
Viscosity:	400 - 600 mm2/s (77 °F (25 °C))

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.

Possibility of hazardous reactions:	This product may generate hydrogen gas.
Conditions to avoid:	Avoid heat, sparks, open flames and other ignition sources.
Incompatible Materials:	A fire or explosion hazard arises because highly flammable gas (hydrogen) is released when it is in contact with : Strong oxidizers, strong bases and chemical compounds with mobile hydrogen, in the presence of metal salts and complexes.
Hazardous Decomposition Products:	Thermal decomposition may liberate dimethylcyclosiloxanes. This product can form formaldehyde vapors when heated to temperatures above 150 degrees C in the presence of air.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	No data available.
Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion:	No data available.
Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product:	No data available.

Dermal

Product:	No data available.

Inhalation

Product:	No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	LC 50 (Rat, 4 h): 36 mg/l

Repeated dose toxicity

Product:	No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	NOAEL (Rat, Inhalation, 24 months): 1.820 mg/l NOAEL (Rabbit, Dermal, 3 weeks): 960 mg/kg

Skin Corrosion/Irritation

Product:	No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	(Rabbit, 24 h): Not irritating

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	(Rabbit, 24 h): Not irritating

Respiratory or Skin Sensitization

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	(Pig)Not a skin sensitizer.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	Bacteria: No mutagenic components identified. Chromosomal aberration: No mutagenic components identified.

In vivo

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	(Rat)No mutagenic components identified.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	LC 50 (Oncorhynchus mykiss, 96 h): >= 0.022 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	EC 50 (Water flea (Daphnia magna), 48 h): > 0.015 mg/l

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	NOEC (Oncorhynchus mykiss, 93 d): >= 0.0044 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	NOEC (Water flea (Daphnia magna), 21 d): 0.0079 mg/l

Toxicity to Aquatic Plants

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	EC 50 (Green algae (Selenastrum capricornutum), 96 h): > 0.022 mg/l

Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	3.7 % (29 d)

BOD/COD Ratio

Product: No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	Fathead Minnow, Bioconcentration Factor (BCF): 12,400

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in Soil: No data available.

Known or predicted distribution to environmental compartments

Octamethylcyclotetrasiloxane	No data available.

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Waste of this material should not be mixed with other waste. Provide measures such as vented bungs to ensure pressure relief in the waste container.

14. Transport information

This material is not subject to transport regulations.

Environmental hazards: Not regulated.

Special precautions for user: Packaging with a breathing/venting bung are FORBIDDEN for transport by air.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

☐	Acute (Immediate)	X	Chronic (Delayed)	☐	Fire	☐	Reactive	☐	Pressure Generating

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act
No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List
No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances
No ingredient regulated by PA Right-to-Know Law present.

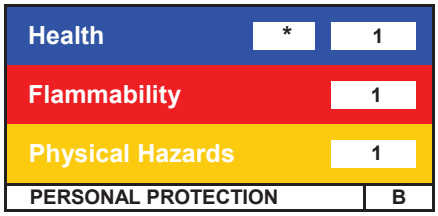
US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

Inventory Status:

US TSCA Inventory:	On or in compliance with the inventory.
Canada DSL Inventory List:	On or in compliance with the inventory.
EU EINECS List:	On or in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory.
Australia AICS:	On or in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory.
New Zealand Inventory of Chemicals:	On or in compliance with the inventory.

16.Other information, including date of preparation or last revision

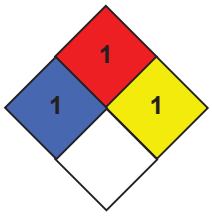
HMIS Hazard ID

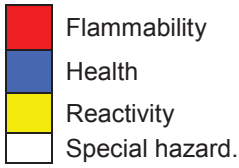


B - Safety Glasses & Gloves

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

NFPA Hazard ID





Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date:	12/15/2016
Revision Date:	No data available.
Version #:	9.0
Further Information:	No data available.

Disclaimer:

The information given is based on data available for the material, the components of the material, and similar materials. The information is believed to be correct. It is given in good faith. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

Safety Data Sheet

Freeman Wood and Plaster Sealer-Aerosol

Date of Preparation: December 1, 2015

Section 1 Chemical Product and Company Identification

HMIS	
H	2
F	4
R	1
PPE	Sec. 8

1.1 Product identifiers

Product name: Freeman Wood and Plaster Sealer-Aerosol

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: N/A

1.3 Details of the supplier of the safety data sheet

Freeman Manufacturing and Supply Company
1101 Moore Road, Avon, OH 44011
Phone (440) 934-1902
FAX (440) 934-7200

1.4 Emergency telephone number

Emergency Phone (800) 424-9300

Section 2 Hazards Identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

Flammable Aerosols, Category 1
Skin Corrosion/Irritation, Category 2
Serious Eye Damage/Eye Irritation, Category 2
Reproductive Toxicity, Category 2
Aspiration Hazard, Category 1
Specific Target Organ Toxicity, single exposure, Category 3
Specific Target Organ Toxicity, repeated exposure, Category2

2.2 GHS Label elements, including precautionary statements



Signal word Danger

Hazard statements

Extremely flammable aerosol.
Causes skin irritation.
May be fatal if swallowed and enters airways.
May damage fertility or the unborn child.
Causes serious eye irritation.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention

Pressurized container. Do not pierce or burn, even after use.
Keep container tightly closed.

Section 2 Hazards Identification cont.

Do not spray on an open flame or other ignition source.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Do not breathe fumes or vapors.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

Response

If on skin: Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
If inhaled: Remove person to fresh air and call doctor/physician if not feeling well.
If in eyes: Rinse continuously with water for at least 15 minutes.
Remove contact lenses, if present and easy to do.
Do NOT induce vomiting.
If swallowed, immediately call a poison control center or a physician.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
In case of fire, use alcohol resistant foam, dry chemical, carbon dioxide (CO_2) or dry sand to extinguish.

Storage

Store in a well-ventilated place.
Do not expose to temperatures exceeding 50°C (122°F).

Disposal

Dispose of contents and container to an appropriate waste site in accordance with local and national regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None.

Section 3 Composition/Information on Ingredients

3.1 Substance

Ingredient Name	CAS Number
Acetone	67-64-1
Xylene	1330-20-7
Propane	74-98-6
Isopropyl Acetate	108-21-4
Isopropyl Alcohol	67-63-0
Toluene	108-88-3
Naphtha, Petroleum, Hydrotreated Light	64742-49-0
Ethyl 3-Ethoxypropanoate	763-69-9
Ethyl Benzene	100-41-4
Methyl Ethyl Ketone	78-93-3
4 Methyl-2-Pentanone	108-10-1
n-Butyl Acetate	123-86-4
Ethyl Benzene	100-41-4

Section 4 First Aid Measures

4.1 Description of first aid measures

If inhaled

Move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water. If skin irritation continues, consult a doctor.

In case of eye contact

Remove contact lenses, if worn. Flush opened eyes thoroughly with water. If irritation persists, get medical assistance.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

Section 5 Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media: Use alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating and in case of fire.

Ruptured cylinders may rocket

5.3 Hazardous Combustion Products

Carbon oxides.

Can form explosive vapor-air mixtures.

Vapors are heavier than air and may spread along floors.

Vapors may travel considerable distance to source of ignition and flash back.

5.4 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.5 Further information

Explosion data: Not sensitive to mechanical impact. Sensitive to static discharge.

Section 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas.

Remove all sources of ignition.

Ensure adequate ventilation.

Remove all non-essential people from the area.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Absorb with liquid binding material.

Sweep up and shovel, using non-sparking tools.

Keep in suitable, closed containers for disposal.

Section 7 Handling and Storage

7.1 Precautions for safe handling

Use normal precautions when handling flammable materials. Do not breathe fumes or vapor. Do not allow material to contact skin.

Provide appropriate exhaust ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Store at ambient temperatures in closed containers. This material can catch fire if overheated. Do not heat this material above the flash point. Keep away from flame and open electrical coils. No chemical incompatibilities.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

Ingredient	OSHA		ACGIH	
	PEL	STEL	TWA	STEL
Acetone	1000 ppm	2400 ppm	500 ppm	750 ppm
Propane	1000 ppm	None estab.	1000 ppm	None estab.
Xylene	100 ppm	None estab.	100 ppm	150 ppm
Isopropyl Acetate	100 ppm	200 ppm	250 ppm	None estab.
Isopropyl Alcohol	400 ppm	None estab.	200 ppm	400 ppm
Toluene	200 ppm	None estab.	20 ppm	200 ppm
Ethyl Benzene	100 ppm	None estab.	20 ppm	125 ppm
n-Butyl Acetate	150 ppm	None estab.	150 ppm	200 ppm
4-Methyl-2-Pentanone	100 ppm	None estab.	20 ppm	75 ppm
Methyl Ethyl Ketone	200 ppm	None estab.	200 ppm	300 ppm

8.2 Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. An eye wash station and safety shower should be located near the workstation.

8.3 Personal protective equipment

Eye/face protection

With product at ambient temperatures, use safety glasses equipped with side shields.

8.4 Skin protection

Hand Protection

With product at ambient temperatures, use disposable nitrile gloves.

Contaminated gloves should be replaced.

Body Protection

Prevent skin contact when handling material.

8.5 Respiratory Protection

The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used.

Section 8 Exposure Controls/Personal Protection cont.

8.6 Safety Stations

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

8.7 General Hygienic Practices

Avoid breathing vapor or mist. Avoid contamination of food, beverages, or smoking materials. Wash thoroughly after handling, and before eating, drinking or smoking. Remove contaminated clothing promptly and clean thoroughly before reuse.

Section 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Aerosol
Odor	Characteristic solvent
Odor Threshold	No data available
pH	No data available
Melting Point	No data available
VOC Content	No data available
Boiling range	-42°C (-44°F)
Flash Point (COC)	-58°C (-73°F)
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability	No data available
Vapor Pressure	No data available
Vapor density	5.0
Relative density (g/cc)	0.80±0.05
Water Solubility	Negligible
Coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Viscosity	No data available
Explosive Properties	No data available
Oxidizing Properties	No data available
% Volatile	No data available

Section 10 Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None.

10.4 Conditions to avoid

Heat and open flames.

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

Thermal oxidative decomposition can produce CO and CO_2.

Section 11 Toxicological Information

11.1 Information on toxicological effects

Acute Oral toxicity	No data available
Acute Inhalation toxicity	LC 50 46 mg/L (mixture)
Acute Dermal toxicity	No data avaiable
Respiratory or skin sensitization	Not a skin sensitizer
Germ cell mutagenicity	No data available
Carcinogenicity	

IARC Xylene (CAS #1330-20-7) is considered class 3, not classifiable as to its carcinogenicity in humans.
Ethyl Benzene (CAS #100-41-4) and 4-Methyl-2-Pentanone (CAS #108-10-1) are considered class 2B suspect human carcinogens.

ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.

Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	Eyes, kidneys, liver, central nervous system, skin, respiratory system
Aspiration hazard	No data available

Section 12 Ecological Information

12.1 Toxicity	No data available
12.2 Persistence and degradability	No data available
12.3 Bioaccumulative potential	No data available
12.4 Mobility in soil	No data available
12.5 Results of PBT & vPvB assessment	No data available

Section 13 Disposal Considerations

13.1 Disposal

Use safety containers for disposal. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, State, and local regulations.

Section 14 Transport Information

DOT: **Shipping Name:** Consumer commodity
Hazard Class: ORM-D

Section 15 Regulatory Information

15.1 US Federal Regulations

RCRA Hazardous Waste Number (40 CFR 261.33): Not listed
RCRA Hazardous Waste Classification (40 CFR 261): Not classified
CERCLA Hazardous Substance (40 CFR 302.4): Listed/unlisted specific per RCRA Sec. 3001
SARA 311/312 Codes: Chronic Health , Fire , Acute Health , Sudden Release of Pressure
SARA Toxic Chemical (40 CFR 372.65): Not listed
TSCA Inventory Status: All ingredients listed on TSCA inventory requirements

15.2 State Regulations

California Proposition 65: 4-Methyl-2-Pentanone (CAS #108-10-1) and Toluene (CAS # 108-88-3) are listed as developmental hazards.
Ethyl Benzene (CAS #100-41-4) and 4-Methyl-2-Pentanone (CAS #108-10-1) are listed as carcinogens.

Section 16 Other Information

16.1 Disclaimer

The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.

RICH ART COLOR CO -- LIQUID FRESCO TEMPERA, PART #VX16 -- 8010-00F004026

========== Product Identification ==========

Product ID:LIQUID FRESCO TEMPERA, PART #VX16
MSDS Date:01/01/1987
FSC:8010
NIIN:00F004026
MSDS Number: BBPJB
=== Responsible Party ===
Company Name:RICH ART COLOR CO/LODI, NJ 07644
Emergency Phone Num:(201) 777-8844
CAGE:0XE44
=== Contractor Identification ===
Company Name:RICH ART COLOR CO INC
Address:109 GRAHAM LN
Box:City:LODI
State:NJ
ZIP:07644-5000
Country:US
Phone:201-777-8844
CAGE:0XE44

========== Composition/Information on Ingredients ==========

Ingred Name:GUMS
CAS:10016-20-3
RTECS #:GU2292000

Ingred Name:DEXTRINS
CAS:9016-00-6
RTECS #:TQ2690000

Ingred Name:WATER
CAS:7732-18-5
RTECS #:ZC0110000

========== Fire Fighting Measures ==========

Flash Point:NONE

========== Accidental Release Measures ==========

Spill Release Procedures:MIX WITH ABSORBANT MATERIAL AND DISPOSE OF IN
ACCORDANCE WITH LOCAL, STATE AND FEDER REGULATIONS.

========== Handling and Storage ==========

Handling and Storage Precautions:NONE

========== Exposure Controls/Personal Protection ==========

Respiratory Protection:NOT NECESSARY
Ventilation:NOT REQUIRED
Protective Gloves:NOT REQUIRED
Supplemental Safety and Health

========== Physical/Chemical Properties ==========

Boiling Pt:B.P. Text:220F
Vapor Pres:760
Spec Gravity:1.51
Evaporation Rate & Reference:AS WATER

Solubility in Water:MISCIBLE
Appearance and Odor:COLORED PAINT; MILD ODOR.
Percent Volatiles by Volume:89%

========== Stability and Reactivity Data ==========

Stability Indicator/Materials to Avoid:YES
NONE
Stability Condition to Avoid:NONE
Hazardous Decomposition Products:NONE

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Safety Data Sheet: FRESH FORCE

Supercedes Date 05/10/2013 **Issuing Date** 02/28/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name FRESH FORCE
Recommended use Cleaning agent
Information on Manufacturer
MANTEK, DIVISION OF NCH CORP.
BOX 152170
IRVING, TEXAS 75015

Product Code 0480
Chemical nature Aqueous surfactant solution
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Yellow-orange - Red orange **Physical State** Liquid **Odor** Orange

GHS
Classification

Physical Hazards

Flammable liquids	Category 3

Health Hazard

Aspiration Toxicity	Category 1
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ systemic toxicity (single exposure)	Category 3
Specific target organ systemic toxicity (repeated exposure)	Category 2

Other hazards
None

Labeling
Signal Word
DANGER



Hazard Statements
H226 - Flammable liquid and vapor
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H336 - May cause drowsiness or dizziness
H304 - May be fatal if swallowed and enters airways
H373 - May cause damage to organs through prolonged or repeated exposure
H351 - Suspected of causing cancer

Precautionary Statements
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat, sparks, open flames or hot surfaces.
P280 - Wear protective gloves, protective clothing and eye protection.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace
P260 - Do not breathe mist or vapor.
P271 - Use in a well-ventilated area.
P285 - In case of inadequate ventilation wear respiratory protection
P270 - Do not eat, drink or smoke when using this product
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
P333 + P313 - If skin irritation or rash occurs, get medical attention
P362 - Take off contaminated clothing and wash before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists, get medical attention.
P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P342 + P311 - If experiencing respiratory symptoms, call a physician
P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Call a physician if unwell.
P403 + P235 - Store in a well-ventilated place. Keep cool
P233 - Keep container tightly closed
P501 - Dispose of contents and container in accordance with applicable regulations.

18 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
D-Limonene	5989-27-5	40-70
Triethanolamine salt of tall oil fatty acid	68132-46-7	7-13
Hexylene glycol	107-41-5	7-13
Diethanolamine salt of tall oil fatty acid	61790-66-7	1-5
Soyamide diethanolamine	68425-47-8	1-5
Coconut fatty acid	68936-15-8	1-5
Cocamide DEA	68603-42-9	1-5

4. FIRST AID MEASURES

General advice Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

Inhalation Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.

Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.

Notes to physician May cause sensitization of susceptible persons. Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways.

5. FIRE-FIGHTING MEASURES

Flash Point 119 °F / 48 °C **Method** Seta closed cup

Flammability Limits in Air % Solvent mixture. **Upper** 6.1 **Lower** 0.7

Suitable Extinguishing Media

Water spray. Carbon dioxide (CO2). Foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Combustible Liquid. Solvent vapors are heavier than air and may spread along floors. Vapors may ignite and explode. Material can create slippery conditions.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA	**Health** 2	**Flammability** 2	**Instability** 0
HMIS	**Health** 2	**Flammability** 2	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.

Environmental Precautions Do not flush into surface water or sanitary sewer system.

Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Methods for Cleaning Up Use clean non-sparking tools to collect absorbed material. Pick up and transfer to properly labeled containers.

Neutralizing Agent Not applicable.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.

Storage Keep away from heat and sources of ignition. Store in original container. Keep in a dry, cool and well-ventilated place.

Storage Temperature	**Minimum**	35 °F / 2 °C		**Maximum**	100 °F / 38 °C
Storage Conditions	**Indoor**	X	**Outdoor**	**Heated**	**Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
D-Limonene	No data available	No data available	No data available
Triethanolamine salt of tall oil fatty acid	No data available	No data available	No data available
Hexylene glycol	Ceiling: 25 ppm	No data available	Ceiling: 25 ppm Ceiling: 125 mg/m^3
Diethanolamine salt of tall oil fatty acid	No data available	No data available	No data available
Soyamide diethanolamine	No data available	No data available	No data available
Coconut fatty acid	No data available	No data available	No data available
Cocamide DEA	No data available	No data available	No data available

Engineering Measures Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Personal Protective Equipment

Eye/Face Protection Tightly fitting safety goggles.

Skin Protection Wear suitable protective clothing, Impervious gloves.

Respiratory Protection In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use. Wear protective gloves/clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Non viscous
Color	Yellow-orange - Red orange	**Odor**	Orange
Odor Threshold	Not applicable	**Appearance**	Transparent - Slightly hazy
pH	8.5	**Specific Gravity**	0.885
Evaporation Rate	0.2 (Butyl acetate=1)	**Percent Volatile (Volume)**	83.1
VOC Content (%)	69.8	**VOC Photoreactive (Y/N)**	Yes
VOC Max Use Dilution (g/L)	35.36	**VOC Max Use Dilution (wt%)**	4
VOC Content (g/L)	617	**Vapor Pressure**	11.6 mmHg @ 70°F
Vapor Density	1.0 (Air = 1.0)	**Solubility**	Slightly soluble
n-Octanol/Water Partition	No data available	**Melting Point/Range**	No data available
Decomposition Temperature	No data available	**Boiling Point/Range**	378 °F / 192 °C
Flammability (solid, gas)	No data available		
Flash Point	119 °F / 48 °C	**Method**	Seta closed cup
Autoignition Temperature	No information available.		
Flammability Limits in Air %	Solvent mixture.	**Upper** 6.1 **Lower** 0.7	

10. STABILITY AND REACTIVITY

Chemical Stability Stable. Hazardous polymerization does not occur.

Conditions to Avoid Keep away from open flames, hot surfaces, and sources of ignition

Incompatible Products Strong oxidizing agents, Reducing agents, Strong acids, Strong bases.

Hazardous Decomposition Products Carbon oxides, Sulfur oxides, Nitrogen oxides (NOx).

Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 3, 2009):

Oral LD50 No information available

Dermal LD50 No information available

Inhalation LC50

Gas No information available

Mist No information available

Vapor No information available

Principle Route of Exposure Skin contact, Eye contact, Inhalation.

Primary Routes of Entry Inhalation, Skin Absorption.

Acute Effects

Eyes Severe eye irritant.

Skin Causes skin irritation. May cause allergic skin reaction.

Inhalation May cause irritation of respiratory tract. Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. May cause allergic respiratory reaction.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration hazard if swallowed - can enter lungs and cause damage.

Chronic Toxicity May cause sensitization by inhalation. May cause sensitization by skin contact. Liver and kidney injuries may occur. Contains a known or suspected carcinogen.

Target Organ Effects Central nervous system, Respiratory system, Kidney, Liver, Immune system, Skin, Eyes.

Aggravated Medical Conditions Neurological disorders, Respiratory disorders, Kidney disorders, Liver disorders, Skin disorders.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
D-Limonene	no data available	> 5 g/kg (Rabbit)	no data available	no data available	no data available
Triethanolamine salt of tall oil fatty acid	no data available	no data available	no data available	no data available	no data available
Hexylene glycol	= 3692 mg/kg (Rat)	no data available	> 310 mg/m^3 (Rat) 1 h	no data available	no data available
Diethanolamine salt of tall oil fatty acid	no data available	no data available	no data available	no data available	no data available
Soyamide diethanolamine	no data available	no data available	no data available	no data available	no data available
Coconut fatty acid	no data available	no data available	no data available	no data available	no data available
Cocamide DEA	no data available	no data available	no data available	no data available	no data available

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
D-Limonene	no data available	Skin sensitization, Respiratory sensitization	no data available	no data available	CNS, immune system, lungs, liver, kidneys
Triethanolamine salt of tall oil fatty acid	no data available	no data available	no data available	no data available	no data available
Hexylene glycol	no data available	Skin sensitization	no data available	no data available	eyes, CNS, respiratory system, skin, immune system
Diethanolamine salt of tall oil fatty acid	no data available	no data available	no data available	no data available	no data available
Soyamide diethanolamine	no data available	no data available	no data available	no data available	no data available
Coconut fatty acid	no data available	no data available	no data available	no data available	no data available
Cocamide DEA	no data available	no data available	no data available	no data available	no data available

Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Other
D-Limonene	not applicable	not applicable	not applicable	not applicable	not applicable
Triethanolamine salt of tall oil fatty acid	not applicable	not applicable	not applicable	not applicable	not applicable
Hexylene glycol	not applicable	not applicable	not applicable	not applicable	not applicable
Diethanolamine salt of tall oil fatty acid	not applicable	not applicable	not applicable	not applicable	not applicable
Soyamide diethanolamine	not applicable	not applicable	not applicable	not applicable	not applicable
Coconut fatty acid	not applicable	not applicable	not applicable	not applicable	not applicable
Cocamide DEA	not applicable	Group 2B	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
D-Limonene	no data available	LC50 0.619 - 0.796 mg/L Pimephales promelas 96 h LC50 = 35 mg/L Oncorhynchus mykiss 96 h	no data available	no data available	N/A
Triethanolamine salt of tall oil fatty acid	no data available	no data available	no data available	no data available	N/A
Hexylene glycol	no data available	LC50 10500 - 11000 mg/L Pimephales promelas 96 h LC50 = 10000 mg/L Lepomis macrochirus 96 h LC50 = 8690 mg/L Pimephales promelas 96 h LC50 = 10700 mg/L Pimephales promelas 96 h	EC50 = 3038 mg/L 5 min	EC50 2700 - 3700 mg/L 48 h	<0.14
Diethanolamine salt of tall oil fatty acid	no data available	no data available	no data available	no data available	N/A
Soyamide diethanolamine	no data available	no data available	no data available	no data available	N/A
Coconut fatty acid	no data available	no data available	no data available	no data available	N/A
Cocamide DEA	no data available	LC50 = 3.6 mg/L Brachydanio rerio 96 h	EC50 = 6000 mg/L 16 h	EC50= 4.2 mg/L 24 h	N/A

Persistence and Degradability No information available.

Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name COMBUSTIBLE LIQUIDS, N.O.S., (D-LIMONENE)
Hazard Class 3
UN-No UN2052
Packing Group III
Description Dipentene Solution ,3,UN2052,PG III

TDG

Proper shipping name Dipentene (Mixture)
Hazard Class 3
UN-No UN2052
Packing Group III

ICAO

UN-No UN2052
Proper Shipping Name Dipentene Solution
Hazard Class 3
Packing Group III
Shipping Description Dipentene Solution,3,UN2052,PG III

IATA

UN-No UN2052
Proper Shipping Name Dipentene Solution
Hazard Class 3
Packing Group III
ERG Code 3L
Shipping Description UN2052,Dipentene Solution,3,PG III

IMDG/IMO

Proper Shipping Name Dipentene Solution
Hazard Class 3
UN-No UN2052
Packing Group III
EmS No. F-E, S-E
Shipping Description UN2052, Dipentene Solution,3,PG III

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies
U.S. Federal Regulations
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
D-Limonene	Not applicable	Not applicable
Triethanolamine salt of tall oil fatty acid	Not applicable	Not applicable
Hexylene glycol	Not applicable	Not applicable
Diethanolamine salt of tall oil fatty acid	Not applicable	Not applicable
Soyamide diethanolamine	Not applicable	Not applicable
Coconut fatty acid	Not applicable	Not applicable

Cocamide DEA	Not applicable	Not applicable

16. OTHER INFORMATION

Prepared By	Adrienne McKee
Supercedes Date	05/10/2013
Issuing Date	02/28/2014
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

MANTEK, DIVISION OF NCH CORP.assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this document is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

NEW HAVEN PACKAGING, LLC
Frost Bite Ice Melt
Solid Commercial Deicer
Safety Data Sheet

Section 1: IDENTIFICATION

PRODUCT IDENTIFIER
FROST BITE ICE MELT
Solid Commercial Deicer

RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE
Deicing/anti-icing highways, bridges, parking lots, and other pavements.

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET
Name/Address: PO Box 1136
Linwood, NJ 19061

Contact Information: Telephone: 203-309-6644
Fax: 302-350-0241
Email: Support@NHPACK.com
Website: WWW.NHPACK.com

EMERGENCY TELEPHONE NUMBER
CHEMTREC (800) 424-9300
Outside continental USA (703) 527-3887

Section 2: HAZARD(S) IDENTIFICATION

CLASSIFICATION ACCORDING TO OSHA HAZCOM 2012
Hazard Class: Not classified as hazardous

LABEL ELEMENTS ACCORDING TO OSHA HAZCOM 2012
There are no OSHA required label elements for this product.

CLASSIFICATION ACCORDING TO WHMIS (Canada)
Hazard Class: Not controlled
WHMIS Hazard Symbols: Not applicable
WHMIS Signal Word: Not applicable

POTENTIAL HEATH EFFECTS
Eye Contact May cause temporary eye irritation. Corneal injury is unlikely.
Skin Contact Repeated contact may cause slight skin irritation or dry skin.
Inhalation may cause irritation or coughing.
Ingestion Ingestion of large quantities may cause nausea, vomiting, diarrhea and abdominal discomfort.
Effects of repeated exposure No effects other than described above are expected.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

COMPOSITION: Frost Bite is a blend of four ice melting chemicals.

MIXTURES

Ingredient	CAS No	Wt. %
Sodium Chloride	7647-14-5	92% - 95%
Calcium Chloride	10043-52-4	Proprietary
Magnesium Chloride	7791-18-6	Proprietary
CMA	76123-46-1	Proprietary

Section 4: FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURE

Eye In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, seek medical attention.

Skin As a precaution, wash skin thoroughly with soap and water. Remove and wash contaminated clothing.

Inhalation If inhaled, move to fresh are and get medical advice.

Ingestion If swallowed, give mil or water to drink and telephone for medical advice. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

MOST IMPORTANT SYMPTIOMS / EFFECTS

Eye May cause eye irritation. Symptoms may include temporary discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Skin As a precaution, wash skin thoroughly with soap and water. Remove and wash contaminated clothing.

Inhalation Inhalation of dust during handling may cause respiratory tract irritation and coughing.

Ingestion Ingestion of large quantities may cause nausea, vomiting, diarrhea and abdominal discomfort.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT

Specific treatments If you fell unwell, seek medical advice immediately. Show the label or safety data sheet to medical personnel if possible.

Section 5: FIRE FIGHTING MEASURES

FLAMMABILITY

Flash Point (close up) Nonflammable by OSHA/WHMIS criteria

Auto Ignition Not applicable

EXTINGUISHING MEDIA

Suitable Extinguishing Media Water, carbon dioxide, or dry chemical. Use extinguishing media appropriate for surrounding materials.

Unsuitable Extinguishing Media Not applicable

SPECIAL HAZARDS

Hazardous Combustion Products Normal combustion forms carbon dioxide and water

Explosion Limits Data not available. Not considered to be explosion hazard.

Unusual Fire Hazard None expected

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIERFIGHTERS

Special Protective Equipment for Firefighters

Wear NIOSH approved self-contained breathing apparatus (SCBA) with positive air pressure.

Section 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUSTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

Avoid eye/skin contact with spilled material. Refer to Section 7 for additional handling precautions

Methods for Containment If material is dissolved, contain and/or absorb spill with inert material (e.g. sawdust, sand, vermiculite).

Methods for Cleaning-UP Scoop up material and transfer to disposal container. If needed, was spillage area with plenty of water.

Section 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Handling Avoid eye contact. Avoid breathing dust when handling.

PRECAUTIONS FOR SAFE STORAGE, INCLUDING ANY COMPATIBILITIES

Storage Store in tightly sealed original containers, away from direct heat and strong oxidizing agents. Do not store or handle product in systems constructed of wetted parts consisting of galvanized steel, zinc, or brass components.

Section 8: CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS

TWA PEL:	No specific limits have been established for this product. As a guideline, OSHA (United States) has established the following limits which are generally recognized for inert or nuisance dust. Particulates Not Otherwise Regulated (PNOR): 8-hour TWA of 15mg/m3 (total particulate) and 5 mg/m3 (respirable fraction).
TWA TLV:	No specific limits have been established for this product. As a guideline, ACGIH (United States) has established the following limits which are generally recognized for inert or nuisance dust. Particulates (insoluble) Not Otherwise Classified (PNOC): 8- Hour TWA limits of 10 mg/m3 (as total dust) and 3 mg/m3 (as respirable)

EXPOSURE CONTROLS

Engineering Controls	No special ventilation is usually necessary; however if operating conditions create high concentration of this material, special ventilation may be needed to keep exposure to airborne contaminants below the exposure limit.

INDIVIDUAL PROTECTIVE MEASURES/PERSONAL PROTECTIVE EQUIPMENT

Eye Protection	Safety glasses or goggles are recommended if eye exposure to product or dust is possible.
Skin Protection	Chemical-resistant gloves and clothing should be used if prolonged exposure is possible to prevent drying of skin.
Respiratory Protection	Breathing of dust should be avoided. If operating conditions create high airborne concentrations of this material, the use of an approved respirator is recommended.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	White to off white, orange, crystals and flakes
ODOR	Odorless
ODOR THRESHOLD	No data available
Ph (20°C, 68°F)	8-10 (10% aqueous solution)
MELTING POINT	Decomposes
BOILING POINT	Not applicable
FLASH POINT	Not applicable
EVAPORATION RATE	No data available
FLAMMABILITY/EXPLOAION LIMITS	Not applicable
VAPOR PRESSURE (20°c)	Not applicable
VAPOR DENSITY (AIR = 1)	Not applicable
RELATIVE DENSITY	No data available
SOLUBILITY IN WATER	Partially soluble
PARTITION COEFFICIENT; n-OCTANOL/WATER	No data available
AUTO-IGNITION TEMPERATURE	No data available
DECOMPOSITION TEMPERATURE	No data available
VISCOSITY (20°C)	Not applicable
OXIDIZING PROPERTIES	Not oxidizing
EXPLOSIVE PROPERTIES	Not explosive

Section 10: STABILITY AND REACTIVITY

REACTIVITY
No dangerous reactions known under conditions of normal use.

CHEMICAL STABILITY
Stable. Polymerization will not occur.

POSSIBLITY OF HAZARDOUS REACTIONS
Avoid prolonged contact with reactive metals such as magnesium and zinc, especially in closed systems where hydrogen gas from the oxidation of these materials may accumulate over time.

INCOMPATIBLE MATERIALS
Strong oxidizing agents; strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS
May decompose into oxides of carbon.

Section 11: TOXICOLOGICAL INFORMATION

ACURTE TOCICITY

LD50 rat-oral: 300 mg/kg
LC50 rat-inhalation: >5000 mg/m3
LD50 rat-dermal: >5000 mg/kg
Dermal irritation rabbit: Non-irritating
Ocular irritation rabbit: Moderate redness/discharge and some swelling of iris at 1 hr.; insignificant signs of irritation at 24 hr.; all signs cleared at 72 hr.
Sub-chronic oral: No effects after 28 consecutive days dosing at 100 mg/kg/day.

LIKELY ROUTES OF EXPOSURE

Skin contact, eye contact, ingestion

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL, AND TOXICOLOGICAL CHARACTERISTICS

Eye	May cause eye irritation. Symptoms may include temporary discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Skin	May cause itching or irritation of any cut or abraded skin. Symptoms of prolonged contact may include dry skin.
Inhalation	Inhalation of dust during handling may cause respiratory tract irritation and coughing. This product is not otherwise expected to be an inhalation hazard.
Ingestion	Ingestion of large quantities may cause nausea, vomiting, diarrhea and abdominal discomfort.

DELAYED AND IMMEDIATE EFFECTS AND CHRONIC EFFECTS FROM SHORT- AND LONG-TERM EXPOSURE/NUMERICAL MEASURES OF TOXICITY

Skin Corrosion/Irritation	Based on available data, the classification criteria are not met.
Serious Eye Damage/Irritation	Based on available data, the classification criteria are not met.
Respiratory or Skin Sensitization	Based on available data, the classification criteria are not met.
Germ Cell Mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	This product does not contain any ingredients that are considered to be carcinogens by IARC, NTP, or OSHA.
Reproductive Toxicity	Based on available data, the classification criteria are not met.
STOT-Single Exposure	Based on available data, the classification criteria are not met.
STOT-Repeated Exposure	Based on available data, the classification criteria are not met.
Aspiration Hazard	Based on available data, the classification criteria are not met.

Section 12: ECOLOGICAL INFORMATION

ECOTOXICITY (AQUATIC AND TERRESTRIAL)

Not expected to cause long-term adverse effects in the aquatic or terrestrial environments.

PERSISTANCE AND DEGRADABILITY

Readily biodegradable. COD (TOD): 0.75 g O2/g deicer; BOD20 (2°c): 0.40 g O2/g deicer, BOD20 (10°C): 0.67

BIOACCUMULATIVE POTENTIAL

Bioaccumulation is not expected.

Section 13: DISPOSAL CONSIDERATIONS

WASTE TREATMENT AND METHODS OF DISPOSAL

Based on available information, this product is neither listed as a hazardous waste nor does it exhibit any of the characteristics that would cause it to be classified as a characterized waste under RCRA. This product may be absorbed onto suitable materials and disposed of in a sanitary landfill unless local, state, or provincial regulations prohibit such disposal.

Section 14: TRASPORT INFORMATION

TRANSPORT INFORMATION

Not regulated as dangerous goods per US DOT or IATA.

Section 15: REGULATORY INFORMATION

INVENTORY LISTS

All of the components in this product are on the following inventory lists: USA (TSCA), Canada (DSL/NDSL), Europe (EINECS)

TSCA SECTION 12(b)

None of these chemicals in this are listed under TSCA Section 12(b).

CERCLA HAZARDOUS SUBSTANCES

There is no CERCLA Reportable Quantity for this material

SARA 311 CATEGORIES

Immediate (Acute) Health Hazard:	Yes
Delayed (Chronic) Health Hazard:	No
Fire Hazard:	No
Sudden Release of Pressure Hazard:	No
Reactivity Hazard:	No

SARA 313

None of the components in this product are subject to reporting under SARA Section 313.

CLEAN WATER ACT

None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

STATE RIGHT-TO-KNOW

This product does not contain components at levels which are required to be reported under the statues of the following: PA, MA, MN, and NJ.
This product does not contain materials known to the State of California (Proposition 65) to cause cancer and/or reproductive harm at levels which would require a warming under the statue.

NFPA 704	
Health	1
Fire	0
Physical Hazard	0
Hazard Rating: 0-4 0-least hazardous; 4-most hazardous	

HMIS – Hazardous Materials Identification System	
Health	1
Fire	0
Physical Hazard	0
Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = serious, 4 = severe	

Section 16: OTHER INFORMATION

SDS REVISION DATE

Revision date: July 1, 2015

Expiration date: July 1, 2018

Latest version of this SDS can be obtained from New Haven Packaging, LLC

NOTE TO EMPLOYER

This Safety Data Sheet contains environmental, health and toxicology information for your employees. Please ensure this information is provided to them. It also contains information to help you meet community right-to-know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this SDS must be given to the buyer or the information incorporated in you SDS. Discard any previous edition of this SDS.

DISCLAMIER

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use or misuse are beyond our control, New Haven Packaging, LLC makes no warranty, either express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for the reliance thereon. New Haven Packaging, LLC assumes no responsibility for any injury or loss resulting from the use of the product described herein. User should satisfy himself that he has all current data relevant to his particular use.

End of Safety Data Sheet

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 357.00
Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Fuchsin Basic

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Carcinogenicity (Category 2). Suspected of causing cancer (H351). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281). IARC-2B carcinogen

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Fuchsin basic	569-61-9	$C_{19}H_{17}N_3 \cdot HCl$	323.83	
Synonyms: Pararosaniline HCl; Basic fuchsin; Magenta O; Basic red 9; C.I. 42500				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid to become airborne. Ventilate area. Wipe up the spill, place in a sealed bag or container, and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #9. Store with dyes, indicators and stains.
Keep container tightly closed. Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling. Will stain skin, clothing, and surfaces.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Green, lustrous powder. Odorless.
Soluble: Water and alcohol.

Absorbance maximum: 550 nm
Biological stain: Flourescent dye and in Ziel-Neelson
pH indicator: 1.2 red to 3.0 purple; 11.6 purple to 14.0 colorless

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: May cause cancer (IARC-2B)
Target organs: Bladder, thyroid, liver.

ORL-RAT LD_{50}: 5000 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (211-189-6).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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Material Safety Data Sheet

BAYER ADVANCED FUNGUS CONTROL FOR LAWNS READY-TO-SPREAD GRANULES II

MSDS Number: 102000019484
MSDS Version 1.0
Revision Date: 04/11/2008

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name BAYER ADVANCED FUNGUS CONTROL FOR LAWNS READY-TO-SPREAD GRANULES II
MSDS Number 102000019484
EPA Registration No. 72155-81

Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-800-331-2867

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Average % by Weight
Propiconazole	60207-90-1	0.51
Calcium carbonate	1317-65-3	

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview Caution! Hazard to humans and domestic animals. Harmful if swallowed, inhaled or absorbed through the skin. Moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid breathing dust. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling.

Physical State granular

Appearance grey to tan

Routes of Exposure Inhalation, Skin contact, Skin Absorption, Eye contact

Immediate Effects

Eye Causes eye irritation. Do not get in eyes.

Skin Harmful if absorbed through skin. May cause slight irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion Harmful if swallowed. Do not take internally.

Inhalation Harmful if inhaled. Avoid breathing dust.

Chronic or Delayed Long-Term	This product or its components may have target organ effects.
Potential Environmental Effect	Toxic to fish.

SECTION 4. FIRST AID MEASURES

General	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Eye	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
Skin	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
Notes to Physician Treatment	There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5. FIRE FIGHTING MEASURES

Flash point	not applicable
Suitable Extinguishing Media	Water spray, Foam, Carbon dioxide (CO2), Dry chemical
Fire Fighting Instructions	Keep out of smoke. Fight fire from upwind position. Cool closed containers/ tanks exposed to fire with water spray. Do not allow water to come into direct contact with the product. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate hazard area. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.
Methods for Cleaning Up	Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional Advice	Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

SECTION 7. HANDLING AND STORAGE

Handling Procedures	Handle and open container in a manner as to prevent spillage.
Storing Procedures	Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.
Work/Hygienic Procedures	Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove contaminated clothing immediately and dispose of safely. Wash thoroughly and put on clean clothing. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash thoroughly and put on clean clothing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection	Follow all label instructions. Train employees in safe use of the product. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.
Eye/Face Protection	Tightly fitting safety goggles
Hand Protection	Chemical resistant nitrile rubber gloves
Body Protection	Wear long-sleeved shirt and long pants and shoes plus socks.

Respiratory Protection When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Exposure Limits

Calcium carbonate	1317-65-3	NIOSH	REL	5 mg/m3
		NIOSH	REL	10 mg/m3
		OSHA Z1	PEL	5 mg/m3
		OSHA Z1	PEL	15 mg/m3
		OSHA Z1A	TWA	5 mg/m3
		OSHA Z1A	TWA	15 mg/m3
		TX ESL	ST ESL	50 ug/m3
		TX ESL	AN ESL	5 ug/m3

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance grey to tan

Physical State granular

pH approx. 6 - 8 (5 %)

Bulk Density approx.
29 - 35 lb/ft³

SECTION 10. STABILITY AND REACTIVITY

Hazardous Reactions No hazardous reactions when stored and handled according to prescribed instructions.
Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the technical-grade active ingredient, propiconazole.

Acute Oral Toxicity female rat: LD50: > 5,000 mg/kg

Acute Dermal Toxicity rat: LD50: > 5,000 mg/kg

Acute Inhalation Toxicity	rat: LC50: > 2.5 mg/l Exposure time: 4 h Determined in the form of dust. rat: LC50: > 110 mg/l Exposure time: 1 h Determined in the form of dust. Extrapolated from the 4 hr LC50.
Skin Irritation	rabbit: Slight irritation.
Eye Irritation	rabbit: Mild eye irritation.
Sensitization	guinea pig: Non-sensitizing.
Chronic Toxicity	Propiconazole caused liver effects and/or stomach irritations in chronic studies in rodents and dogs.

Assessment Carcinogenicity

Propiconazole has been classified as a Group C (possible human carcinogen) chemical based on liver tumors in male mice. In lifetime feeding studies, propiconazole was not carcinogenic to rats or to female mice.

ACGIH
None.
NTP
None.
IARC
None.
OSHA
None.

Reproductive & Developmental Toxicity	REPRODUCTION: Propiconazole was not considered a primary reproductive toxicant in a two-generation study in rats. DEVELOPMENTAL TOXICITY: Propiconazole is considered a developmental toxicant based on developmental toxicity studies in rats.
Neurotoxicity	Propiconazole caused minimal neurobehavioral effects without correlating neuropathological changes in neurotoxicity studies in rats.
Mutagenicity	Propiconazole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions	Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance	Dispose in accordance with all local, state/provincial and federal regulations. Never place unused product down any indoor or outdoor drain. Follow advice on product label and/or leaflet.
Container Disposal	Do not re-use empty containers. Follow advice on product label and/or leaflet.

SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION:
Not regulated for any mode of transportation

FREIGHT CLASSIFICATION:
Insecticides or Fungicides, N.O.I.; other than liquid

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 72155-81

US Federal Regulations

TSCA list

Calcium carbonate	1317-65-3	

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

Propiconazole	60207-90-1	1.0%

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

Propiconazole	60207-90-1	NJ
Calcium carbonate	1317-65-3	MN, RI

Canadian Regulations

Canadian Domestic Substance List

None.

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 0 Reactivity - 0 Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: New Material Safety Data Sheet.

Revision Date: 04/11/2008

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.

SAFETY DATA SHEET
WINSOR & NEWTON GALERIA FLOW FORMULA ACRYLIC COLOUR

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME	WINSOR & NEWTON GALERIA FLOW FORMULA ACRYLIC COLOUR
PRODUCT NO.	2100000
APPLICATION	Fine Art Painting
SUPPLIER	Colart Fine Art & Graphics Limited Whitefriars Avenue Harrow Middlesex HA3 5RH +44 (0) 208 4274343 44 (0) 208 42433217

2 COMPOSITION/INFORMATION ON INGREDIENTS

COMPOSITION COMMENTS

Any hazardous ingredients are below classification limit.

3 HAZARDS IDENTIFICATION

Not regarded as a health or environmental hazard under current legislation.

4 FIRST-AID MEASURES

INHALATION

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

INGESTION

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Drink plenty of water. Get medical attention if any discomfort continues.

SKIN CONTACT

Remove affected person from source of contamination. Get medical attention if irritation persists after washing.

EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.

6 ACCIDENTAL RELEASE MEASURES

SPILL CLEAN UP METHODS

Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Avoid spilling, skin and eye contact.

STORAGE PRECAUTIONS

Keep in original container. Store at moderate temperatures in dry, well ventilated area.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT COMMENTS

OES = Occupational Exposure Standard. MEL = Maximum Exposure Limit.

ENGINEERING MEASURES

No particular ventilation requirements.

HAND PROTECTION

No specific hand protection noted.

EYE PROTECTION

If risk of splashing, wear safety goggles or face shield.

OTHER PROTECTION

No specific protective equipment noted, but may be required anyway.

HYGIENE MEASURES

Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Paste
COLOUR	Misc. colours
ODOUR	Characteristic
SOLUBILITY	Miscible with water.

BOILING POINT (°C)	> 100 760 mm Hg	RELATIVE DENSITY	1.2 - 1.5 20
VAPOUR DENSITY (air=1)	> 1	pH-VALUE, CONC. SOLUTION	9-10

10 STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions.

CONDITIONS TO AVOID

Avoid excessive heat for prolonged periods of time.

HAZARDOUS DECOMPOSITION PRODUCTS

Fire creates: Carbon monoxide (CO). Carbon dioxide (CO2).

11 TOXICOLOGICAL INFORMATION

GENERAL INFORMATION

This product has low toxicity. Only large volumes may have adverse impact on human health.

INHALATION

May cause irritation to the respiratory system.

INGESTION

May cause discomfort if swallowed.

SKIN CONTACT

Slightly irritating.

EYE CONTACT

Irritating to eyes.

HEALTH WARNINGS

No specific health warnings noted.

ROUTE OF ENTRY

Inhalation. Skin and/or eye contact.

MEDICAL SYMPTOMS

Irritation of eyes and mucous membranes.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

Not regarded as dangerous for the environment.

WATER HAZARD CLASSIFICATION

1

13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements.

14 TRANSPORT INFORMATION

ROAD TRANSPORT NOTES	Not Classified
RAIL TRANSPORT NOTES	Not Classified.
SEA TRANSPORT NOTES	Not Classified.
AIR TRANSPORT NOTES	Not Classified.

15 REGULATORY INFORMATION

RISK PHRASES

NC	Not classified.

SAFETY PHRASES

NC	Not classified.

EU DIRECTIVES

Dangerous Substance Directive 67/548/EEC. Dangerous Preparations Directive 1999/45/EC. System of specific information relating to Dangerous Preparations. 2001/58/EC.

16 OTHER INFORMATION

DATE	25/10/2007

DISCLAIMER

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

MATERIAL SAFETY DATA SHEET
ORGANIC SALES AND MARKETING, INC.
114 Broadway
Raynham, MA 02767
508-823-1117

READY TO USE GARDEN GUYS GARDEN-NEEM INSECTICIDE – FUNGICIDE

SECTION 1: PRODUCT IDENTIFICATION

PRODUCT NAME: Ready to Use Garden Guys Garden-Neem Insecticide - Fungicide
EPA #: 70191 - 2
COMMON NAME OF ACTIVE INGREDIENT: Potassium salts of $C_{12} - C_{18}$ fatty acids (partially derived from Neem seed oil)
CHEMICAL NAME: Potassium salts of $C_{12} - C_{18}$ saturated & unsaturated aliphatic carboxylic acids
MOLECULAR FORMULA: Trade Secret
CAS NUMBERS: Trade Secret
PERCENT ACTIVE INGREDIENT: 1.5 %
PERCENT INERT INGREDIENTS: about 0.025 % d-limonene, 0.4 % ethanol, 98 % water
DESCRIPTION: An insecticidal soap derived from cold pressed neem seed oil

SECTION 2: HAZARDOUS COMPONENTS

None of the ingredients in this product are listed as carcinogenic by NTP, IARC or OSHA
This formulation does not contain any VOC (volatile organic compounds)

SECTION 3: PHYSICAL DATA

APPEARANCE: Amber liquid with light citrus scent
SOLUBLE IN WATER: Yes
BOILING POINT: 98° C @ 760 mmHg
MELTING POINT: < 4° C
VAPOR PRESSURE: Not applicable
SPECIFIC GRAVITY: 0.989
PH: 10.1 @ 20 – 25 ° C

SECTION 4: FIRE AND EXPLOSION DATA

FLASH POINT: > 158° C
METHOD: Closed cup
EXTINGUISHING MEDIA: Not applicable
SPECIAL FIRE FIGHTING PROCEDURES: None required
UNUSUAL FIRE AND EXPLOSION HAZARDS: None

SECTION 5: REACTIVITY DATA

HAZARDOUS DECOMPOSITION PRODUCT: None likely
INCOMPATIBILITY: Concentrated mineral supplements, reactive metals and oxidizing agents
STABILITY: Stable under normal conditions avoid temperature extremes
HAZRDOUS POLYMERIZATION: None likely

SECTION 6: HEALTH HAZARDS

PRIMARY ROUTE OF ENTRY: Dermal
EXPOSURE LIMIT: No OSHA TLV
EYE CONTACT: Mild irritant avoid contact.
CORROSIVITY: Non - Corrosive
EFFECTS OF OVER EXPOSURE: Irritation to skin & mucous membranes

SENSITIZATION: Not a sensitizer
TOXICITY: None of the components of this product are listed as carcinogenic (NTP, OSHA)
ACUTE STUDIES:
Oral LD_{50} (Rat) > 16,900 mg / kg (low toxicity)
Dermal LD_{50} (Rabbit) > 5000 mg / kg (low toxicity)
Inhalation: Not an acute inhalation hazard
Eye Irritation (Rabbit) Reversible corneal irritation in un-rinsed eyes

SECTION 7: FIRST AID PROCEDURES

SKIN: Wash hands after use. If irritation occurs / persists consult with physician.
EYES: Flush eyes with cool water and consult physician.
INGESTION: Give demulcent (milk)
INHALATION: Remove to fresh air consult physician if problem occurs.

SECTION 8: PERSONAL PROTECTION / SPILL & DISPOSAL PROCEDURES

EYES: Goggles should be worn if possibility of splashing exists.
GLOVES: Waterproof gloves recommended for repeated or prolonged exposure.
RESPIRATORY: Ensure good ventilation respiratory protection should not be necessary.
CLOTHING: Wear pants, shirt, shoes and socks
IF SPILLED: Contain leaking fluid with absorbent material, then place in container for disposal
DISPOSAL METHOD: Spills, rinsates and leftover pesticide must be disposed of according to federal, state and local procedures

SECTION 9: SPECIAL PRECAUTIONS

Keep in original container, tightly closed in a safe place.
Empty container completely, triple rinse and dispose of safely according to law.
Wash contamination from skin & eyes immediately
Remove heavily contaminated clothing and wash
Wash hands and exposed skin before eating, drinking and smoking
Do not apply to lakes, ponds or streams
Do not contaminate waterways by cleaning of equipment

SECTION 10: SHIPPING REGULATIONS

FREIGHT CLASSIFICATION: Insecticides or fungicides other than poisons (CLASS 60)
DOT LABELS REQUIRED: None
SARA TITLE III HAZARD CLASSIFICATION:
Immediate (acute) health: No
Delayed (chronic) health: No
Fire: No
Sudden Release of Pressure: No
Reactive: No
NATIONAL FIRE PROTECTION ASSOCIATION RATING:
Health 1
Flammability 0
Reactivity 0

TO THE BEST OF OUR KNOWLEDGE THIS INFORMATION IS TRUE AND ACCURATE. SINCE THE INFORMATION CONTAINED HEREIN MAY BE APPLIED UNDER CONDITIONS BEYOND OUR CONTROL WE DO NOT ASSUME ANY RESPONSIBILITY FOR THE RESULTS OF ITS USE. THIS INFORMATION IS FURNISHED UPON THE CONDITION THAT THE PERSON RECEIVING THIS PRODUCT SHALL MAKE HIS / HER OWN DETERMINATION OF THE SUITABILITY OF THE MATERIAL FOR THEIR PARTICULAR PURPOSE. THIS INFORMATION IS PROVIDED IN GOOD FAITH BUT WITHOUT EXPRESSED OR IMPLIED WARRANTY. IT IS THE RESPONSIBILITY OF THE CUSTOMER TO TAKE APPROPRIATE PRECAUTIONS.

SAFETY DATA SHEET

1. Product and Company Identification

Product identifier **Gas Leak Detector (4180-53, 4832-C9)**

Other means of identification Not available

Recommended use Gas Leak Detector

Recommended restrictions None known.

Manufacturer

Nu-Calgon
2008 Altom Court
St. Louis, MO 63146 US
Phone: 314-469-7000 / 800-554-5499
Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. Hazards Identification

Physical hazards	Flammable liquids	Category 3
Health hazards	Serious eye damage/eye irritation	Category 2
	Carcinogenicity	Category 2

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement

Flammable liquid and vapor.
Causes serious eye irritation.
Suspected of causing cancer.

Precautionary statement

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.
Wash thoroughly after handling.
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection.

Response

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use appropriate media to extinguish.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If exposed or concerned: Get medical advice/attention.

Storage

Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information 17% of the mixture consists of component(s) of unknown acute inhalation toxicity.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Glycerol		56-81-5	30-60
Polyethylene glycol		25322-68-3	10-30
Isopropanol		67-63-0	3-7
Sulfuric acid, monododecyl ester, compd. with 2,2'',2''''-nitrilotris[ethanol] (1:1)		139-96-8	1-5

Chemical name	Common name and synonyms	CAS number	%
Amides, coco, N,N-bis(hydroxyethyl)		68603-42-9	0.5-1.5
Ethanol, 2,2''-iminobis-		111-42-2	0.1-1

Composition comments US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

4. First Aid Measures

Inhalation If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

Skin contact If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Eye contact If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center/doctor/.

Most important symptoms/effects, acute and delayed Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Keep away from sources of ignition. No smoking. Avoid contact with eyes, skin and clothing. Take off all contaminated clothing immediately. Wash contaminated clothing before reuse. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media Foam. Water fog. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. Firefighters should wear a self-contained breathing apparatus.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards Flammable liquid and vapor.

Hazardous combustion products May include and are not limited to: Oxides of nitrogen. Hydrogen chloride. Oxides of carbon.

Explosion data

Sensitivity to mechanical impact Not available.

Sensitivity to static discharge Not available.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Never return spills in original containers for re-use. Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas. Use water spray to reduce vapors or divert vapor cloud drift. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Vapors may form explosive mixtures with air. Avoid breathing vapors or mists of this product. Use only with adequate ventilation. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid contact with eyes, skin and clothing. When using do not eat or drink. Wash thoroughly after handling. Keep container tightly closed.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Keep out of reach of children. Store locked up. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure Controls/Personal Protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Glycerol (CAS 56-81-5)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Isopropanol (CAS 67-63-0)	PEL	980 mg/m3	
		400 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Ethanol, 2,2''-iminobis- (CAS 111-42-2)	TWA	1 mg/m3	Inhalable fraction and vapor.
Isopropanol (CAS 67-63-0)	STEL	400 ppm	
	TWA	200 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Ethanol, 2,2''-iminobis- (CAS 111-42-2)	TWA	15 mg/m3
		3 ppm
Isopropanol (CAS 67-63-0)	STEL	1225 mg/m3
		500 ppm
	TWA	980 mg/m3
		400 ppm

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
Polyethylene glycol (CAS 25322-68-3)	TWA	10 mg/m3	Particulate.

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Isopropanol (CAS 67-63-0)	40 mg/L	Acetone	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection

Chemical goggles are recommended.

Skin protection

Hand protection

Rubber gloves. Confirm with a reputable supplier first.

Other

As required by employer code.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards	Not applicable.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and Chemical Properties

Appearance	Liquid
Physical state	Liquid.
Form	Liquid.
Color	Clear
Odor	Isopropanol
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	unknown
Pour point	Not available.
Specific gravity	1.1 - 1.15
Partition coefficient (n-octanol/water)	Not available.
Flash point	102.2 °F (39.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and Reactivity

Reactivity	The product is stable and non reactive under normal conditions of use, storage and transport.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Do not mix with other chemicals.
Incompatible materials	Strong oxidizing agents. Isocyanates. Chlorine.
Hazardous decomposition products	May include and are not limited to: Oxides of nitrogen. Hydrogen chloride. Oxides of carbon.

11. Toxicological Information

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Information on likely routes of exposure	
Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	May cause irritation.

US ACGIH Threshold Limit Values: Skin designation

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	IV Can be absorbed through the skin.

Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity

Components	**Species**	**Test Results**
Amides, coco, N,N-bis(hydroxyethyl) (CAS 68603-42-9)		
Acute		
Dermal		
LD50	Rabbit	1220 mg/kg
Inhalation		
LC50	Not available	
Oral		
LD50	Rat	2700 mg/kg
Ethanol, 2,2''-iminobis- (CAS 111-42-2)		
Acute		
Dermal		
LD50	Rabbit	11.9 ml/kg
Inhalation		
LC50	Not available	
Oral		
LD50	Rat	1600 mg/kg
		710 mg/kg
Glycerol (CAS 56-81-5)		
Acute		
Dermal		
LD50	Rabbit	> 10000 mg/kg
		23000 mg/kg
Inhalation		
LC50	Rat	> 570 mg/m3, 1 Hours
		> 143 mg/m³, 4 Hours
Oral		
LD50	Mouse	23000 mg/kg
	Rat	> 12600 mg/kg
		27200 mg/kg
Isopropanol (CAS 67-63-0)		
Acute		
Dermal		
LD50	Rabbit	12800 mg/kg
Inhalation		
LC50	Rat	16970 mg/l/4h
Oral		
LD50	Dog	4797 mg/kg
	Mouse	3600 mg/kg
	Rabbit	5030 mg/kg
	Rat	4396 mg/kg
Polyethylene glycol (CAS 25322-68-3)		
Acute		
LC50	Not available	
Dermal		
LD50	Rabbit	20000 mg/kg

Components	Species	Test Results
Oral		
LD50	Guinea pig	19600 mg/kg
	Rat	27500 mg/kg

Sulfuric acid, monododecyl ester, compd. with 2,2",2""-nitrilotris[ethanol] (1:1) (CAS 139-96-8)

Acute		
Inhalation		
LC50	Not available	
Oral		
LD50	Rat	> 2000 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Exposure minutes Not available.

Erythema value Not available.

Oedema value Not available.

Serious eye damage/eye irritation Causes serious eye irritation.

Corneal opacity value Not available.

Iris lesion value Not available.

Conjunctival reddening value Not available.

Conjunctival oedema value Not available.

Recover days Not available.

Respiratory or skin sensitization Not available.

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

US ACGIH Threshold Limit Values: Skin designation

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	IV Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	IV Can be absorbed through the skin.

Germ cell mutagenicity Not classified.

Mutagenicity Not classified.

Carcinogenicity Contains potential carcinogens.

ACGIH Carcinogens

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	A3 Confirmed animal carcinogen with unknown relevance to humans.
Isopropanol (CAS 67-63-0)	A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Amides, coco, N,N-bis(hydroxyethyl) (CAS 68603-42-9)	Volume 101 - 2B Possibly carcinogenic to humans.
Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Volume 77, Volume 101 - 2B Possibly carcinogenic to humans.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

1,3-Dichloropropene (CAS 542-75-6)	Carcinogenic.
Amides, coco, N,N-bis(hydroxyethyl) (CAS 68603-42-9)	Carcinogenic.
Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Carcinogenic.
Formaldehyde (CAS 50-00-0)	Carcinogenic.
Methylene chloride (CAS 75-09-2)	Carcinogenic.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Teratogenicity Not classified.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects Prolonged inhalation may be harmful.

Further information Not available.

Name of Toxicologically Synergistic Products Not available.

12. Ecological Information

Ecotoxicity See below

Components		Species	Test Results
Ethanol, 2,2''-iminobis- (CAS 111-42-2)			
Algae	IC50	Algae	7.8 mg/L, 72 Hours
Crustacea	EC50	Daphnia	55 mg/L, 48 Hours
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	100 mg/L, 96 hours
Glycerol (CAS 56-81-5)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	51000 - 57000 mg/L, 96 hours
Isopropanol (CAS 67-63-0)			
Algae	IC50	Algae	1000 mg/L, 72 Hours
Crustacea	EC50	Daphnia	13299 mg/L, 48 Hours
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/L, 96 hours
Polyethylene glycol (CAS 25322-68-3)			
Aquatic			
Fish	LC50	Atlantic salmon (Salmo salar)	> 1000 mg/L, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Mobility in general Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:

UN number UN1993
Proper shipping name Flammable liquids, n.o.s. (Isopropanol RQ = 2000 LBS)
Hazard class Limited Quantity - US
Packing group III
Special provisions B1, B52, IB3, T4, TP1, TP29
Packaging exceptions 150

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

UN number UN1993
Proper shipping name FLAMMABLE LIQUID, N.O.S. (Isopropanol)
Hazard class Limited Quantity - Canada
Packing group III

IATA/ICAO (Air)

Basic shipping requirements:

UN number	UN1993
Proper shipping name	Flammable liquid, n.o.s. (Isopropanol)
Hazard class	Limited Quantity - IATA
Packing group	III

IMDG (Marine Transport)

Basic shipping requirements:

UN number	UN1993
Proper shipping name	FLAMMABLE LIQUID, N.O.S. (Isopropanol)
Hazard class	Limited Quantity - IMDG
Packing group	III

DOT; IMDG; TDG



IATA



15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

Canada NPRI VOCs with Additional Reporting Requirements: Mass reporting threshold/Identification Number

Isopropanol (CAS 67-63-0)	1 TONNES

Canada WHMIS Ingredient Disclosure: Threshold limits

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	1 %
Isopropanol (CAS 67-63-0)	1 %

WHMIS status Controlled

WHMIS classification Class B - Division 3 - Combustible Liquid, Class D - Division 2A, 2B

WHMIS labeling



US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	1.0 %
Isopropanol (CAS 67-63-0)	1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Listed.
Isopropanol (CAS 67-63-0)	Listed.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Listed.
Isopropanol (CAS 67-63-0)	Listed.

US CAA Section 111 Volatile Organic Compounds: Listed substance

Glycerol (CAS 56-81-5)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Polyethylene glycol (CAS 25322-68-3)	Listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Isopropanol	67-63-0	3-7

Other federal regulations

Safe Drinking Water Act (SDWA)	Not regulated.
Food and Drug Administration (FDA)	Not regulated.

US state regulations

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Hazardous Substances (Director's): Listed substance

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Listed.
Isopropanol (CAS 67-63-0)	Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

1,3-Dichloropropene (CAS 542-75-6)	Listed.
Amides, coco, N,N-bis(hydroxyethyl) (CAS 68603-42-9)	Listed.
Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Listed.
Formaldehyde (CAS 50-00-0)	Listed.
Methanol (CAS 67-56-1)	Listed.
Methylene chloride (CAS 75-09-2)	Listed.

US - Illinois Chemical Safety Act: Listed substance

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Listed.
Isopropanol (CAS 67-63-0)	Listed.

US - Louisiana Spill Reporting: Listed substance

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Listed.
Isopropanol (CAS 67-63-0)	Listed.

US - Minnesota Haz Subs: Listed substance

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Listed.
Glycerol (CAS 56-81-5)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Polyethylene glycol (CAS 25322-68-3)	Listed.

US - New Jersey RTK - Substances: Listed substance

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Listed.
Glycerol (CAS 56-81-5)	Listed.
Isopropanol (CAS 67-63-0)	Listed.

US - New York Release Reporting: Hazardous Substances: Listed substance

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Listed.

US - Texas Effects Screening Levels: Listed substance

Amides, coco, N,N-bis(hydroxyethyl) (CAS 68603-42-9)	Listed.
Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Listed.
Glycerol (CAS 56-81-5)	Listed.

Isopropanol (CAS 67-63-0)	Listed.
Polyethylene glycol (CAS 25322-68-3)	Listed.

US. Massachusetts RTK - Substance List

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Listed.
Glycerol (CAS 56-81-5)	Listed.
Isopropanol (CAS 67-63-0)	Listed.

US. Pennsylvania RTK - Hazardous Substances

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Listed.
Glycerol (CAS 56-81-5)	Listed.
Isopropanol (CAS 67-63-0)	Listed.

US. Rhode Island RTK

Ethanol, 2,2''-iminobis- (CAS 111-42-2)	Listed.
Isopropanol (CAS 67-63-0)	Listed.

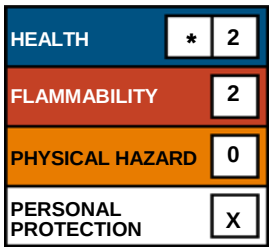
Inventory status

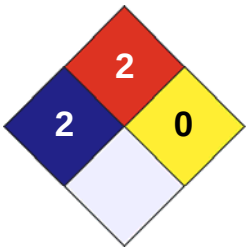
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0





Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date 24-December-2015

Effective date 20-April-2015

Expiry date 20-April-2018

Further information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Prepared by Nu-Calgon Technical Service Phone: (314) 469-7000

Other information This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).
This SDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.

NRP

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFICATION

PRODUCT: **NRP GAS LEAK DETECTOR** **HMIS CODES: H F R**
PRODUCT CODE: **NLDB / NLDC / NLDF** 1 0 0

MANUFACTURER: COMSTAR INTERNATIONAL INC.
ADDRESS: 20-45 128th STREET, COLLEGE POINT, NY 11356
INFORMATION: 718-445-7900 **EMERGENCY:** CHEMTREC - 800-424-9300
DATE: 5/2003 PREPARER: R. Madariaga
DISTRIBUTOR: **NATIONAL REFRIGERATION PRODUCTS**
2900 SAMUEL DRIVE · BENSALEM, PA 19020-7306
1-800-352-6951

HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

HAZARDOUS COMPONENTS	CAS NUM	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	PERCENTAGE (OPTIONAL)
SURFACTANT	9016-45-9	NE	NE		
SODIUM LAURYL SULFATE	6858-47-7	NE	NE		
SODIUM DECYL SULFATE	142-87-0	NE	NE		
COCAMIDE	68603-42-9	NE	NE		
BENZENE SULFONIC ACID SALT	68081-81-2	NA	NA		
PRODUCT NLDB CONTAINS					
ETHYLENE GLYCOL	107-21-1	50PPM	100PPM		

PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: 212ºF
MELTING POINT: NONE
VAPOR PRESSURE @ 70 DEG F: N/A
SPECIFIC GRAVITY (H_20=1): NA
VAPOR DENSITY (AIR=1): N/A
EVAPORATION RATE: (BUTYL ACETATE=1): >1
SOLUBILITY IN WATER: COMPLETE
APPEARANCE AND ODOR: NLDF (YELLOW), NLDB (BLUE), NLDC (CLEAR) --LIQUID

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: NONE **FLAMMABLE LIMITS:** LET: N/A UEL: N/A
EXTINGUISHING MEDIA: WATER FOG, CO2, ALL UNIVERSAL FOAMS
SPECIAL FIREFIGHTING PROCEDURES: SELF-CONTAINED RESPIRATORY PROTECTION SHOULD BE PROVIDED FOR FIREMEN FIGHTING IN BUILDINGS OR CONFINED AREAS.
UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE KNOWN

REACTIVITY DATA

STABILITY: YES **HAZARDOUS POLYMERIZATION:** WILL NOT OCCUR
CONDITIONS TO AVOID: SEE BELOW
INCOMPATIBILITY (MATERIALS TO AVOID): STRONG ACIDS, BASES AND OXIDIZING AGENTS
HAZARDOUS DECOMPOSITION OR PRODUCTS: NONE KNOWN

HEALTH HAZARD DATA

ROUTE(S) OF ENTRY: INHALATION? NO SKIN? NO INGESTION? YES

HEALTH HAZARDS (ACUTE & CHRONIC): BASED ON KNOWN TOXICOLOGY AND CHEMICAL INFORMATION NO ACUTE OR CHRONIC HEALTH HAZARDS EXISTS BASED ON NORMAL USE.

CARCINOGENITY: NO NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

SIGNS AND SYMTOMS OF EXPOSURE: SKIN IRRITATION, DIZZINESS OR NAUSEA

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE KNOWN.

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: REMOVE CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WATER.
EYES: HOLD EYELIDS OPEN AND FLUSH WITH WATER IMMEDIATELY AND CONTINUE FOR 15 MINUTES.
INGESTION: IMMEDIATELY DRINK LARGE AMOUNTS OF WATER.
INHALATION: REMOVE TO FRESH AIR

SEEK MEDICAL ATTENTION IF THERE IS ANY DISCOMFORT

PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE OF RELEASE OR SPILL: FLUSH WITH WATER AND MOP, SOAK OR VACUUM UP AND PLACE IN AN APPROPRIATE HOLDING CONTAINER.

WASTE DISPOSAL METHOD: DISPOSE OF ALL WASTE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

PRECAUTIONS FOR STORAGE AND HANDLING: KEEP AWAY FROM HEAT, SPARKS, OPEN FLAME OR DIRECT SUNSHINE. DO NOT PUNCTURE OR INCINERATE.

OTHER PRECAUTIONS: INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATION AND INHALING VAPOR CONTENTS CAN BE HARMFUL.

CONTROL MEASURES

RESPIRATORY PROTECTION: USE NIOSH APPROVED RESPIRATOR IF LIMITS ARE EXCEEDED.
VENTILATION: LOCAL EXHAUST: YES **SPECICAL: NONE**
MECHANICAL (GENERAL): YES **OTHER: NONE**

PROTECTIVE GLOVES: POLYFLUORINATED OR POLYVINYL ALCOHOL OR VITON.
EYE PROTECTION: SAFETY GOGGLES OR FACE SHIELD.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: PLASTIC OR RUBBER APRON.
WORK/HYGIENIC PRACTICES: WASH HANDS AFTER USE.

DISCLAIMER

INFORMATION AND RECOMMENDATIONS CONTAINED HERIN ARE BELIEVED TO BE ACCURATE AT THE TIME OF PREPARATION. NO WARRANTY IS MADE CONCERNING THE ACCURACY AND NO LIABILITY SHALL BE MADE FOR CLAIMS FOR USE OR RELIANCE OF THE RECOMMENDATIONS CONTAINED HEREIN.

GAS LEAK LOCATOR

Material Safety Data Sheet

SECTION I - COMPANY IDENTIFICATION

PRODUCT: GAS LEAK LOCATOR

CAT. NO.: GL6, GL128

MANUFACTURED BY:
Virginia KMP Corporation
4100 Platinum Way
Dallas, Texas 75237

TELEPHONE NUMBERS:
Office: 1-(214) 330-7731
Emergency Only: 1-(800) 424-9300

SECTION II - HAZARDOUS INGREDIENTS

OSHA Hazardous Components (29 CFR 1910.1200)

EXPOSURE LIMITS: 8 HR. TWA

	OSHA PEL	ACGIH TLV
Glycerine (56-81-5)	10 mg/m^3 (total mist)	10 mg/m^3 (vapor)

SECTION III - HAZARDS IDENTIFICATIONS

EMERGENCY OVERVIEW: No hazard under normal industrial use.

POTENTIAL HEALTH EFFECTS:

INHALATION: Mist is inhalation irritant.
EYE CONTACT: May cause slight irritation.
SKIN CONTACT: Substance does not generally irritate and is only mildly irritating to the skin. May aggravate pre-existing skin disorders.
INGESTION: Small amounts (a tablespoonful) swallowed during normal handling operations are not likely to cause injury, swallowing amounts larger than that may cause injury.

CHRONIC Effects: No adverse health effects known.

NOTE:

CARCINOGENICITY: LISTED IN NTP? No IARC? No OSHA Regulated? No

SECTION IV - FIRST AID MEASURES

INHALATION: Remove victim to fresh air and, if needed, immediately begin artificial respiration. Give oxygen if breathing is labored. Get emergency medical help. Contact a physician immediately.
EYE CONTACT: Flush eyes with water for 15 minutes. Get medical attention if symptoms develop and persist.
SKIN CONTACT: Flush with water or soap and water for 15 minutes or until all traces have been removed. Seek medical attention if symptoms develop and persist.
INGESTION: Do not induce vomiting. Rinse mouth out with water. Get immediate medical attention.

SECTION V - FIRE FIGHTING MEASURES

FLASHPOINT (TEST METHOD): 320 F
FLAMMABLE LIMITS: LOWER: ND UPPER: ND
AUTOIGNITION TEMPERATURE: ND

GENERAL HAZARD: No hazard under normal industrial use.
FIRE FIGHTING INSTRUCTIONS: Approach fire from upwind side. Avoid breathing smoke, fumes, mist or vapors on the downwind side. Firefighters wear protective clothing and self contained breathing apparatus.

EXTINGUISHING MEDIA: Dry powder, carbon dioxide (CO_2), water fog or spray.
HAZARDOUS COMBUSTION PRODUCTS: Acrid smoke and fumes.

SECTION VI - ACCIDENTAL RELEASE MEASURES

LAND SPILL: Flush spill area with water.
WATER SPILL: Dissolves in water completely. Prevent spills to avoid contamination. Notify operator of nearby water intake.

SECTION VII - HANDLING AND STORAGE

HANDLING: Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating, drinking or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown in section VI. Launder contaminated clothing before reuse.

STORAGE: Follow normal storage procedures. No special requirements necessary.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust ventilation recommended.
PERSONAL PROTECTION: Not required under normal conditions of use.

GAS LEAK LOCATOR

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

VAPOR PRESSURE: ND
SPECIFIC GRAVITY (H_2O=1): ND
SOLUBILITY IN WATER: Complete
pH: ND
BOILING POINT: Above 212 F
APPEARANCE & ODOR: Colored liquid, bland odor.

VAPOR DENSITY (Air=1): same as water
EVAPORATION RATE (BuAc=1): >1
VOC (LB/GAL): NA
FREEZING POINT: ND

SECTION X - STABILITY AND REACTIVITY

STABILITY: Stable.
CONDITIONS TO AVOID: Not known.
MATERIALS TO AVOID: Strong oxidizers, hydrogen peroxide.
HAZARDOUS DECOMPOSITION PRODUCTS: None
HAZARDOUS POLYMERIZATION: Will not occur.

SECTION XI - TOXICOLOGICAL INFORMATION

TDLo: 1428 mg/kg (oral - human)
LD50: 4090 mg/kg (oral - mouse)

SECTION XII - ECOLOGICAL INFORMATION

NA

SECTION XIII - DISPOSAL CONSIDERATIONS

No special disposal considerations required. Follow all applicable federal, state and local regulations before disposal.

SECTION XIV - TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: Not regulated.

HAZARD CLASS: NA
IDENTIFICATION NUMBER: NA
DOT Emergency Guide #: NA
Reportable Quantity (RQ): NA
International: NA

SECTION XV - REGULATORY INFORMATION

TSCA (Toxic Substance Control Act): Components of this product are listed on the TSCA Inventory.
CERCLA (Comprehensive Environmental Response, Compensation and Liability Act): NA

SARA TITLE III (Superfund Amendments and Reauthorization Act): NA

CALIFORNIA PROPOSITION 65: Not listed.

SECTION XVI - OTHER INFORMATION

State Right-to-Know Programs:

NFPA Ratings
Health: 1
Flammability: 1
Reactivity: 1
HMIS Protective Equipment: X See your supervisor

epared by: Virginia KMP Corporation
is information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Virginia KMP. The data on this set related only to specific material designated herein. Virginia KPM assumes no legal responsibility for use or reliance upon these data.

revised: 2/10/98

Material Safety Data Sheet

Section 1 Chemical Product and Company Identification

Manufacturer

Federal Process Corporation
4520 Richmond Rd
Cleveland OH 44128
1-800-846-7325

Emergency Telephone Number	Call Chemtrec at 1-800-424-9300
Product Identifier:	Gasoila® Soft Set
Product Description:	Complex Mixture
Product Use:	Pipe Thread Sealant

Section 2 Hazards Identification

HMIS HAZARD IDENTIFICATION
Health 1 Flammability 2 Reactivity 0

EMERGENCY OVERVIEW:

PHYSICAL HAZARDS: May become slippery if spilled on floor.

ACUTE HEALTH EFFECTS:

May cause severe eye irritation but no lasting damage.
Transient irritation may result from extended skin contact.
If ingested may cause gastrointestinal discomfort.

CHRONIC HEALTH EFFECTS:

No chronic health effects are expected

Section 3 Composition/Information on Ingredients

Additional information is provided in the Regulatory section of this document for Sara 313, California Proposition 65, and various state right-to-know laws.

Contains:		OSHA PEL	ACGIH TLV	% by wt.
Polytetrafluorethylene	CAS # 9002-84-0	NA	NA	.5-2
Titanium Dioxide	CAS# 13463-67-7	15mg/m3	10mg/m3	1-6
Talc	CAS# 14807-96-6	2mg/m3	.1mg/m3	48-59
Isopropyl Alcohol	CAS # 67-63-0	400 ppm	400 ppm	5-12
Ethylene Glycol Butyl Ether	CAS # 111-76-2	50 ppm	25 ppm	5-10

Polytetrafluorethylene can emit toxic vapors at temperatures exceeding 700 F see Section 5 for additional information.

Section 4 First Aid Measures

INHALATION: Not expected to become a significant inhalation hazard under normal conditions of use.
INGESTION: If ingested this product is not expected to cause an acute reaction. Give two glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.
EYES: Flush eyes immediately with large quantities of water, lifting the lower and upper lids occasionally. If irritation persists consult a physician.
SKIN: Flush the contaminated skin and wash with soap and water. If irritation develops or persists seek medical advice. Contaminated clothing should be washed prior to re-use.

Section 5 Fire Fighting Measures

EXTINGUISHING MEDIA: Foam (Aqueous Film Forming Foam) , dry chemical, carbon dioxide.

SPECIAL PRECAUTIONS: Water fog may be used to cool the containers, however frothing may occur if water is sprayed directly into burning containers. Do not enter fire area without proper protection.
HAZARDOUS COMBUSTION PRODUCTS: The thermal decomposition products are highly dependant upon the combustion conditions. Noxious or toxic fumes may be generated, some of which may be toxic or irritating. Polytetrafluorethylene can emit toxic fumes when heated to temperatures exceeding 700 F. The maximum operating temperature for this compound is around 500 F. At these temperatures PTFE does not undergo any thermal degradation and is not hazardous.

FLASH POINT: 90 F
LOWER FLAMMABLE LIMIT: 1.1%
UPPER FLAMMABLE LIMIT: 10.6%
AUTOIGNITION TEMPERATURE: Not established

Section 6 Accidental Release Measures

Isolate the spill area, and keep unnecessary people away. Absorb spilled material with a suitable inert absorbent material. Collect and dispose of the contaminated absorbent in accordance with local state and federal laws.

Section 7 Handling and Storage

HANDLING: Avoid contact with the skin and eyes. Use good industrial hygiene practices. Provide adequate ventilation. Keep containers closed. No smoking or open flame in storage areas. Wash hands after using product and before eating, drinking, smoking or using toilet facilities.
STORAGE: Store in a dry place away from moisture, excessive heat and sources of ignition. Avoid storage near food to prevent food contamination. Avoid freezing.

Section 8 Exposure Controls/Personal Protection

VENTILATION REQUIREMENTS: In confined areas local and general ventilation should be provided to maintain airborne concentrations below permissible exposure limits. Ventilation systems must be designed according to approved engineering standards.

PERSONAL PROTECTION:
EYE: The wearing of protective glasses is recommended when handling any chemicals.
GLOVES: If prolonged or repeated skin contact is expected wear gloves as appropriate to prevent skin contact. Butyl and nitrile rubbers are recommended.
RESPIRATORY: Provide adequate ventilation in the workplace.
OTHER: Eating and smoking should be prohibited in areas where product is handled. Nothing replaces good personal hygiene. Coveralls or other full body clothing shall be worn and properly laundered after use. Workers should wash hands, face, neck, and arms before eating, drinking, or smoking.

Section 9 Physical and Chemical Properties

PHYSICAL STATE:	Light Blue Paste
ODOR AND APPEARANCE:	Slight Odor
LOWEST BOILING POINT:	180 F
VAPOR PRESSURE:	0.88 mm/hg
VAPOR DENSITY:	1
WATER SOLUBILITY:	Slight
% ORGANIC VOLATILES:	27.0% w/w (2.249 lbs/gallon)= (269.16 grams/liter)
pH	N.A.
SPECIFIC GRAVITY	1.53 (12.74 LBS/GALLON)

Section 10 Stability and Reactivity

STABILITY: Stable under normal conditions.

REACTIVITY: Unknown

Section 11 Toxicological Information

Exposure limits: The limits reported in Section 2 of this document refer to other physical forms of the ingredients present in this product. Limits for the formulated product have not been determined.

None of the components of this product have been reported as carcinogenic by NTP, OSHA or IARC.

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Section 12 Ecological Information

General: No special Procedures

Section 13 Disposal Information

Waste materials must be disposed of in accordance with your municipal, state, provincial and federal regulations. Contact the proper authorities for specific instructions. Avoid incineration.

Section 14 Transportation Information

CONTAINERS UNDER 1 GALLON:

DOT HAZARD CLASS: Consumer Commodity ORM-D
PROPER SHIPPING NAME: Consumer Commodity ORM-D
IDENTIFICATION NUMBER: Not Listed
Refer to CFR 49 Section 173.150 for specific requirements.

CONTAINERS 1 GALLON AND OVER::

DOT HAZARD CLASS: FLAMMABLE LIQUIDS N.O.S. (contains Alcohol) 3
PROPER SHIPPING NAME: FLAMMABLE LIQUIDS N.O.S. (contains Alcohol) 3
IDENTIFICATION NUMBER: UN1993,III
DO NOT SHIP BY AIR

Section 15 Regulatory Information

Listed below are chemical substances subject to supplier notification requirements. The percentages, when present represent average values.

CAS Number	SARA 313	WHMIS	CA-65
111-76-2 Ethylene Glycol Butyl Ether	X		X

CA-65 - Chemical substances identified under the California Proposition 65 column are known to the State of California to cause cancer and/or reproductive toxicity.

TSCA STATUS: All ingredients of this product comply with the requirements of the US EPA Toxic Substances Control Act.

Section 16 Other

Prepared by R. L.

The above information and recommendations are believed accurate and reliable. Because it is not possible to anticipate all conditions of use, additional safety precautions may be required. The Federal Process Company makes no warranty, either express or implied, including merchantability and fitness.

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it into individual site safety programs in accordance with applicable hazard communication standards and regulations.

Safety Data Sheet

Material Name: Gasoline All Grades

SDS No. 9950
US GHS

Synonyms: Hess Conventional (Oxygenated and Non-oxygenated) Gasoline; Reformulated Gasoline (RFG); Reformulated Gasoline Blendstock for Oxygenate Blending (RBOB); Unleaded Motor or Automotive Gasoline

* * * Section 1 - Product and Company Identification * * *

Manufacturer Information

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

Phone: 732-750-6000 Corporate EHS
Emergency # 800-424-9300 CHEMTREC
www.hess.com (Environment, Health, Safety Internet Website)

* * * Section 2 - Hazards Identification * * *

GHS Classification:

Flammable Liquid - Category 2
Skin Corrosion/Irritation - Category 2
Germ Cell Mutagenicity - Category 1B
Carcinogenicity - Category 1B
Toxic to Reproduction - Category 1A
Specific Target Organ Toxicity (Single Exposure) - Category 3 (respiratory irritation, narcosis)
Specific Target Organ Toxicity (Repeat Exposure) - Category 1 (liver, kidneys, bladder, blood, bone marrow, nervous system)
Aspiration Hazard - Category 1
Hazardous to the Aquatic Environment – Acute Hazard - Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

DANGER

Hazard Statements

Highly flammable liquid and vapour.
Causes skin irritation.
May cause genetic defects.
May cause cancer.
May damage fertility or the unborn child.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Causes damage to organs (liver, kidneys, bladder, blood, bone marrow, nervous system) through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.
Harmful to aquatic life.

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and forearms thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist/vapours/spray.
Use only outdoors or in well-ventilated area.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.

Response

In case of fire: Use water spray, fog, dry chemical fire extinguishers or hand held fire extinguisher.
IF ON SKIN (or hair): Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.
IF exposed or concerned: Get medical advice/attention.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Get medical advice/attention if you feel unwell.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.

Storage

Store in a well-ventilated place.
Keep cool. Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
86290-81-5	Gasoline, motor fuel	100
108-88-3	Toluene	1-25
106-97-8	Butane	<10
1330-20-7	Xylenes (o-, m-, p- isomers)	1-15
95-63-6	Benzene, 1,2,4-trimethyl-	<6
64-17-5	Ethyl alcohol	0-10
100-41-4	Ethylbenzene	<3
71-43-2	Benzene	0.1-4.9

110-54-3	Hexane	0.5-4

A complex blend of petroleum-derived normal and branched-chain alkane, cycloalkane, alkene, and aromatic hydrocarbons. May contain antioxidant and multifunctional additives. Non-oxygenated Conventional Gasoline and RBOB do not have oxygenates (Ethanol). Oxygenated Conventional and Reformulated Gasoline will have oxygenates for octane enhancement or as legally required.

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

First Aid: Skin

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or with waterless hand cleanser. Obtain medical attention if irritation or redness develops.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

First Aid: Inhalation

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or gaseous extinguishing agent.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Firefighting foam suitable for polar solvents is recommended for fuel with greater than 10% oxygenate concentration.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

* * * Section 6 - Accidental Release Measures * * *

Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Caution, flammable vapors may accumulate in closed containers.

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

USE ONLY AS A MOTOR FUEL.
DO NOT SIPHON BY MOUTH

Handle as a flammable liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

Incompatibilities

Keep away from strong oxidizers.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

Gasoline, motor fuel (86290-81-5)

ACGIH: 300 ppm TWA
500 ppm STEL

Toluene (108-88-3)

ACGIH: 20 ppm TWA
OSHA: 200 ppm TWA; 375 mg/m3 TWA
150 ppm STEL; 560 mg/m3 STEL
NIOSH: 100 ppm TWA; 375 mg/m3 TWA
150 ppm STEL; 560 mg/m3 STEL

Butane (106-97-8)

ACGIH: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4)
OSHA: 800 ppm TWA; 1900 mg/m3 TWA
NIOSH: 800 ppm TWA; 1900 mg/m3 TWA

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: 100 ppm TWA
150 ppm STEL
OSHA: 100 ppm TWA; 435 mg/m3 TWA
150 ppm STEL; 655 mg/m3 STEL

Benzene, 1,2,4-trimethyl- (95-63-6)

NIOSH: 25 ppm TWA; 125 mg/m3 TWA

Ethyl alcohol (64-17-5)

ACGIH: 1000 ppm STEL
OSHA: 1000 ppm TWA; 1900 mg/m3 TWA
NIOSH: 1000 ppm TWA; 1900 mg/m3 TWA

Ethylbenzene (100-41-4)

ACGIH: 20 ppm TWA
OSHA: 100 ppm TWA; 435 mg/m3 TWA
125 ppm STEL; 545 mg/m3 STEL
NIOSH: 100 ppm TWA; 435 mg/m3 TWA
125 ppm STEL; 545 mg/m3 STEL

Benzene (71-43-2)

ACGIH: 0.5 ppm TWA
2.5 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 5 ppm STEL (Cancer hazard, Flammable, See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA
NIOSH: 0.1 ppm TWA
1 ppm STEL

Hexane (110-54-3)

ACGIH: 50 ppm TWA
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 500 ppm TWA; 1800 mg/m3 TWA
NIOSH: 50 ppm TWA; 180 mg/m3 TWA

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Personal Protective Equipment: Hands

Gloves constructed of nitrile, neoprene, or PVC are recommended.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Skin and Body

Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Translucent, straw-colored or light yellow	**Odor:**	Strong, characteristic aromatic hydrocarbon odor. Sweet-ether like
Physical State:	Liquid	**pH:**	ND
Vapor Pressure:	6.4 - 15 RVP @ 100 °F (38 °C) (275-475 mm Hg @ 68 °F (20 °C)	**Vapor Density:**	AP 3-4
Boiling Point:	85-437 °F (39-200 °C)	**Melting Point:**	ND
Solubility (H2O):	Negligible to Slight	**Specific Gravity:**	0.70-0.78
Evaporation Rate:	10-11	**VOC:**	ND
Percent Volatile:	100%	**Octanol/H2O Coeff.:**	ND
Flash Point:	-45 °F (-43 °C)	**Flash Point Method:**	PMCC
Upper Flammability Limit (UFL):	7.6%	**Lower Flammability Limit (LFL):**	1.4%
Burning Rate:	ND	**Auto Ignition:**	>530°F (>280°C)

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

Incompatible Products

Keep away from strong oxidizers.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

A: General Product Information

Harmful if swallowed.

B: Component Analysis - LD50/LC50

Gasoline, motor fuel (86290-81-5)

Inhalation LC50 Rat >5.2 mg/L 4 h; Oral LD50 Rat 14000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Toluene (108-88-3)

Inhalation LC50 Rat 12.5 mg/L 4 h; Inhalation LC50 Rat >26700 ppm 1 h; Oral LD50 Rat 636 mg/kg; Dermal LD50 Rabbit 8390 mg/kg; Dermal LD50 Rat 12124 mg/kg

Butane (106-97-8)

Inhalation LC50 Rat 658 mg/L 4 h

Xylenes (o-, m-, p- isomers) (1330-20-7)
Inhalation LC50 Rat 5000 ppm 4 h; Inhalation LC50 Rat 47635 mg/L 4 h; Oral LD50 Rat 4300 mg/kg; Dermal LD50 Rabbit >1700 mg/kg

Benzene, 1,2,4-trimethyl- (95-63-6)
Inhalation LC50 Rat 18 g/m3 4 h; Oral LD50 Rat 3400 mg/kg; Dermal LD50 Rabbit >3160 mg/kg

Ethyl alcohol (64-17-5)
Oral LD50 Rat 7060 mg/kg; Inhalation LC50 Rat 124.7 mg/L 4 h

Ethylbenzene (100-41-4)
Inhalation LC50 Rat 17.2 mg/L 4 h; Oral LD50 Rat 3500 mg/kg; Dermal LD50 Rabbit 15354 mg/kg

Benzene (71-43-2)
Inhalation LC50 Rat 13050-14380 ppm 4 h; Oral LD50 Rat 1800 mg/kg

Hexane (110-54-3)
Inhalation LC50 Rat 48000 ppm 4 h; Oral LD50 Rat 25 g/kg; Dermal LD50 Rabbit 3000 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Moderate irritant. Contact with liquid or vapor may cause irritation.

Potential Health Effects: Ingestion

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

Potential Health Effects: Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This product may cause genetic defects.

Carcinogenicity

A: General Product Information

May cause cancer.

IARC has determined that gasoline and gasoline exhaust are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. The U.S. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

B: Component Carcinogenicity

Gasoline, motor fuel (86290-81-5)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Toluene (108-88-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Ethyl alcohol (64-17-5)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC: Monograph 100E [in preparation] (in alcoholic beverages); Monograph 96 [2010] (in alcoholic beverages) (Group 1 (carcinogenic to humans))

Ethylbenzene (100-41-4)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC: Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))

Benzene (71-43-2)

ACGIH: A1 - Confirmed Human Carcinogen
OSHA: 5 ppm STEL (Cancer hazard, Flammable, See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA
NIOSH: potential occupational carcinogen
NTP: Known Human Carcinogen (Select Carcinogen)
IARC: Monograph 100F [in preparation]; Supplement 7 [1987]; Monograph 29 [1982] (Group 1 (carcinogenic to humans))

Reproductive Toxicity

This product is suspected of damaging fertility or the unborn child.

Specified Target Organ General Toxicity: Single Exposure

This product may cause drowsiness or dizziness.

Specified Target Organ General Toxicity: Repeated Exposure

This product causes damage to organs through prolonged or repeated exposure.

Aspiration Respiratory Organs Hazard

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

Very toxic to aquatic life with long lasting effects. Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Gasoline, motor fuel (86290-81-5)

Test & Species		Conditions
96 Hr LC50 Alburnus alburnus	119 mg/L [static]	
96 Hr LC50 Cyprinodon variegatus	82 mg/L [static]	
72 Hr EC50 Pseudokirchneriella subcapitata	56 mg/L	
24 Hr EC50 Daphnia magna	170 mg/L	

Toluene (108-88-3)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	15.22-19.05 mg/L [flow-through]	1 day old
96 Hr LC50 Pimephales promelas	12.6 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.89-7.81 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	14.1-17.16 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.8 mg/L [semi-static]	
96 Hr LC50 Lepomis macrochirus	11.0-15.0 mg/L [static]	
96 Hr LC50 Oryzias latipes	54 mg/L [static]	
96 Hr LC50 Poecilia reticulata	28.2 mg/L [semi-static]	
96 Hr LC50 Poecilia reticulata	50.87-70.34 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	>433 mg/L	
72 Hr EC50 Pseudokirchneriella subcapitata	12.5 mg/L [static]	
48 Hr EC50 Daphnia magna	5.46 - 9.83 mg/L [Static]	
48 Hr EC50 Daphnia magna	11.5 mg/L	

Xylenes (o-, m-, p- isomers) (1330-20-7)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	13.4 mg/L [flow-through]	

96 Hr LC50 Oncorhynchus mykiss	2.661-4.093 mg/L [static]
96 Hr LC50 Oncorhynchus mykiss	13.5-17.3 mg/L
96 Hr LC50 Lepomis macrochirus	13.1-16.5 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	19 mg/L
96 Hr LC50 Lepomis macrochirus	7.711-9.591 mg/L [static]
96 Hr LC50 Pimephales promelas	23.53-29.97 mg/L [static]
96 Hr LC50 Cyprinus carpio	780 mg/L [semi-static]
96 Hr LC50 Cyprinus carpio	>780 mg/L
96 Hr LC50 Poecilia reticulata	30.26-40.75 mg/L [static]
48 Hr EC50 water flea	3.82 mg/L
48 Hr LC50 Gammarus lacustris	0.6 mg/L

Benzene, 1,2,4-trimethyl- (95-63-6)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	7.19-8.28 mg/L [flow-through]
48 Hr EC50 Daphnia magna	6.14 mg/L

Ethyl alcohol (64-17-5)

Test & Species	Conditions
96 Hr LC50 Oncorhynchus mykiss	12.0 - 16.0 mL/L [static]
96 Hr LC50 Pimephales promelas	>100 mg/L [static]
96 Hr LC50 Pimephales promelas	13400 - 15100 mg/L [flow-through]
48 Hr LC50 Daphnia magna	9268 - 14221 mg/L
24 Hr EC50 Daphnia magna	10800 mg/L
48 Hr EC50 Daphnia magna	2 mg/L [Static]

Ethylbenzene (100-41-4)

Test & Species	Conditions
96 Hr LC50 Oncorhynchus mykiss	11.0-18.0 mg/L [static]
96 Hr LC50 Oncorhynchus mykiss	4.2 mg/L [semi-static]
96 Hr LC50 Pimephales promelas	7.55-11 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	32 mg/L [static]
96 Hr LC50 Pimephales promelas	9.1-15.6 mg/L [static]
96 Hr LC50 Poecilia reticulata	9.6 mg/L [static]
72 Hr EC50 Pseudokirchneriella subcapitata	4.6 mg/L
96 Hr EC50 Pseudokirchneriella subcapitata	>438 mg/L
72 Hr EC50 Pseudokirchneriella subcapitata	2.6 - 11.3 mg/L [static]

96 Hr EC50 Pseudokirchneriella subcapitata	1.7 - 7.6 mg/L [static]
48 Hr EC50 Daphnia magna	1.8 - 2.4 mg/L

Benzene (71-43-2)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	10.7-14.7 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	5.3 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	22.49 mg/L [static]
96 Hr LC50 Poecilia reticulata	28.6 mg/L [static]
96 Hr LC50 Pimephales promelas	22330-41160 µg/L [static]
96 Hr LC50 Lepomis macrochirus	70000-142000 µg/L [static]
72 Hr EC50 Pseudokirchneriella subcapitata	29 mg/L
48 Hr EC50 Daphnia magna	8.76 - 15.6 mg/L [Static]
48 Hr EC50 Daphnia magna	10 mg/L

Hexane (110-54-3)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	2.1-2.98 mg/L [flow-through]
24 Hr EC50 Daphnia magna	>1000 mg/L

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Soil

No information available.

* * * Section 13 - Disposal Considerations * * *

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 14 - Transportation Information * * *

Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

Component	CAS #	
Gasoline, motor fuel	86290-81-5	DOT regulated marine pollutant

DOT Information

Shipping Name: Gasoline
UN #: 1203 **Hazard Class:** 3 **Packing Group:** II
Placard:



* * * Section 15 - Regulatory Information * * *

Regulatory Information

A: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Toluene (108-88-3)
SARA 313: 1.0 % de minimis concentration
CERCLA: 1000 lb final RQ; 454 kg final RQ

Xylenes (o-, m-, p- isomers) (1330-20-7)
SARA 313: 1.0 % de minimis concentration
CERCLA: 100 lb final RQ; 45.4 kg final RQ

Benzene, 1,2,4-trimethyl- (95-63-6)
SARA 313: 1.0 % de minimis concentration

Ethylbenzene (100-41-4)
SARA 313: 0.1 % de minimis concentration
CERCLA: 1000 lb final RQ; 454 kg final RQ

Benzene (71-43-2)
SARA 313: 0.1 % de minimis concentration
CERCLA: 10 lb final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule); 4.54 kg final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule)

Hexane (110-54-3)

SARA 313: 1.0 % de minimis concentration
CERCLA: 5000 lb final RQ; 2270 kg final RQ

SARA Section 311/312 – Hazard Classes

Acute Health	Chronic Health	Fire	Sudden Release of Pressure	Reactive
X	X	X	--	--

Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

Component	CAS #	
Gasoline, motor fuel	86290-81-5	DOT regulated marine pollutant

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	**CAS**	**CA**	**MA**	**MN**	**NJ**	**PA**	**RI**
Gasoline, motor fuel	86290-81-5	No	No	No	No	Yes	No
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes	No
Butane	106-97-8	Yes	Yes	Yes	Yes	Yes	No
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes	Yes	Yes	No
Benzene, 1,2,4-trimethyl-	95-63-6	No	Yes	Yes	Yes	Yes	No
Ethyl alcohol	64-17-5	Yes	Yes	Yes	Yes	Yes	No
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	Yes	No
Benzene	71-43-2	Yes	Yes	Yes	Yes	Yes	No
Hexane	110-54-3	No	Yes	Yes	Yes	Yes	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.
WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Toluene	108-88-3	1 %
Butane	106-97-8	1 %
Benzene, 1,2,4-trimethyl-	95-63-6	0.1 %
Ethyl alcohol	64-17-5	0.1 %
Ethylbenzene	100-41-4	0.1 %
Benzene	71-43-2	0.1 %
Hexane	110-54-3	1 %

Additional Regulatory Information

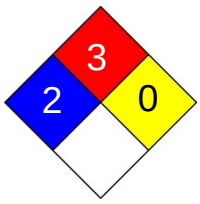
Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Gasoline, motor fuel	86290-81-5	No	DSL	EINECS
Toluene	108-88-3	Yes	DSL	EINECS
Butane	106-97-8	Yes	DSL	EINECS
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	DSL	EINECS
Benzene, 1,2,4-trimethyl-	95-63-6	Yes	DSL	EINECS
Ethyl alcohol	64-17-5	Yes	DSL	EINECS
Ethylbenzene	100-41-4	Yes	DSL	EINECS
Benzene	71-43-2	Yes	DSL	EINECS
Hexane	110-54-3	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

NFPA® Hazard Rating

Health	2
Fire	3
Reactivity	0



HMIS® Hazard Rating

Health	2	Moderate
Fire	3	Serious
Physical	0	Minimal
		*Chronic

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

End of Sheet

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: MOBIL SHC 629
Product Description: Synthetic Base Stocks and Additives
Product Code: 201560500540, 602946-00, 970114
Intended Use: Lubricant

COMPANY IDENTIFICATION

Supplier: **EXXON MOBIL CORPORATION**
3225 GALLOWS RD.
FAIRFAX, VA. 22037 USA

24 Hour Health Emergency	609-737-4411
Transportation Emergency Phone	800-424-9300
ExxonMobil Transportation No.	281-834-3296
Product Technical Information	800-662-4525, 800-947-9147
MSDS Internet Address	http://www.exxon.com, http://www.mobil.com

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

No Reportable Hazardous Substance(s) or Complex Substance(s).

SECTION 3 HAZARDS IDENTIFICATION

This material is not considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

POTENTIAL HEALTH EFFECTS

Low order of toxicity. Excessive exposure may result in eye, skin, or respiratory irritation. High-pressure injection under skin may cause serious damage.

NFPA Hazard ID:	Health:	0	Flammability:	1	Reactivity:	0
HMIS Hazard ID:	Health:	0	Flammability:	1	Reactivity:	0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 4 FIRST AID MEASURES

INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use

mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Hazardous Combustion Products: Smoke, Fume, Aldehydes, Sulfur oxides, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES

Flash Point [Method]: >210C (410F) [ASTM D-92]
Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 7.0
Autoignition Temperature: N/D

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

SPILL MANAGEMENT

Land Spill: Stop leak if you can do it without risk. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Prevent small spills and leakage to avoid slip hazard.

Static Accumulator: This material is a static accumulator.

STORAGE

Do not store in open or unlabelled containers.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits/standards for materials that can be formed when handling this product: When mists / aerosols can occur, the following are recommended: 5 mg/m³ - ACGIH TLV, 10 mg/m³ - ACGIH STEL, 5 mg/m³ - OSHA PEL.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator

selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

No protection is ordinarily required under normal conditions of use.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

See Sections 6, 7, 12, 13.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

GENERAL INFORMATION

Physical State: Liquid
Color: Orange
Odor: Characteristic
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 C): 0.864
Flash Point [Method]: >210C (410F) [ASTM D-92]
Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 7.0
Autoignition Temperature: N/D
Boiling Point / Range: > 316C (600F)
Vapor Density (Air = 1): > 2 at 101 kPa
Vapor Pressure: < 0.013 kPa (0.1 mm Hg) at 20 C
Evaporation Rate (n-butyl acetate = 1): N/D
pH: N/A

Log Pow (n-Octanol/Water Partition Coefficient): > 3.5
Solubility in Water: Negligible
Viscosity: 150 cSt (150 mm2/sec) at 40 C
Oxidizing Properties: See Sections 3, 15, 16.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: N/A
Pour Point: -39°C (-38°F)
DMSO Extract (mineral oil only), IP-346: < 3 %wt

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Excessive heat. High energy sources of ignition.

MATERIALS TO AVOID: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Route of Exposure	Conclusion / Remarks
Inhalation	
Toxicity (Rat): LC50 > 5000 mg/m3	Minimally Toxic. Based on test data for structurally similar materials.
Irritation: No end point data.	Negligible hazard at ambient/normal handling temperatures. Based on assessment of the components.
Ingestion	
Toxicity (Rat): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Skin	
Toxicity (Rabbit): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation (Rabbit): Data available.	Negligible irritation to skin at ambient temperatures. Based on test data for structurally similar materials.
Eye	
Irritation (Rabbit): Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

CHRONIC/OTHER EFFECTS

Contains:

Synthetic base oils: Not expected to cause significant health effects under conditions of normal use, based on laboratory studies with the same or similar materials. Not mutagenic or genotoxic. Not sensitizing in test animals and humans.

Additional information is available by request.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC	3 = IARC 1	5 = IARC 2B
2 = NTP SUS	4 = IARC 2A	6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.
Material -- Not expected to demonstrate chronic toxicity to aquatic organisms.

MOBILITY

Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT) : Not Regulated for Land Transport

LAND (TDG) : Not Regulated for Land Transport

SEA (IMDG) : Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA) : Not Regulated for Air Transport

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: IECSC, DSL, EINECS, KECI, TSCA
Special Cases:

Inventory	Status
AICS	Restrictions Apply
PICCS	Restrictions Apply

EPCRA: This material contains no extremely hazardous substances.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

SARA (313) TOXIC RELEASE INVENTORY: This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

The Following Ingredients are Cited on the Lists Below:

Chemical Name	CAS Number	List Citations
PHENOL, 4,4-METHYLENEBIS(2,6-BIS(1,1-DIMETHYLETHYL)-	118-82-1	5

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16 OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Changes:
Section 06: Notification Procedures - Header was modified.
Section 08: Hand Protection was modified.
Section 11: Dermal Lethality Test Data was modified.
Section 11: Oral Lethality Test Data was modified.
Section 05: Hazardous Combustion Products was modified.
Section 15: List Citation Table - Header was modified.
Section 16: Code to MHCs was modified.
Section 15: Special Cases Table was modified.
Section 06: Notification Procedures was modified.
Section 01: Company Contact Methods Sorted by Priority was modified.
Section 15: Chemical Name - Header was added.
Section 15: CAS Number - Header was added.
Section 15: List Citations - Header was added.
Section 15: List Citations Table was added.
Section 16: Standard phrases for California Proposition 65 was deleted.

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 363.00
Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Gelatin

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300 **Signal Word** **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Gelatin	9000-70-8	Unspecified	Unspecified	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides.
Moisture sensitive. Store tightly closed in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Light amber granules. Faint, sour, animal-like odor.
Soluble: Hot water. Insoluble in most organic solvents.

Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Stable nonhazardous substance.
Shelf life: Indefinite, if kept dry.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Shelf life:

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: February 6, 2014

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MATERIAL SAFETY DATA SHEET
General Finishes Corporation

SECTION 1: Material Identification

Material Name: GF Arm-R-Seal Topcoats - Gloss, Satin, Semi-Gloss

Revision Date: July 25, 2004

Rockler SKUs:
20675, 20682, 25804. 26530, 33766, 35042, 36382, 56564, 56572, 56580, 56598, 56606, 56614

HMIS Ratings
Health: 2
Flammability: 2
Reactivity: 0

Manufacturer:
General Finishes Corp., P.O Box 510567, New Berlin, WI 53151
(800) 783-6050
Emergency Phone Numbers:
(262) 786-6050

SECTION 2: Composition/Information on Ingredients

CAS #	Chemical Name	Percent	TLV	PEL
8052-41-3	Mineral spirits	20-40%	100 ppm TWA	400 ppm TWA
64742-47-8	Mineral spirits	10-20%	100 ppm TWA	400 ppm TWA
64742-48-9	Mineral spirits	5-10%	Not established	Not established
111-84-2	Nonane	5-10%	200 ppm TWA	200 ppm TWA
Proprietary	Oil modified urethane resin	10-35%	Not established	Not established
Proprietary	Resin	0-25%	Not established	Not established
95-63-6	1,2,4-Trimethylbenzene	0-1%	25 ppm TWA	25 ppm TWA

SECTION 3: Hazards Identification

*** Emergency Overview ***

Amber liquid, solvent odor. Combustible. Rags soaked in material may be subject to spontaneous combustion if not properly disposed of (See Section 7 of MSDS). May cause eye, skin or respiratory irritation, dizziness, headache, nausea.

Effects of Short-Term Overexposure:

Eyes: Irritation

Skin: Irritation, dermatitis upon prolonged exposure

Inhalation: Irritation, headache, dizziness, nausea

Ingestion: Irritation, nausea

Effects of Chronic Overexposure: Dermatitis

Material Exposure Limits: See Section 2 for information on ingredients.

Routes of Entry: Contact, inhalation, ingestion

Target Organs: Eyes, skin, respiratory system, nervous system

Cancer Rating: This material does not contain more than 0.1% of any chemical listed by NTP, IARC or OSHA as being carcinogenic.

Additional Information: Not applicable

SECTION 4: First Aid Measures

Eyes: Immediately flush eyes with plenty of water. Seek medical attention if irritation persists.

Skin: Remove contaminated clothing. Wash with soap and water. Seek medical attention if necessary.

Inhalation: If exposed to excessive levels, remove to fresh air. Seek medical attention if necessary.

Ingestion: Rinse mouth if conscious. Seek medical attention if necessary.

SECTION 5: Fire Fighting Measures

Flash Point: 105.0 ^{o}F

Method Used: PMCC (ASTM D93)

Flammable Limits (Percentage in air):

UEL: ND

LEL: ND

Extinguishing Media: Foam, carbon dioxide, dry chemical, water spray

Control Measures: Use self-contained breathing apparatus and full turn-out gear. Use water spray to cool containers.

Unusual Hazards: Closed containers may rupture or explode when exposed to extreme heat. Rags soaked in material may be subject to spontaneous combustion if not properly disposed of. (See Section 7 of MSDS)

SECTION 6: Accidental Release Measures

Spills: Use personal protective equipment. Ventilate area. Remove ignition sources. Contain spilled material and soak up with inert absorbant. Collect for disposal.

Releases to the air: Not applicable

SECTION 7: Handling and Storage

Handling: Avoid personal contact. Use with adequate ventilation. Wash after handling.
Storage requirements: Keep container closed and upright. Avoid high temperatures and flames.
Warning: Promptly soak all used rags in a water-filled container. Failure to do so may result in spontaneous combustion. Seal all soaked rags in a plastic bag for disposal.

SECTION 8: Exposure Controls and Personal Protection

Protective equipment: *

Eyes: Safety glasses or chemical goggles

Skin: Impervious gloves should be worn to prevent prolonged or repeated skin contact

Respiratory: A NIOSH/MSHA approved air-purifying respirator if exposure limits exceeded

Ventilation: Good general ventilation should be sufficient to control airborne levels. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

Additional information: None

*Protective equipment should be determined by conditions of exposure.

SECTION 9: Physical and Chemical Properties

Appearance and Odor: Amber liquid, solvent odor
Specific gravity (water = 1): 0.85-0.86
Boiling point: > 300.0 ^{o}F
Melting/freezing point: ND
Percent volatile: 63-68% /wt
VOC: 63-68% /wt
Vapor pressure: ND
Vapor density (air = 1): ND
Evaporation rate (n-Butyl acetate = 1): ND
pH: NA
Solubility in water: ND

SECTION 10: Stability and Reactivity

Stability: Stable
Conditions to avoid: Not applicable
Hazardous polymerization: Not applicable
Conditions to avoid: Not applicable
Incompatibility: Strong oxidizers, strong alkalies
Hazardous decomposition products: CO, CO_2, nitrogen oxides, hydrogen cyanide, hydrocarbons
Unusual hazards: Not applicable

SECTION 11: Toxicological Information

No information available at this time.

SECTION 12: Ecological Information

No information required at this time.

SECTION 13: Disposal Procedures

Material and containers should be disposed in accordance with local, state and federal regulations.

Empty Container Warning: Empty containers retain residue (liquid and/or vapor) and can be dangerous. **Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.** Do not attempt to clean since residue is difficult to remove. Empty containers should be completely drained and properly disposed of in an environmentally safe manner and in accordance with governmental regulations.

SECTION 14: Transportation Information

DOT Hazard Classification: Combustible Liquid

SECTION 15: Regulatory Information

SARA Title III Section 302 Extremely Hazardous Substances above de minimis level: None
CERCLA Hazardous Substances above de minimis level: None
SARA Title III Section 313 Toxic Chemicals above de minimis level: None
California Proposition 65: WARNING: This product contains chemical(s) known to the State of California to cause cancer.
Benzene 71-43-2
California Proposition 65: WARNING: This product contains chemical(s) known to the State of California to cause birth defects or other reproductive harm.
Benzene 71-43-2
Toluene 108-88-3

VOC Data*:

Color	VOC lb/gal	VOC g/l	Color	VOC lb/gal	VOC g/l
Gloss	4.5	539.5			
Satin	4.81	576.53			
Semi-Gloss	4.80	575.80			

*Grams (pounds) of VOC per Liter (gallon) of coating, less water and less exempt compounds

SECTION 16: Other Information

Abbreviations:

NA - Not applicable
ND - Not determined

General Finishes believes that the information contained in this MSDS is correct as of this date. However, because the material may be used under conditions over which General Finishes has no control or in ways we cannot anticipate, we give no warranty, expressed or implied, as to the accuracy of the information. General Finishes assumes no responsibility for any damage to person, property or user of this material or to insure that it is properly and safely used.

End of MSDS

MATERIAL SAFETY DATA SHEET
General Finishes Corporation

SECTION 1: Material Identification

Material Name: EF PolyAcrylic Gloss, EF PolAcrylic Satin, EF PolAcrylic Semi-Gloss PolyAcrylic Matte

Revision Date: August 8, 2008

Material Description: Water-based coating

HMIS Ratings
Health: **1**
Flammability: **1**
Reactivity: **0**

General Finishes Corp., 2462 Corporate Circle, East Troy, WI 53120
(800) 783-6050

Emergency Phone Numbers:
(262) 642-4545 Chemtrec: 800-424-9309 800-262-8200

SECTION 2: Composition/Information on Ingredients

CAS #	Chemical Name	Percent	TLV	PEL
7732-18-5	Water	65-75%	Not applicable	Not applicable
Proprietary	Acrylic polymer	10-15%	Not established	Not established
Proprietary	Glycol ethers	3-5%	Not established	Not established
Proprietary	Polyurethane	3-5%	Not established	Not established
Proprietary	Nonionic polyethylene	3-5%	Not established	Not established
872-50-4	N-Methyl-2-pyrrolidone	0.9-2%	Not established	Not established
64742-95-6	Solvent Naphtha	1-1.5%	100 ppm TWA	400 ppm TWA

SECTION 3: Hazards Identification

*** Emergency Overview ***

Amber liquid, solvent odor. Not Combustible. May cause eye, skin or respiratory irritation, dizziness, headache, nausea.

Effects of Short-Term Overexposure:

Eyes: Irritation

Skin: Irritation

Inhalation: Irritation, headache, dizziness, nausea

Ingestion: Irritation, nausea

Effects of Chronic Overexposure: ND

Material Exposure Limits: See Section 2 for information on ingredients.

Routes of Entry: Contact, inhalation, ingestion

Target Organs: Eyes, skin, respiratory system, nervous system

Cancer Rating: This material does not contain more than 0.1% of any chemical listed by NTP, IARC or OSHA as being carcinogenic.

Additional Information: Not applicable

SECTION 4: First Aid Measures

Eyes: Immediately flush eyes with plenty of water. Seek medical attention if irritation persists.

Skin: Remove contaminated clothing. Wash with soap and water. Seek medical attention if necessary.

Inhalation: If exposed to excessive levels, remove to fresh air. Seek medical attention if necessary.

Ingestion: Rinse mouth if conscious. Seek medical attention if necessary.

SECTION 5: Fire Fighting Measures

Flash Point: > 210 ^{o}F

Method Used: CC (ASTM D3828)

Flammable Limits (Percentage in air):

UEL: ND

LEL: ND

Extinguishing Media: Foam, carbon dioxide, dry chemical, water spray

Control Measures: Use self-contained breathing apparatus and full turn-out gear. Use water spray to cool containers.

Unusual Hazards: Closed containers may rupture or explode when exposed to extreme heat.

SECTION 6: Accidental Release Measures

Spills: Use personal protective equipment. Ventilate area. Contain spilled material and soak up with inert absorbant. Collect for disposal.

Releases to the air: Not applicable

SECTION 7: Handling and Storage

Handling: Avoid personal contact. Use with adequate ventilation. Wash after handling.
Storage requirements: Keep container closed and upright. Do not store above 120 ^{o}F.

SECTION 8: Exposure Controls and Personal Protection

Protective equipment: *

Eyes: Safety glasses or chemical goggles

Skin: Impervious gloves should be worn to prevent prolonged or repeated skin contact

Respiratory: A NIOSH/MSHA approved air-purifying respirator if exposure limits exceeded

Ventilation: Good general ventilation should be sufficient to control airborne levels. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

Additional information: None

*Protective equipment should be determined by conditions of exposure.

SECTION 9: Physical and Chemical Properties

Appearance and Odor: Amber liquid, solvent odor
Specific gravity (water = 1): 1.02
Boiling point: > 212.0 ^{o}F
Melting/freezing point: ND
Percent volatile: 76-81% by wt
VOC: 7 – 8 % /wt
Vapor pressure: ND
Vapor density (air = 1): ND
Evaporation rate (n-Butyl acetate = 1): ND
pH: ND
Solubility in water: Miscible

SECTION 10: Stability and Reactivity

Stability: Stable

Conditions to avoid: Not applicable

Hazardous polymerization: Not applicable

Conditions to avoid: Not applicable

Incompatibility: Strong oxidizers
Hazardous decomposition products: CO, CO_2
Unusual hazards: Not applicable

SECTION 11: Toxicological Information

No information available at this time.

SECTION 12: Ecological Information

No information required at this time.

SECTION 13: Disposal Procedures

Material and containers should be disposed in accordance with local, state and federal regulations.

Empty Container Warning: Empty containers retain residue (liquid and/or vapor) and can be dangerous. **Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.** Do not attempt to clean since residue is difficult to remove. Empty containers should be completely drained and properly disposed of in an environmentally safe manner and in accordance with governmental regulations.

SECTION 14: Transportation Information

DOT Hazard Classification: Not regulated

SECTION 15: Regulatory Information

SARA Title III Section 302 Extremely Hazardous Substances above de minimis level: None
CERCLA Hazardous Substances above de minimis level: None
SARA Title III Section 313 Toxic Chemicals above de minimis level:
Glycol ethers
872-50-4 N-Methyl-2-pyrrolidone

California Proposition 65: WARNING: This product contains chemical(s) known to the State of California to cause cancer.

123-91-1 1,4-Dioxane
872-50-4 N-Methyl-2-pyrrolidone

California Proposition 65: WARNING: This product contains chemical(s) known to the State of California to cause birth defects or other reproductive harm.

VOC Data:

Gloss – 251 g/l (2.02 lb/gal) less water and exempt compounds
Satin – 248 g/l (2.07 lb/gal) less water and exempt compounds

Semi-Gloss – 250 g/l (2.08 lb/gal) less water and exempt compounds
Matte – 245 g/l (2.05 lb/gal) less water and exempt compounds

SECTION 16: Other Information

Abbreviations:

NA - Not applicable
ND - Not determined

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End of MSDS

MATERIAL SAFETY DATA SHEET
General Finishes Corporation

SECTION 1: Material Identification

Material Name: EF Sanding Sealer

Revision Date: July 29, 2004

Material Description: Water-based coating

HMIS Ratings
Health: **1**
Flammability: **1**
Reactivity: **0**

Manufacturer:
General Finishes Corp., P.O Box 510567, New Berlin, WI 53151
(800) 783-6050
Emergency Phone Numbers:
(262) 786-6050

SECTION 2: Composition/Information on Ingredients

CAS #	Chemical Name	Percent	TLV	PEL
7732-18-5	Water	70-75%	Not applicable	Not applicable
Proprietary	Ammonia salts of modified styrene-acrylic polymers	15-20%	Not established	Not established
Proprietary	Glycol ethers	5-10%	Not established	Not established
78-51-3	Tributoxyethyl phosphate	1-3%	Not established	Not established

SECTION 3: Hazards Identification

*** Emergency Overview ***

Liquid. Combustible. May cause eye, skin or respiratory irritation, dizziness, headache, nausea.

Effects of Short-Term Overexposure:

Eyes: Irritation

Skin: Irritation

Inhalation: Irritation, headache, dizziness, nausea

Ingestion: Irritation, nausea

Effects of Chronic Overexposure: ND

Material Exposure Limits: See Section 2 for information on ingredients.

Routes of Entry: Contact, inhalation, ingestion

Target Organs: Eyes, skin, respiratory system, nervous system

Cancer Rating: This material does not contain more than 0.1% of any chemical listed by NTP, IARC or OSHA as being carcinogenic.

Additional Information: Not applicable

SECTION 4: First Aid Measures

Eyes: Immediately flush eyes with plenty of water. Seek medical attention if irritation persists.

Skin: Remove contaminated clothing. Wash with soap and water. Seek medical attention if necessary.

Inhalation: If exposed to excessive levels, remove to fresh air. Seek medical attention if necessary.

Ingestion: Rinse mouth if conscious. Seek medical attention if necessary.

SECTION 5: Fire Fighting Measures

Flash Point: > 210 ^{o}F

Method Used: CC (ASTM D3828)

Flammable Limits (Percentage in air):

UEL: ND

LEL: ND

Extinguishing Media: Foam, carbon dioxide, dry chemical, water spray

Control Measures: Use self-contained breathing apparatus and full turn-out gear. Use water spray to cool containers.

Unusual Hazards: Closed containers may rupture or explode when exposed to extreme heat.

SECTION 6: Accidental Release Measures

Spills: Use personal protective equipment. Ventilate area. Contain spilled material and soak up with inert absorbant. Collect for disposal.

Releases to the air: Not applicable

SECTION 7: Handling and Storage

Handling: Avoid personal contact. Use with adequate ventilation. Wash after handling.
Storage requirements: Keep container closed and upright. Do not store above 120 ^{o}F.

SECTION 8: Exposure Controls and Personal Protection

Protective equipment: *

Eyes: Safety glasses or chemical goggles

Skin: Impervious gloves should be worn to prevent prolonged or repeated skin contact

Respiratory: A NIOSH/MSHA approved air-purifying respirator if exposure limits exceeded

Ventilation: Good general ventilation should be sufficient to control airborne levels. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

Additional information: None

*Protective equipment should be determined by conditions of exposure.

SECTION 9: Physical and Chemical Properties

Appearance and Odor: Liquid
Specific gravity (water = 1): 1.03
Boiling point: > 212.0 ^{o}F
Melting/freezing point: ND
Percent volatile: 78.37% /wt
VOC: 6.05% /wt
Vapor pressure: ND
Vapor density (air = 1): ND
Evaporation rate (n-Butyl acetate = 1): ND
pH: ND
Solubility in water: Miscible

SECTION 10: Stability and Reactivity

Stability: Stable

Conditions to avoid: Not applicable

Hazardous polymerization: Not applicable

Conditions to avoid: Not applicable

Incompatibility: Strong oxidizers
Hazardous decomposition products: CO, CO_2
Unusual hazards: Not applicable

SECTION 11: Toxicological Information

No information available at this time.

SECTION 12: Ecological Information

No information required at this time.

SECTION 13: Disposal Procedures

Material and containers should be disposed in accordance with local, state and federal regulations.

Empty Container Warning: Empty containers retain residue (liquid and/or vapor) and can be dangerous. **Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.** Do not attempt to clean since residue is difficult to remove. Empty containers should be completely drained and properly disposed of in an environmentally safe manner and in accordance with governmental regulations.

SECTION 14: Transportation Information

DOT Hazard Classification: Not regulated

SECTION 15: Regulatory Information

SARA Title III Section 302 Extremely Hazardous Substances above de minimis level: None

CERCLA Hazardous Substances above de minimis level: None

SARA Title III Section 313 Toxic Chemicals above de minimis level:
Glycol ethers

California Proposition 65: WARNING: This product contains chemical(s) known to the State of California to cause cancer.
123-91-1 1,4-Dioxane
California Proposition 65: WARNING: This product contains chemical(s) known to the State of California to cause birth defects or other reproductive harm.
64-17-5 Ethanol

VOC Data: 247.05 g/l (2.06 lb/gal) less water and exempt compounds

SECTION 16: Other Information

Abbreviations:

NA - Not applicable
ND - Not determined

General Finishes believes that the information contained in this MSDS is correct as of this date. However, because the material may be used under conditions over which General Finishes has no control or in ways we cannot anticipate, we give no warranty, expressed or implied, as to the accuracy of the information. General Finishes assumes no responsibility for any damage to person, property or user of this material or to insure that it is properly and safely used.

End of MSDS

Close this window MSDS

Common Name: M32300 POLYURETHANE FOAM
Manufacturer: MOMENTIVE PERFORMANCE MATERIALS
MSDS Revision Date: 7/15/2008

Grainger Item Number(s): 3GWD1
Manufacturer Model Number(s):

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MOMENTIVE PERFORMANCE MATERIALS

M32300

POLYURETHANE FOAM

MATERIAL SAFETY DATA SHEET

VERSION: 3.

07/15/2008

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

top

MANUFACTURED BY:
WATERFORD PLANT
260 HUDSON RIVER RD
WATERFORD NY 12188

REVISED: 07/15/2008

PREPARER: PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS

CHEMTREC: 1-800-424-9300

CHEMICAL FAMILY/USE: ADHESIVE

FORMULA: MIXTURE

HMIS:
HEALTH 2
FLAMMABILITY 2
REACTIVITY 1

NFPA:
HEALTH 2
FLAMMABILITY 2
REACTIVITY 1

2. HAZARDS IDENTIFICATION

top

EMERGENCY OVERVIEW:

DANGER!

EXTREMELY FLAMMABLE CONTENTS UNDER PRESSURE. HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH THE SKIN. IRRITATING TO EYES AND RESPIRATORY SYSTEM. MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION.
VISCOUS FOAM; SOLID UPON CURING.

FORM: AEROSOL

COLOR: TRANSPARENT & LIGHT YELLOW

ODOR: HYDROCARBON-LIKE

POTENTIAL HEALTH EFFECTS:

INGESTION:

DO NOT INGEST!

INGESTION OF UNCURED PRODUCT CAN BE HARMFUL OR FATAL. CAN CAUSE SEVERE IRRITATION AND CORROSION OF MOUTH, THROAT, AND GASTROINTESTINAL TRACT. SYMPTOMS INCLUDE NAUSEA, STOMACH PAIN, DIARRHEA, ABDOMINAL CRAMPS AND SPASMS, BLOODY WATERY STOOLS, AND VOMITING OF HARD WHITISH FRAGMENTS OF POLYMERIZED ISOCYANATE. PRODUCT MAY CURE IN GASTROINTESTINAL TRACT AND OBSTRUCT THE PASSAGE OF FOOD AND AIR. OTHER EFFECTS INCLUDE SLOWED OR IRREGULAR HEARTBEAT, METABOLIC ACIDOSIS, BLOOD DISTURBANCES, CENTRAL NERVOUS SYSTEM EFFECTS, COMA, AND DEATH.

SKIN:
THIS PRODUCT CONTAINS INGREDIENTS WHICH MAY PRODUCE AN ALLERGIC SKIN REACTION. IT SHOULD BE TREATED AS A SKIN SENSITIZER. WILL BOND SKIN SURFACES TOGETHER. CONTACT MAY CAUSE SEVERE IRRITATION WITH REDNESS, PAIN, AND RASH.

INHALATION:
HARMFUL IF INHALED. INHALATION OF VAPORS OR GAS CAN CAUSE RESPIRATORY TRACT IRRITATION, BREATHLESSNESS, WHEEZING, COUGHING, DECREASED PULMONARY FUNCTION, HEADACHE, NAUSEA, VOMITING, CHEST PAIN, AND IRREGULAR HEARTBEAT. CENTRAL NERVOUS SYSTEM DEPRESSION CAN OCCUR WITH DISORIENTATION, DRUNKENESS, SUFFOCATION, CONVULSIONS, COMA, AND DEATH. RESPIRATORY AND CARDIAC SENSITIZER. OVEREXPOSURE MAY CAUSE CHEMICAL PNEUMONITIS, INFLAMMATION OF THE LUNGS, AND PULMONARY EDEMA WHICH MAY BE FATAL.

SYMPTOMS MAY BE DELAYED FOR SEVERAL HOURS.

EYES:
WILL BOND EYELIDS TOGETHER. CONTACT WITH PRODUCT, VAPORS, OR PROPELLANT GAS CAN BE IRRITATING AND DAMAGING TO THE EYE.

MEDICAL CONDITIONS AGGRAVATED:

RESPIRATORY DISORDER ALLERGY APPLIES IN UNCURED STATE. CENTRAL NERVOUS SYSTEM DISORDERS. CARDIOVASCULAR DISORDERS. SKIN DISORDERS.

SUBCHRONIC (TARGET ORGAN):
RESPIRATORY SYSTEM; SKIN; CENTRAL NERVOUS SYSTEM; IMMUNE SYSTEM; EYES

CHRONIC EFFECTS / CARCINOGENICITY:
THIS PRODUCT OR ONE OF ITS INGREDIENTS PRESENT AT 0.1% OR MORE IS NOT LISTED AS A CARCINOGEN OR SUSPECTED CARCINOGEN BY NTP, IARC, OR OSHA.

ROUTES OF EXPOSURE: INHALATION; DERMAL

3. COMPOSITION/INFORMATION ON INGREDIENTS

top

PRODUCT COMPOSITION	CAS REG NO.	WGT. %
A. HAZARDOUS:		
DIPHENYLMETHANE DIISOCYANATE	101-68-8	10 - 30 %
	TRADE SECRET	30 - 60 %
ISOCYANIC ACID, POLYMETHYLENEPOLYPHENYLENE ESTER	9016-87-9	10 - 30 %
B. NON-HAZARDOUS:		
POLYOL MIXTURE		60 - 100 %

4. FIRST AID MEASURES

top

INGESTION: CALL A PHYSICIAN OR POISON CONTROL CENTRE IMMEDIATELY.

SKIN:
PRODUCT ADHERES TO SKIN. REMOVE CONTAMINATED CLOTHING. WASH IMMEDIATELY WITH ABRASIVE SOAP. IF PRODUCT CANNOT BE REMOVED, OR ALLERGIC REACTION WITH REDDENING AND BLISTERING DEVELOPS, GET IMMEDIATE MEDICAL ATTENTION.

INHALATION:
OBTAIN MEDICAL ATTENTION. IF NOT BREATHING, BEGIN ARTIFICIAL RESPIRATION USING A BARRIER DEVICE. BECAUSE OF CHEMICAL PROPERTIES, DO NOT USE MOUTH-TO-MOUTH CONTACT. REMOVE TO FRESH AIR.

EYES:
IMMEDIATE MEDICAL ATTENTION IS REQUIRED. FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.

5. FIRE-FIGHTING MEASURES

top

FLASH POINT:
-68.9 DEG. C
-92 DEG. F

IGNITION TEMPERATURE: NOT APPLICABLE

FLAMMABLE LIMITS IN AIR - LOWER (%): NOT APPLICABLE
FLAMMABLE LIMITS IN AIR - UPPER (%): NO DATA AVAILABLE NOT APPLICABLE

SENSITIVITY TO STATIC DISCHARGE:
| PRESSURIZED CONTAINER:
| PROTECT FROM SUNLIGHT AND DO NOT EXPOSE TO TEMPERATURES EXCEEDING
| 50 DEG. C. DO NOT PIERCE OR BURN, EVEN AFTER USE., AVOID CONTACT WITH

| SKIN AND EYES., AVOID BREATHING VAPOR., USE ONLY WITH ADEQUATE
| VENTILATION., STORE AWAY FROM HEAT.

EXTINGUISHING MEDIA:
WATER, FOAM, CARBON DIOXIDE (CO2), DRY CHEMICAL, HALOGENATED AGENTS

SPECIAL FIRE FIGHTING PROCEDURES:
CONTAINERS CAN BUILD UP PRESSURE IF EXPOSED TO HEAT (FIRE)., POLYMERIZATION MAY TAKE PLACE DURING A FIRE DUE TO ELEVATED TEMPERATURE WHERE CLOSED CONTAINERS COULD VIOLENTLY RUPTURE., TOXIC HYDROGEN CYANIDE CAN BE LIBERATED UNDER BURNING CONDITIONS, TREAT AS A PRESSURIZED CONTAINER., FIREFIGHTERS MUST WEAR NIOSH/MSHA APPROVED POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS WITH FULL FACE MASK AND FULL PROTECTIVE CLOTHING., COOL CLOSED CONTAINERS EXPOSED TO FIRE WITH WATER SPRAY.

6. ACCIDENTAL RELEASE MEASURES

top

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
WEAR SUITABLE PROTECTIVE EQUIPMENT.

7. HANDLING AND STORAGE

top

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
USE ONLY IN WELL-VENTILATED AREAS. AVOID CONTACT WITH SKIN AND EYES. KEEP AWAY FROM CHILDREN. CURING RELEASES VAPORS WHICH MAY BE HARMFUL. REMOVE CONTACT LENSES BEFORE USING SEALANT. DO NOT HANDLE LENSES UNTIL ALL SEALANT HAS BEEN CLEANED FROM THE FINGERTIPS, NAILS AND CUTICLES. RESIDUAL SEALANT MAY REMAIN ON FINGERS FOR SEVERAL DAYS AND TRANSFER TO LENSES AND CAUSE SEVERE EYE IRRITATION. GOOD HYGIENIC PRACTICES SHOULD BE OBSERVED. WORK CLOTHES SHOULD BE WASHED SEPARATELY AT THE END OF EACH WORK DAY. DISPOSABLE CLOTHING SHOULD BE DISCARDED WITH MATERIAL. STORE BETWEEN 40 F AND 120 F. DO NOT STORE WHERE TEMPERATURES MAY EXCEED 120 F. IF TEMPERATURE IS LESS THAN 40 F, CONTENTS MAY SEPARATE. SHAKE CAN TO MIX. AVOID INHALATION OF VAPOR OR MIST.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

top

ENGINEERING CONTROLS: EYEWASH STATIONS

RESPIRATORY PROTECTION:
IF EXPOSURE LIMITS ARE EXCEEDED OR RESPIRATORY IRRITATION IS EXPERIENCED, NIOSH/MSHA APPROVED RESPIRATORY PROTECTION SHOULD BE WORN. SUPPLIED AIR RESPIRATORS MAY BE REQUIRED FOR NON-ROUTINE OR EMERGENCY SITUATIONS. RESPIRATORY PROTECTION MUST BE PROVIDED IN ACCORDANCE WITH OSHA REGULATIONS (SEE 29 CFR 1910.134).

PROTECTIVE GLOVES: IMPERMEABLE OR CHEMICAL RESISTANT GLOVES.

EYE AND FACE PROTECTION: SAFETY GLASSES WITH SIDE-SHIELDS

OTHER PROTECTIVE EQUIPMENT: WEAR SUITABLE PROTECTIVE CLOTHING AND GLOVES.

EXPOSURE GUIDELINES:

COMPONENT	CAS RN	SOURCE	VALUE
DIPHENYLMETHANE DIISOCYANATE	101-68-8	ACGIH, TWA	0.005 PPM
DIPHENYLMETHANE DIISOCYANATE	101-68-8	OSHA Z1, CEILING	0.02 PPM 0.2 MG/M3

ABSENCE OF VALUES INDICATES: NONE FOUND

PEL - OSHA PERMISSIBLE EXPOSURE LIMIT

TLV - ACGIH THRESHOLD LIMIT VALUE

TWA - TIME WEIGHTED AVERAGE

INTL REL - INTERNAL RECOMMENDED EXPOSURE LIMIT

OSHA REVOKED THE FINAL RULE LIMITS OF JANUARY 19, 1989 IN RESPONSE TO THE
11TH CIRCUIT COURT OF APPEALS DECISION (AFL-CIO V. OSHA)
EFFECTIVE JUNE 30, 1993. SEE 29 CFR 1910.1000 (58 FR 35338).

9. PHYSICAL AND CHEMICAL PROPERTIES

top

BOILING POINT - C & F: -25 DEG. C; -13 DEG. F; AT PETROLEUM HYDROCARBON

VAPOR PRESSURE (20 C) (MMHG): MEASURED 2592.45

VAPOR DENSITY (AIR=1): NO DATA AVAILABLE

FREEZING POINT: NOT APPLICABLE

MELTING POINT: NOT APPLICABLE

PHYSICAL STATE: AEROSOL

ODOR: HYDROCARBON-LIKE

COLOR: TRANSPARENT & LIGHT YELLOW

SPECIFIC GRAVITY (WATER=1): 1.1

DENSITY: 1.1 G/CM3

ACID / ALKALINITY (MEQ/G): NOT APPLICABLE

pH: NOT APPLICABLE

VOLATILE ORGANIC CONTENT (VOL): 25 %(M)

SOLUBILITY IN WATER (20 C): INSOLUBLE

SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT): NF

10. STABILITY AND REACTIVITY

top

STABILITY: STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS:
CARBON DIOXIDE (CO2); CARBON MONOXIDE HYDROGEN CYANIDE (HYDROCYANIC ACID);
OXIDES OF NITROGEN.

INCOMPATIBILITY (MATERIALS TO AVOID):
BASES ALCOHOLS FINELY POWDERED METALS. AVOID AMINES.

CONDITIONS TO AVOID:
FREEZING KEEP AWAY FROM HEAT AND SOURCES OF IGNITION. AVOID ANY SOURCE OF
IGNITION DUE TO FLAMMABILITY.

11. TOXICOLOGICAL INFORMATION

top

ACUTE ORAL:
REMARKS: UNKNOWN

ACUTE DERMAL:
REMARKS: UNKNOWN

ACUTE INHALATION:
REMARKS: UNKNOWN

OTHER: NONE.

SENSITIZATION: NO DATA AVAILABLE

SKIN IRRITATION: NO DATA AVAILABLE

EYE IRRITATION: NO DATA AVAILABLE

MUTAGENICITY: UNKNOWN

12. ECOLOGICAL INFORMATION

top

DISTRIBUTION: NO DATA AVAILABLE

13. DISPOSAL CONSIDERATIONS

top

DISPOSAL METHOD: IN ACCORDANCE WITH LOCAL AND NATIONAL REGULATIONS.

14. TRANSPORT INFORMATION

top

DOT SHIPPING NAME: CONSUMER COMMODITY ORM-D (POLYURETHANE FOAM SEALANT HC)
DOT HAZARD CLASS: 2.1
DOT LABEL (S): 2.1
UN/NA NUMBER: UN1950
PACKING GROUP:

IMDG SHIPPING NAME: AEROSOLS
CLASS: 2.1
IMDG-LABELS: 2.1
UN NUMBER: UN1950
PACKING GROUP:
EMS NO: F-D; S-U

15. REGULATORY INFORMATION

top

INVENTORIES:

TSCA LIST: Y (POSITIVE LISTING)

CANADA DSL INVENTORY: N (NEGATIVE LISTING)

CANADA NDSL INVENTORY: N (NEGATIVE LISTING)

JAPAN INVENTORY OF EXISTING & NEW CHEMICAL SUBSTANCES (ENCS):
N (NEGATIVE LISTING)

KOREA EXISTING CHEMICALS INVENTORY (KECI): N (NEGATIVE LISTING)

CHINA INVENTORY OF EXISTING CHEMICAL SUBSTANCES: N (NEGATIVE LISTING)

AUSTRALIA INVENTORY OF CHEMICAL SUBSTANCES (AICS): N (NEGATIVE LISTING)

PHILIPPINES INVENTORY OF CHEMICALS AND CHEMICAL SUBSTANCES (PICCS):
N (NEGATIVE LISTING)

FOR INVENTORIES THAT ARE MARKED AS QUANTITY RESTRICTED OR SPECIAL CASES,
PLEASE CONTACT MOMENTIVE.

US REGULATORY INFORMATION:

SARA (311,312) HAZARD CLASS: ACUTE HEALTH HAZARD

SARA (313) CHEMICALS:
9016-87-9, ISOCYANIC ACID, POLYMETHYLENEPOLYPHENYLENE ESTER.
101-68-8, DIPHENYLMETHANE DIISOCYANATE.

CALIFORNIA PROPOSITION 65:
THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO STATE OF CALIFORNIA TO
CAUSE CANCER, BIRTH, OR ANY OTHER REPRODUCTIVE DEFECTS.

CANADIAN REGULATORY INFORMATION:

WHMIS HAZARD CLASS:
B2 - FLAMMABLE LIQUID
A - COMPRESSED GAS
D2A - VERY TOXIC MATERIAL CAUSING OTHER TOXIC EFFECTS
D2B - TOXIC MATERIAL CAUSING OTHER TOXIC EFFECTS

16. OTHER INFORMATION

top

OTHER:
THESE DATA ARE OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS PRODUCT
SPECIFICATIONS. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, IS MADE. THE
RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO
BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE
RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE
WHETHER THEY ARE APPROPRIATE.

C = CEILING LIMIT

NEGL = NEGLIGIBLE

EST = ESTIMATED

NF = NONE FOUND

NA = NOT APPLICABLE

UNKN = UNKNOWN

NE = NONE ESTABLISHED

REC = RECOMMENDED

ND = NONE DETERMINED

V = RECOMMENDED BY VENDOR

SKN = SKIN

TS = TRADE SECRET

R = RECOMMENDED

MST = MIST

NT = NOT TESTED

STEL = SHORT TERM EXPOSURE LIMIT

PPM = PARTS PER MILLION

PPB = PARTS PER BILLION

BY-PRODUCT= REACTION BY-PRODUCT, TSCA INVENTORY STATUS NOT REQUIRED
UNDER 40 CFR PART 720.30(H-2).

DALER ~ ROWNEY U.S.A.

FINE ART & GRAPHIC MATERIALS
Daler-Rowney USA, 2 Corporate Drive, Cranbury, New Jersey 08512-9584 U.S.A.
Tel: 609 655 5252 Fax: 609 655 5852

Material Safety Data Sheet

1. IDENTIFICATION OF THE PREPARATION AND COMPANY

Product : GEORGIAN OIL COLOUR (All colours with the exception of Flake White & Underpainting White – see separate MSDS's)

Intended use: OIL COLOUR PAINTING.

Manufacturers Name:	Daler-Rowney Ltd.
Address:	2 Corporate Drive Cranbury New Jersey 08512-9584
Emergency telephone Number:	609 655 5252
Telephone Number for information:	609 655 5252
Date of Issue:	2nd November 2000

2. CHEMICAL COMPOSITION/INFORMATION ON INGREDIENTS

Substances presenting a health hazard with the meaning of the Dangerous Substances Directive 67/548/EEC.

Names:	% (wt) Concentration	Symbol	R Phrases

3. HAZARDS IDENTIFICATION OF PREPARATION

Product Type: Georgian Oil Colour. For use in oil painting.

Labelling requirements in conformity with ASTM D – 4236

Classified as HL Non - Toxic

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4. FIRST AID MEASURES.

General:	In all cases, if symptoms persist, seek medical attention. NEVER give anything by mouth to an unconscious person.
Inhalation:	Not Applicable.
Eye contact:	Irrigate eyes with copious amounts of water for at least ten minutes. If irritation Persists, seek medical attention.
Skin contact:	Wash affected area with plenty of soap and water. DO NOT use solvent. If irritation persists, seek medical attention.
Ingestion:	DO NOT induce vomiting. Flush mouth with clean water. Seek medical attention.

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5. FIRE FIGHTING METHODS

Extinguishing media: Dry or Foam Extinguishers.

Not to be used: Water jet.

Recommendations/other information :

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6. ACCIDENTAL RELEASE MEASURES

Clean up with absorbent cloth. Any residue can be cleaned up with a cloth dampened with solvent. USE PROTECTIVE GLOVES when using solvents. Ensure good ventilation. Dispose of any soiled rags or waste in a sealed water filled metal container. Dispose of in accordance with local regulations.

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7. HANDLING AND STORAGE

Handling:	Observe good standards of hygiene. DO NOT eat, drink or smoke whilst using. Wash hands after use.
Storage:	Reseal tube when not in use. Store at room temperature. Keep out of reach of children.

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8. EXPOSURE CONTROLS/PERSON PROTECTION

Wear overalls / smock.
DO NOT eat, drink or smoke whilst using.
Wash hands before eating, drinking or smoking

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance :	Oil colours of buttery consistency.
Odour:	Linseed oil.
pH of aqueous extract:	Not Applicable
Melting point:	Greater than 250^0C
Flash point:	Not Applicable.
Flammability :	See 5 above.
Explosive properties :	Not Applicable
Specific gravity:	1.04 – 2.83
Solubility water:	Insoluble.
Organic solvents:	Soluble in White Spirit, Turpentine or Isoparrafin Solvents (eg. Daler-Rowney Low Odour Thinners).

10. STABILITY AND REACTIVITY

Conditions to avoid:	Contains an oxidising oil. Rags, Steel wool or waste soaked with this product may spontaneously catch fire if improperly discarded. Immediately after use, place soiled material in a sealed water filled metal container.
Materials to avoid:	None known.
Hazardous decomposition products :	Nothing below 250^0C

11. TOXICOLOGICAL INFORMATION

There are no data on the preparation itself.

Threshold limit:

Ingestion:	Not considered to represent a significant health hazard. May cause discomfort.
Skin:	Prolonged contact may result in a mild reaction in some cases.
Eyes:	May cause temporary discomfort.
Respiratory:	Not Applicable.

12. ECOLOGICAL INFORMATION

No information available.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations

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14. TRANSPORT INFORMATION

Transport only in accordance with ADR for roads, RID for Rail, IMDG for sea and ICAO/IATA for air transport

ADR/RID: Not restricted.

IMG : Not restricted.

ICAO/IATA: Not restricted

Packaging Group.

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15. REGULATORY INFORMATION

In accordance with ASTM D – 4236 the product is labelled as follows:

Danger Classification : HL Non Toxic.

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16. OTHER INFORMATION

The information on this MSDS is based on the present state of our knowledge, as the users working conditions are beyond our knowledge and control. The product is not to be used for other purposes than specified in section 1 without first seeking our advice. It is always the responsibility of the user to take necessary steps in order to fulfil the demands laid down in the local rules of legislation. The information in this MSDS is meant as a description of the safety requirements of our product: it is not to be considered as a guarantee of the products properties.

DALER ~ROWNEY U.S.A.

FINE ART & GRAPHIC MATERIALS

Daler-Rowney USA, 2 Corporate Drive, Cranbury, New Jersey 08512-9584 U.S.A.

Tel: 609 655 5252 Fax: 609 655 5852

Material Safety Data Sheet

SECTION I PRODUCTS & MANUFACTURERS DETAILS

Identification of Product (as listed):	**GEORGIAN OIL COLOUR FLAKE WHITE**
Manufacturers Name:	Daler-Rowney Ltd
Address:	2 Corporate Drive Cranbury New Jersey 08512-9584
Emergency Telephone Number:	609 655 5252
Telephone Number for information:	609 655 5252
Date Prepared:	25th June 2000

SECTION II HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Product Type: White oil colour for oil painting. Contains lead carbonate pigment.

Labelling Requirements Conform to ASTM D-4236

WARNING: May be harmful if swallowed. Cancer agent based on experimental data. Exposure may cause damage to the testes, difficulty with reproduction (child bearing) or harmful to the developing foetus. Exposure may cause nervous system, kidney or bone marrow damage. Contains lead.
Precautions: Do not spray apply. Wash hands immediately after use. When using do not eat, drink or smoke. Wear a work apron. Keep in original container. **AVOID USING IF PREGNANT OR CONTEMPLATING PREGNANCY. NOT FOR USE IN HEALTH CARE FACILITIES. KEEP OUT OF REACH OF CHILDREN.** For further health information contact a poison control center.

SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: Over 300°

Solubility in Water: Imiscible

Specific Gravity: 2.4

Freezing: Not determined

Evaporation Rate: Not applicable

Appearance and Odour: White oil colour. Linseed oil.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (method used): Over 230°

Extinguishing Media: Use dry powder, foam, carbon dioxide or halon extinguisher.

Special Fire Fighting Procedures: Never use water since this may boil explosively or may float the burning oil and thus spread the fire.

Unusual Fire and Explosion Hazards: Danger of spontaneous combustion if colour is absorbed onto porous material (e.g. clay, cloths and rags, particularly cotton.) Ensure all porous material is sprayed well with water.

SECTION V REACTIVITY DATA

Stability: Stable

Conditions to Avoid: May auto ignite over 300°C

Hazardous Decomposition/byproducts: If heated over 250° will decompose to give complex mixture of aldehydes, lactones and ketones, notably acrolein

Hazardous Polymerisation: None known.

SECTION VI HEALTH HAZARD DATA

Inhalation: Not applicable. Do not spray apply

Skin: Not considered hazardous. Wash skin with soap and warm water. Flush eye with water and seek medical advice.

Ingestion: May cause nausea and sickness. Exposure may cause nervous system, kidney or bone marrow damage. Exposure may cause damage to the testes, difficulty with reproduction and harm to the developing foetus. If swallowed seek prompt medical attention.

Carcinogenicity: Cancer agent based on experimental data.

Signs & Symptons of Exposure: Nausea, sickness, abdonimal pain**.**

Medical Conditions aggravated by exposure: Avoid using if pregnant or contemplating pregnancy**.**

Emergency and First Aid Procedure: Seek immediate medical attention.

SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled.

Contain the spilll with sand or earth. Spray the earth with water to avoid spontaneous combustion. Any rags or cloths used to clean up the spill should be burnt; if left crumpled in a dustbin there is a risk of spontaneous combustion and any cloths which cannot be burnt should be soaked in water for 5 minutes then placed in a flat bin.

Waste Disposal Method. Dispose in accordance with local regulations

Precautions to be taken in handling and storing. Store at room temperature. Keep in original container. Avoid using if pregnant or contemplating pregnancy. Not to be used in health care facilities. Keep out of reach of children. Wash hands after use. When using do not eat, smoke or drink. Do not spray apply.

SECTION VIII CONTROL MEASURES

Respiratory Protection: Not applicable. Do not spray apply

Protective Gloves: None

Eye Protection: None

Other Precautions: Clothing and Equipment: Apron

SECTION IX OTHER INFORMATION

The information on this MSDS is based on the present state of our knowledge, as the users working conditions are beyond our knowledge and control. The product is not to be used for other purposes than specified in section 11 without first seeking our advice. It is always the responsibility of the user to take necessary steps in order to fulfil the demands laid down in the local rules of legislation. The information in this MSDS is meant as a description of the safety requirements of our product: it is not to be considered as a guarantee of the products properties.

Safety Data Sheet

The supplier identified below generated this SDS using the UL SDS template. UL did not test, certify, or approve the substance described in this SDS, and all information in this SDS was provided by the supplier or was reproduced from publically available regulatory data sources. UL makes no representations or warranties regarding the completeness or accuracy of the information in this SDS and disclaims all liability in connection with the use of this information or the substance described in this SDS. The layout, appearance and format of this SDS is © 2014 UL LLC. All rights reserved.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **538AD Germ-X Hand Sanitizer - Morning Fresh**

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Hand sanitizer

Uses advised against Use only as directed.

Details of the supplier of the safety data sheet

Supplier Name Vi-Jon Inc.
Supplier Address Vi-Jon Inc.
8800 Page Avenue
Saint Louis
MO
63114
US
Supplier Phone Number Phone: 314-427-1000 (M-F 8am-4pm CST)
Fax:3144271010
Supplier Email info@vijon.com
Emergency telephone number Chemtrec: 1-800-424-9300 (24-Hour)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 3

GHS Label elements, including precautionary statements

Emergency Overview

Signal word **Warning**

Flammable liquid and vapor



Appearance: Clear to Slightly Hazy, Pale Blue, Viscous Liquid **Physical State:** Viscous Liquid **Odor:** Alcohol, Fresh

Precautionary Statements - Prevention
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ ventilating/ lighting/ equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Skin
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Fire
In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Unknown Toxicity
0.218% of the mixture consists of ingredient(s) of unknown toxicity

Other information
Toxic to aquatic life with long lasting effects
PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION
May cause slight eye irritation

Interactions with Other Chemicals
None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Ethyl Alcohol 62 %v/v	64-17-5	50-100	*
Benzophenone-4	4065-45-6	0-10	*
Blue 1	3844-45-9	0-10	*
Carbomer	Proprietary	0-10	*
Fragrance	Proprietary	0-10	*
Glycerin	56-81-5	0-10	*
Isopropyl Alcohol	67-63-0	0-10	*
Isopropyl Myristate	110-27-0	0-10	*
Tocopheryl Acetate	7695-91-2	0-10	*
Water	7732-18-5	10-50	*

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures

General Advice
Call 911 or emergency medical service. Remove and isolate contaminated clothing and shoes.

Eye Contact
If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin Contact
In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, (trained personnel should) give oxygen.

Ingestion
Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.

Self-protection of the first aider
Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects
No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Unsuitable Extinguishing Media
CAUTION: All these products have a very low flash point. Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard.

Uniform Fire Code Flammable Liquid: I-C

Hazardous Combustion Products
Carbon oxides.

Explosion Data
Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge Yes.

Protective equipment and precautions for firefighters
Move containers from fire area if you can do it without risk.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk.

Other Information Water spray may reduce vapor; but may not prevent ignition in closed spaces.

Environmental Precautions

Environmental Precautions Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for Containment A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Methods for cleaning up Use clean non-sparking tools to collect absorbed material. Dike far ahead of liquid spill for later disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Use personal protection equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Keep in an area equipped with sprinklers. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

Incompatible Products Strong oxidizing agents. Acids. Chlorinated compounds.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines **There is no exposure data pertaining to the Product. This section reflects exposure data pertaining to individual ingredients.**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethyl Alcohol 62% v/v 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m^3 (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m^3	IDLH: 3300 ppm 10% LEL TWA: 1000 ppm TWA: 1900 mg/m^3
Glycerin 56-81-5	TWA: 10 mg/m^3 mist	TWA: 15 mg/m^3 mist, total particulate TWA: 5 mg/m^3 mist, respirable fraction (vacated) TWA: 10 mg/m^3 mist, total particulate (vacated) TWA: 5 mg/m^3 mist, respirable fraction	
Isopropyl Alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m^3 (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m^3 (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m^3	IDLH: 2000 ppm 10% LEL TWA: 980 mg/m^3 TWA: 400 ppm STEL: 500 ppm STEL: 1225 mg/m^3

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures
Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tight sealing safety goggles.

Skin and Body Protection Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant apron. Impervious gloves. Antistatic boots.

Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Viscous Liquid		
Appearance	Clear to Slightly Hazy, Pale Blue, Viscous Liquid	**Odor**	Alcohol, Fresh
Color	Pale Blue	**Odor Threshold**	No information available

Property	**Values**	**Remarks/ Method**
pH	7.5	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	23 C / 73 F	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	0.90	None known
Water Solubility	Miscible in water	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No data available	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	No data available

10. STABILITY AND REACTIVITY

R eactivity
No data available.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to avoid
Heat, flames, and sparks.

When used in accordance with the directions.

Incompatible materials
None known.

Hazardous Decomposition Products
Carbon oxides.

Other Adverse Effects
No information available.

11. TOXICOLOGICAL INFORMATION

There is no data for this product. The information included in this section describes the potential hazards of the individual ingredients.

Information on likely routes of exposure

Product Information Product does not present an acute toxicity hazard based on known or supplied information.

Inhalation Specific test data for the substance or mixture is not available.

Eye Contact Specific test data for the substance or mixture is not available.

Skin Contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethyl Alcohol 62% v/v 64-17-5	-	-	= 124.7 mg/L (Rat) 4 h
Glycerin 56-81-5	-	> 10 g/kg (Rabbit)	-
Isopropyl Alcohol 67-63-0	= 4396 mg/kg (Rat)	= 12800 mg/kg (Rabbit)	= 16000 ppm (Rat) 8 h
Isopropyl Myristate 110-27-0	> 10000 mg/kg (Rat)	= 5 g/kg (Rabbit)	> 41 mg/L (Rat)
Water 7732-18-5	> 90 mL/kg (Rat)	-	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethyl Alcohol 62% v/v 64-17-5	A3	Group 1	Known	X
Blue 1 3844-45-9		Group 3		
Isopropyl Alcohol 67-63-0		Group 3		X

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 3 - Not Classifiable as to Carcinogenicity in Humans
NTP (National Toxicology Program)
Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Chronic Toxicity None

Target Organ Effects Blood. Central Nervous System (CNS). Eyes. Liver. Reproductive System. Respiratory system. Skin. Kidney. Spleen. Systemic Toxicity.

Aspiration Hazard No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (inhalation-dust/mist)
228.70 mg/l
ATEmix (inhalation-vapor)
1,872.36 ATEmix

12. ECOLOGICAL INFORMATION

There is no ecological data on the Product. The Product ingredients are expected to be safe for the environment at concentrations predicted under normal use and accidental spill scenarios. Packaging components are compatible with the conventional solid waste management practices.

Ecotoxicity
Toxic to aquatic life with long lasting effects.

Persistence and Degradability
No information available.

Bioaccumulation
No information available.

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).
Contaminated Packaging	Do not reuse empty containers.
US EPA Waste Number	D001
California Hazardous Waste Codes	331

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name	CONSUMER COMMODITY
Hazard Class	ORM-D
Description	CONSUMER COMMODITY, ORM-D
Emergency Response Guide Number	127

TDG

UN-No.	UN1170
Proper Shipping Name	ETHANOL
Hazard Class	3
Packing Group	III
Description	UN1170, ETHANOL, 3, PG III

MEX

UN-No.	UN1170
Proper Shipping Name	ETHANOL
Hazard Class	3
Packing Group	III
Description	UN1170, ETHANOL, 3, III

ICAO

UN-No.	UN1170
Proper Shipping Name	ETHANOL SOLUTION
Hazard Class	3
Packing Group	III
Description	UN1170, ETHANOL SOLUTION, 3, PG III

IATA

UN-No.	UN1170
Proper Shipping Name	ETHANOL SOLUTION
Hazard Class	3
Packing Group	III
Description	UN1170, ETHANOL SOLUTION, 3, PG III

IMDG/IMO

UN-No.	UN1170
Proper Shipping Name	ETHANOL
Hazard Class	3
Packing Group	III
EmS No.	F-E, S-D
Description	UN1170, ETHANOL, 3, PG III, FP 34C

RID

UN-No.	UN1170
Proper Shipping Name	ETHANOL (ETHYL ALCOHOL)
Hazard Class	3
Packing Group	III
Classification code	F1
Description	UN1170, ETHANOL (ETHYL ALCOHOL), 3, III

ADR

UN-No.	UN1170
Proper Shipping Name	ETHANOL (ETHYL ALCOHOL)
Hazard Class	3
Packing Group	III
Classification code	F1
Tunnel restriction code	(D/E)
Description	UN1170, ETHANOL (ETHYL ALCOHOL), 3, III

ADN

UN-No.	UN1170
Proper Shipping Name	ETHANOL
Hazard Class	3
Packing Group	III
Classification code	F1
Special Provisions	144, 601
Description	UN1170, ETHANOL, 3, III
Hazard Labels	3
Limited Quantity	LQ7
Ventilation	VE01

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	All components are listed either on the DSL or NDSL.
IECSC	-

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No.	Weight-%	SARA 313 - Threshold Values %
Isopropyl Alcohol - 67-63-0	67-63-0	0 - 10	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

US State Regulations

California Proposition 65 - NONE

This product contains the following Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Ethyl Alcohol 62% v/v 64-17-5		X			
Blue 1 3844-45-9		X			
Glycerin 56-81-5	X	X	X	X	
Isopropyl Alcohol 67-63-0	X	X	X	X	

International Regulations

Mexico
National occupational exposure limits

Component	Carcinogen Status	Exposure Limits
Ethyl Alcohol 62% v/v 64-17-5 (50 - 100)		Mexico: TWA 1000 ppm Mexico: TWA 1900 mg/m^3
Glycerin 56-81-5 (0 - 10)	-	10mg/m^3 (mist) TWA
Isopropyl Alcohol 67-63-0 (0 - 10)		Mexico: TWA 400 ppm Mexico: TWA 980 mg/m^3 Mexico: STEL 500 ppm Mexico: STEL 1225 mg/m^3

Mexico - Occupational Exposure Limits - Carcinogens

Canada
WHMIS Hazard Class
B2
D2A



16. OTHER INFORMATION

NFPA	**Health Hazards**	1	**Flammability**	3	**Instability**	0	**Physical and Chemical Hazards**	- N/A
HMIS	**Health Hazards**	0	**Flammability**	3	**Physical Hazard**	0	**Personal Protection**	X

Prepared By WERCS Professional Services, LLC
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date May 31, 2015

Revision Date None

Revision Note None

General Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Approved and Updated by Vi-Jon, Inc.

Disclaimer:

The information and recommendations contained in the Safety Data Sheet (SDS) are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. The information and recommendations set forth herein are presented in good faith and believed to be correct as of this date hereof.

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End of Safety Data Sheet

MATERIAL SAFETY DATA SHEET

G-FORCE Multipurpose Cleaner

MSDS Ref. No: 4410
Date Prepared: 04/18/2002
Date Revised: 08/16/2002

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME/USE: G-FORCE Multipurpose Cleaner
Product Synonyms: 70 G-FORCE Multipurpose Cleaner Concentrate; Command Center 70 G-FORCE Multipurpose Cleaner Concentrate

MANUFACTURER

The Butcher Company
67 Forest Street
Marlborough, MA 01752-3012

Butcher Telephone Number: 800-225-9475
Emergency Telephone (24 hours): 800-228-5635
CHEMTREC (U.S./Can.): 800-424-9300
CHEMTREC (Int'l): +1 703-527-3887

2. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT(S)	CAS#	% BY WEIGHT
Linear primary alcohol ethoxylate	68439-46-3	7 - 10
Propylene glycol monobutyl ether	5131-66-8	3 - 5

See Section 8 for Exposure Limits *NA - Not Applicable*

OSHA REGULATORY STATUS: This product is classified as hazardous under OSHA regulations.

WHMIS CLASS: Class D- Division 2B

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Clear, Green Liquid . No Odor. Causes Eye Irritation.

POTENTIAL HEALTH EFFECTS *(See Section 11 for Toxicological Information)*

PRIMARY ROUTE(s) OF EXPOSURE: X Eye X Skin Contact __ Skin Absorption
X Inhalation __ Ingestion

EFFECTS OF ACUTE EXPOSURE

EYES: Causes eye irritation. Symptoms may include redness and pain.

SKIN: Non-irritating to the skin.

INHALATION: High concentrations of vapor or mist may cause nose, throat and respiratory tract irritation. Symptoms may include coughing.

INGESTION: May cause mild mouth, throat and stomach irritation. Symptoms may include nausea.

EFFECTS OF CHRONIC EXPOSURE: Prolonged or repeated contact can cause defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

MEDICAL CONDITIONS AGGRAVATED: None known.

4. FIRST AID MEASURES

EYES: Flush eyes with plenty of water while holding eyelids apart. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Do not put any medication in the victim's eyes unless instructed by a physician. Get medical attention.

SKIN: Flush with water, then wash with soap and water. Remove saturated clothing. Get medical attention if irritation develops.

INHALATION: Remove to fresh air. Get medical attention if symptoms persist.

INGESTION: Do not induce vomiting. Drink large quantities of water. Get medical attention.

5. FIRE FIGHTING MEASURES

FLASH POINT AND METHOD: > 93°C (200°F)TCC

FLAMMABLE LIMITS: Not applicable.

AUTOIGNITION TEMPERATURE: Not applicable.

EXTINGUISHING MEDIA: Use extinguishing media appropriate for surrounding fire.

HAZARDOUS COMBUSTION PRODUCTS: Normal products of combustion (carbon monoxide and carbon dioxide).

FIRE AND EXPLOSION HAZARDS: None known.

FIRE FIGHTING INSTRUCTIONS: This product is not flammable. As in any fire, MSHA/NIOSH approved self-contained breathing apparatus (SCBA) and full protective gear should be worn.

6. ACCIDENTAL RELEASE MEASURES

See Section 8, Exposure Controls/Personal Protection and Section 3, Hazard Identification. Floors may be slippery. Use care to avoid falling. Contain and isolate spill. Prevent from entering sewers and waterways. Keep non-essential personnel from entering spill area. Use mop, absorbent, or wet vacuum to collect material for proper disposal. Rinse area with water.

7. HANDLING AND STORAGE

HANDLING: Follow label use directions. Do not mix with other chemicals unless instructed by label directions. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Remove saturated clothing. Wash clothing and equipment before reuse.

STORAGE: Keep container closed when not in use. Keep from freezing.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT (PPE)

EYE: Not required under normal conditions of use.

SKIN: Where prolonged or repeated contact is possible, chemical-resistant clothing (e.g., gloves) is recommended.

RESPIRATORY: No respiratory protection is required if ventilation is adequate.

ENGINEERING CONTROLS: Good general room ventilation is expected to be adequate.

EXPOSURE LIMITS:

INGREDIENT(S)	OSHA PEL/STEL	ACGIH TLV/STEL
Linear primary alcohol ethoxylate	NA	NA
Propylene glycol monobutyl ether	NA	NA

NA - Not Available

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: No
APPEARANCE: Clear, Green
pH: 9.1
PERCENT VOLATILE BY WEIGHT: 90.2
VAPOR PRESSURE: Not Determined
VAPOR DENSITY: Not Determined
BOILING POINT: Not Determined
FREEZING/MELTING POINT: Not Determined
SOLUBILITY IN WATER: Complete
EVAPORATION RATE: Not Determined
SPECIFIC GRAVITY: 1.01
VISCOSITY: Water Thin
OCTANOL/WATER PARTITION COEFFICIENT: Not Determined
ODOR THRESHOLD: Not Determined

10. STABILITY AND REACTIVITY

STABILITY (CONDITIONS TO AVOID): Stable.

POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: None known.

INCOMPATIBLE MATERIALS: None known.

11. TOXICOLOGICAL INFORMATION

ACUTE DATA: This product is a primary eye irritant and non-irritating to skin. Based on acute toxicity testing, this product is not toxic by ingestion. The following additional data is available for the product and its ingredients:

PRODUCT/INGREDIENT	ORAL LD_{50} (rat)	DERMAL LD_{50} (rabbit)	INHALATION LC_{50} (rat)
G-FORCE Multipurpose Cleaner	>5000 mg/kg	Not Available	Not Available
Linear primary alcohol ethoxylate	1400 - 2700 mg/kg	>4000 - mg/kg	Not Available
Propylene glycol monobutyl ether	1900 - 3300 mg/kg	1400 - mg/kg	Not Available

SENSITIZATION DATA: No data available.

CHRONIC DATA:
No data available.

REPRODUCTIVE/TERATOGENIC DATA: No data available.

CARCINOGENIC/MUTAGENIC DATA: Not listed as carcinogenic by NTP, IARC, or ACGIH or regulated as a carcinogen by OSHA.

SYNERGISTIC MATERIALS: No data available.

12. ECOLOGICAL INFORMATION

This product is readily biodegradable as determined by OECD 301B biodegradation test.

The 48 hour EC50 value for acute toxicity to Daphnia magna was determined to be 110 mg/L. The No-Observed-Effect Concentration (NOEC) established for this product was 41 mg/L.

13. DISPOSAL CONSIDERATIONS

Disposal of this material should be in accordance with local, state or provincial and federal regulations. The unused product, as manufactured, is a RCRA non-hazardous waste in accordance with 40 CFR 261. The product has not been evaluated by the Toxicity Characteristic Leachate Procedure (TCLP). According to RCRA, it is the responsibility of the waste generator to ensure proper disposal.

14. TRANSPORT INFORMATION

DOT/TDG HAZARDOUS MATERIAL DESCRIPTION: Not regulated

15. REGULATORY INFORMATION

Not meant to be all-inclusive---selected regulations represented.

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: Under 40 CFR 370.2, this product meets the following hazard category: Immediate.

313 REPORTABLE INGREDIENTS: Ingredients in this product are not currently subject to notification.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: Not reportable under CERCLA.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: This product complies with all TSCA inventory requirements.

MASSACHUSETTS, NEW JERSEY, PENNSYLVANIA RIGHT-TO-KNOW:

INGREDIENT(S)	CAS NO.	STATE LISTING
Water	7732-18-5	Not Listed
Linear primary alcohol ethoxylate	68439-46-3	Not Listed
Propylene glycol monobutyl ether	5131-66-8	Not Listed

NA - Not Applicable

CANADA

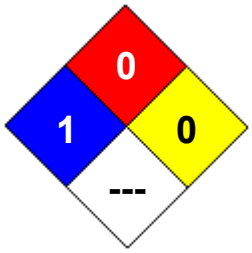
WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): Class D-Division 2B, eye irritant.

16. OTHER INFORMATION

HMIS RATING

HEALTH	2
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	-

NFPA CODES:



APPROVED BY: Product Safety & Regulatory

MSDS STATUS

Revision No: 1

Revision #: 1

This MSDS replaces the April 23, 2002 MSDS. Any changes in information are as follows:
In Section 3
Emergency Overview - Immediate Concerns Chronic Effects Signs & Symptoms - Eyes Signs & Symptoms - Skin

In Section 4
Firstaid - Eyes

In Section 11
Dermal LD50 (Unit) Toxicological Oral LD50 (Value) Oral LD50 (Unit) Inhalation LC50 (Unit) Oral LD50 (Operator)

In Section 12
Ecological

In Section 16
HMIS Health

APPROVAL DATE: 08/16/2002

The information on this data sheet represents our current data and best opinion as to the proper use in handling of the product under normal foreseeable conditions. Any use of this product which is not in conformance with this data sheet or product label, or which involves using the product in combination with any other product or any other process is the responsibility of the user.

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 364.00
Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

(+)-Gibberellic Acid

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
(+)-Gibberellic acid	77-06-5	$C_{19}H_{22}O_6$	346.41	
Synonyms: Berelex; Gibberellin A_3				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell or if irritation occurs (P337+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338).
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Wipe up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #1. Store with acids, anhydrides and peracids.
Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White, crystalline powder. Possible solvent-like odor.
Soluble: Many organic solvents. Slightly in water.

Melting point: 234 °C
Specific gravity: 0.93

Used as a plant growth hormone typically in concentrations of 0.01 - 5.0 mg/L.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 6300 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (201-001-0).

SECTION 16 — OTHER INFORMATION

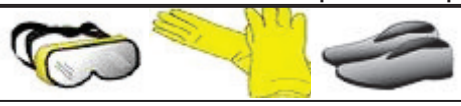
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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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Glance HC Glass & Multi-Surface Cleaner

HMIS		NFPA	Personal protective equipment
Health	3		
Flammability	0		
Physical Hazard / Instability	0		

Version Number: 1

Preparation date: 2012-10-03

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Glance HC Glass & Multi-Surface Cleaner

SDS #: MS0301167
Product Code: 3165337
Recommended use:
- Glass Cleaner
- MULTI-PURPOSE CLEANER
- This product is intended to be diluted prior to use

Manufacturer, importer, supplier:
US Headquarters
Sealed Air
8215 Forest Point Blvd.
Charlotte, NC 28273-5509
Phone: 1-888-352-2249

Canadian Headquarters
Sealed Air - Canada
3755 Laird Road
Mississauga, Ontario L5L 0B3
Phone: 1-800-668-7171

SDS Internet Address: https://sds.sealedair.com
Emergency telephone number: 1-800-851-7145 (U.S.); 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
DANGER. CORROSIVE. CAUSES SKIN AND EYE BURNS. HARMFUL OR FATAL IF SWALLOWED.

Principal routes of exposure: Eye contact. Skin contact. Inhalation. Ingestion.
Eye contact: Corrosive. Causes permanent eye damage, including blindness.
Skin contact: Corrosive. Causes permanent damage.
Inhalation: May cause irritation and corrosive effects to nose, throat and respiratory tract.
Ingestion: May be irritating to mouth, throat and stomach.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS #	Weight %	LD50 Oral - Rat (mg/kg)	LD50 Dermal - Rabbit	LC50 Inhalation - Rat
Diethylene glycol butyl ether	112-34-5	20 - 30%	4500	=2700 mg/kg	Not available
2-butoxyethanol	111-76-2	10 - 20%	1400	=99 mg/kg	=450 ppm (4 h)
Sodium lauryl sulfate	151-21-3	5 - 10%	1288	=580 mg/kg	>3900 mg/m^3 (1 h)
Ammonium hydroxide	1336-21-6	1 - 5%	350	Not available	Not available

4. FIRST AID MEASURES

Eye contact: Immediately flush eyes with running water for 15-20 minutes, keeping eyelids open. Get medical attention immediately.
Skin contact: Immediately flush with plenty of water for 15-20 minutes. Get medical attention immediately.
Inhalation: If breathing is affected, remove to fresh air. Get medical attention immediately.
Ingestion: If swallowed, rinse mouth. Give a cupful of water or milk. THEN IMMEDIATELY CONTACT A PHYSICIAN OR POISON CENTER. DO NOT induce vomiting unless directed to do so by medical

personnel. Never give anything by mouth to an unconscious person.

Aggravated Medical Conditions: Individuals with chronic respiratory disorders such as asthma, chronic bronchitis, emphysema, etc., may be more susceptible to irritating effects.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: The product is not flammable. Extinguish fire using agent suitable for surrounding fire.
Specific hazards: Not applicable.
Unusual hazards: Corrosive material (See sections 8 and 10).

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Extinguishing media which must not be used for safety reasons: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment.
Environmental precautions and clean-up methods: Clean-up methods - large spillage. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin, eyes and clothing. Do not taste or swallow. Avoid breathing vapors or mists. Use only with adequate ventilation. Remove and wash contaminated clothing and footwear before re-use. Wash thoroughly after handling. Product residue may remain on/in empty containers. All precautions for handling the product must be used in handling the empty container and residue. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage: Protect from freezing. Keep tightly closed in a dry, cool and well-ventilated place. KEEP OUT OF REACH OF CHILDREN.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
Good general ventilation should be sufficient to control airborne levels. Respiratory protection is not required if good ventilation is maintained.

Personal Protective Equipment

Eye protection: Chemical-splash goggles.
Hand protection: Chemical-resistant gloves
Skin and body protection: Protective footwear. If major exposure is possible, wear suitable protective clothing and footwear.
Respiratory protection: In case of insufficient ventilation wear suitable respiratory equipment. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Ingredient(s)	CAS #	ACGIH	OSHA	Mexico
Diethylene glycol butyl ether	112-34-5	10 ppm (TWA)		
2-butoxyethanol	111-76-2	20 ppm (TWA)	Skin 50 ppm (TWA) 240 mg/m^3 (TWA)	75 ppm (STEL) 360 mg/m^3 (STEL) 26 ppm (TWA) 120 mg/m^3 (TWA)

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Appearance: Liquid Aqueous solution
Specific gravity: 0.995
Vapor density: No information available
Boiling point/range: Not determined
Decomposition temperature: Not determined
Solubility: Completely Soluble
Solubility in other solvents: No information available
Partition coefficient (n-octanol/water): No information available
Elemental Phosphorus: 0.00 % by wt.
pH: 12
Explosion limits: - upper: Not determined **- lower:** Not determined

Bulk density: No information available
Evaporation Rate: No information available
Color: Clear, Dark, Blue
Odor: Ammonia
Melting point/range: Not determined
Autoignition temperature: No information available
Density: 8.3 lbs/gal 0.995 Kg/L
Flash point: > 200 °F > 93.3 °C
Viscosity: No information available
VOC: 13.5 % *
Dilution pH: 10.5 @ 1:40

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Stability: The product is stable
Polymerization: Hazardous polymerization does not occur.
Hazardous decomposition products: None reasonably foreseeable.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Corrosive. Oral LD50 estimated to be between 2000 - 3000 mg/kg. Dermal LD50 estimated to be > 2000 mg/kg.
Component Information: See Section 3.

Chronic toxicity: None known

Specific effects
Carcinogenic effects: None known
Mutagenic effects: None known
Reproductive toxicity: None known
Target organ effects: None known

12. ECOLOGICAL INFORMATION

Environmental Information: No data available.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
This product, as sold, if discarded or disposed, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Dispose in compliance with all Federal, state, provincial, and local laws and regulations.
RCRA Hazard Class (undiluted product): Not Regulated

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: Proper shipping descriptions can vary by pack size. Please refer to the Diversey HazMat Library, http://naextranet.diversey.com/dot/, for up to date shipping information.

DOT (Ground) Bill of Lading Description: UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S., (ammonium hydroxide), 8, II

IMDG (Ocean) Bill of Lading Description: UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S., (ammonium hydroxide), 8, II

15. REGULATORY INFORMATION

International Inventories at CAS# Level
All components of this product are listed on the following inventories: U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (ECL), Philippines (PICCS), China (IECSC).

U.S. Regulations
California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65.

RIGHT TO KNOW (RTK)

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Water	7732-18-5	-	-	-	-
Diethylene glycol butyl ether	112-34-5	-	X	-	-
2-butoxyethanol	111-76-2	X	X	X	-
Sodium lauryl sulfate	151-21-3	-	-	-	-
Ammonium hydroxide	1336-21-6	X	X	X	X

CERCLA/ SARA

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Diethylene glycol butyl ether	112-34-5	20 - 30%			X
2-butoxyethanol	111-76-2	10 - 20%			X
Ammonium hydroxide	1336-21-6	1 - 5%	1000		X

Ingredient(s)	CAA HAP	CAA ODS	CWA Priority Pollutants
Diethylene glycol butyl ether	X		

2-butoxyethanol	X		

SARA 311/312 Hazard Categories

Immediate:	x
Delayed:	-
Fire:	-
Reactivity:	-
Sudden Release of Pressure:	-

Canadian Regulations

WHMIS hazard class: E Corrosive material.



16. OTHER INFORMATION

Reason for revision:	Not applicable
Prepared by:	NAPRAC
Additional advice:	• Does not contain an added fragrance • This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations

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RECKITT BENCKISER

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	**GLASS PLUS® GLASS & MULTI-SURFACE CLEANER (TRIGGER & REFILL)**
Product Description	Trigger and refill products for streak free cleaning of glass and other shiny surfaces. Contains no ammonia or phosphates.
Manufacturer	Reckitt Benckiser North America, Inc. Morris Corporate Center IV 399 Interpace Parkway (P.O. Box 225) Parsippany, N.J. 07054-0225
Product Identifier	Not available.
Item Number	0002832

MSDS#	Not available.
Validation Date	4/1/2008
Print Date	4/1/2008

In case of Emergency:	Telephone: 800-228-4722
Transportation Emergencies:	Chemtrec: 1-800-424-9300 (U.S. & Canada) Outside the U.S & Canada (North America), call: 703-527-3887

Formula Number	1201-088B
UPC Number	19200-00085 (32 oz.) Trigger; 19200-00080 (64 oz. Refill); 62338-77453 (144 oz. Refill).

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits : TLV/PEL
No hazardous ingredient.			

Section 3. Hazards Identification

Emergency Overview	KEEP OUT OF REACH OF CHILDREN.

Section 4. First Aid Measures

Eye Contact	As with any material contacting the eye, it is recommended to rinse the eyes thoroughly with water.
Skin Contact	In keeping with good hygienic practices, wash exposed areas thoroughly with soap and water.
Inhalation	Remove to fresh air.
Ingestion	Rinse mouth with water. Contact a physician or poison control center if symptoms develop. NEVER give an unconscious person anything to ingest.

Section 5. Fire and Explosion Data

Flammability	See Section 14 for any Shipping Classifications.
Flash Point	CLOSED CUP: Higher than 93.3°C (200°F). (Tagliabue)
Explosive Limits in Air	Not available.
Products of Combustion	Carbon monoxide, carbon dioxide and other unknown organic compounds.

Continued on Next Page

Fire and Explosion Hazards	None known.
Fire Fighting Media and Instructions	Use extinguishing media suitable for surrounding materials.
Special Fire Fighting Instructions	Wear self-contained breathing apparatus and protective clothing appropriate for fighting a chemical fire.

Section 6. Accidental Release Measures

Accidental Spill	Small spills: Absorb with an inert material and place in appropriate waste disposal container. Small spills may also be flushed into the drain with water. Large spills should be diked, contained and collected for later disposal according to local, state or federal regulations.

Section 7. Handling and Storage

Handling and Storage	KEEP OUT OF REACH OF CHILDREN. Store in original container in a cool, secure area inaccessible to children and pets. Keep from freezing.

Section 8. Exposure Controls/Personal Protection

Ventilation Requirements	No special ventilation requirements.
Eye Protection	None required under normal use conditions. When handling in large quantities or responding to emergency situations, the use of appropriate eye protection is recommended.
Skin Protection	None required.
Respiratory Protection	None required.
Other Protection	None required.
Work/Hygienic Practices	None required.

Section 9. Physical and Chemical Properties

Description	Liquid. (Clear sparkling liquid.)
pH	10.5 [Basic.]
Boiling/Condensation Point	100°C (212°F).
Specific Gravity	0.995 (Water = 1)
Vapor Pressure	17.5 mm of Hg (@ 20°C).
Vapor Density	Not available.
Viscosity	Not available.
Solubility	Complete.
Physical Chemical Comments	Not available.

Odor	Floral / citrus.
Color	Blue.

Continued on Next Page

Section 10. Stability and Reactivity Data

Chemical Stability	The product is stable.
Conditions of Instability	None known.
Incompatibility with Various Substances	None known.
Hazardous Decomposition Products	None known.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Exposure effects

Eye Contact	No adverse effects expected.
Skin Contact	Not a skin irritant.
Inhalation	Inhalation toxicity not determined.
Ingestion	Not orally toxic.
Carcinogenicity	Not listed as carcinogenic by OSHA, NTP or IARC.

Section 12. Ecological Information

Ecotoxicity	Not available.

Section 13. Disposal Considerations

Waste Disposal	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Rinse empty container thoroughly and discard in trash or rinse and recycle container. Dispose of in accordance with local, state and federal regulations.

Section 14. Transport Information

DOT Classification	Not a DOT regulated material (United States).
Proper Shipping Name	Not applicable.
DOT Identification Number	Not applicable.
Packing Group	Not applicable.
Maritime Transportation	Not applicable.
Hazardous Substances Reportable Quantity	Not applicable.
Special Provisions for Transport	Not applicable.
TDG Classification	Not regulated under TDG.

Continued on Next Page

ADR Classification	Not applicable.
IMDG Classification	Not regulated under IMDG.
IATA Classification	Not regulated under IATA.

Section 15. Regulatory Information

Federal and State Regulations

SARA Title III, Section 313 Toxic Chemical Notification & Release Reporting:

None

California Proposition 65: This product contains the following ingredients which require a warning under the Safe Drinking Water & Toxic Enforcement Act:

None

Other Classifications

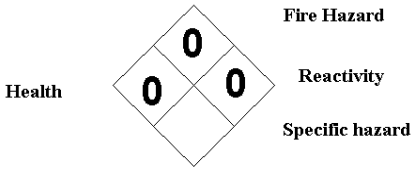
WHMIS (Canada) Not a WHMIS controlled product.

Section 16. Other Information

HMIS (U.S.A.)

Health Hazard	0
Fire Hazard	0
Reactivity	0
Personal Protection	A

National Fire Protection Association (U.S.A.)



NFPA Aerosol Level Not applicable.

Reviewed by Regulatory on 4/1/2008

Printed on 4/1/2008

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

MATERIAL SAFETY DATA SHEET
(SIMILAR TO OSHA FORM 174)

N.A. = Not Applicable
Not Est. = Not Established
Prop. = Proprietary

SECTION 1 - MANUFACTURER / DISTRIBUTOR INFORMATION

Product Name: GLEAM Furniture Polish
Product #: 1305
Supplier's Name: National Chemical Laboratories of PA, Inc.
Supplier's Address: 401 N. 10th Street · Philadelphia PA 19123
Emergency Phone #: CHEM-TEL (800) 255-3924
HMIS Hazard Code: **Health:** 1 **Flammability:** 0 **Reactivity:** 0 **Other:** 0
Chemical Name: N.A. Proprietary Blend
Chemical Family: Mineral Oil Emulsion
Formula: N.A. Blended Product
D.O.T. Shipping Name: N/A
Hazard Class: N/A **D.O.T. ID#:** N/A

SECTION 2 - HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NUMBER	% Concentration Range	Hazard Ratings (TLV/PEL)
Mineral Seal Oil	64742-30-9	PROP.	5 mg/m^3

SECTION 3 - PHYSICAL DATA

Boiling Point (°F): 212
Specific Gravity: 0.913
Vapor Pressure: = To Water
Evaporation Rate: = To Water
Vapor Density: = To Water
Solubility in Water: Disperses
Appearance: White Opaque Thin Liquid
Odor: Banana

SECTION 4 - FIRE AND EXPLOSION DATA

Flash Point (°F): None to boiling (TOC)
Flammable Limits: N/A
Unusual Fire & Explosion Hazards: None

SECTION 5 - HEALTH HAZARD DATA

Route(s) of Entry: **Inhalation:** No **Skin:** Yes **Ingestion:** Yes **Threshold Limit Value:** Not Est.
Effects of Overexposure: May cause minor skin and eye irritation. Harmful if swallowed. May cause severe diarrhea.
Emergency & First Aid Procedures: **For Eyes:** Flush thoroughly with water for at least fifteen minutes. If irritation persists seek medical attention.
For Skin: Flush skin thoroughly with water. If irritation persists seek medical attention. **If ingested:** Do not induce vomiting. Give large quantities of water. Seek medical attention. Never give anything by mouth to an unconscious person.
Conditions Aggravated by Exposure: None

Listed Carcinogen, Mutagen, Teratogen (Ingredient, Source, Amount): None

SECTION 6 - REACTIVITY DATA

Stability: Stable
Conditions to Avoid: None
Incompatibility: Avoid contact with strong oxidizers
Hazardous Decomposition Products: Carbon Oxides
Hazardous Polymerization: Will not occur.

SECTION 7 - SPILL OR LEAK PROCEDURES

Steps to be taken if material is released or spilled: Recontainerize by mopping, wet vacuum, or using a suitable absorbent. Be cautious of slippery floors.
Waste Disposal Method: Follow local, state, and federal regulations.

SECTION 8 - SPECIAL PROTECTION INFORMATION

Respiratory Protection: Not required
Ventilation: Not required
Protective Gloves: Not required
Eye Protection: Not required
Other Protective Equipment: Not required

SECTION 9 – SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Store between 40°F and 120°F.
Other Precautions: Keep out of reach of children. For professional use only.

The information contained in this MSDS was obtained from current and reliable sources, however the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of this company, it is not responsible for loss, injury and expense arising out of the product's improper use. No warranty, expressed or inferred, regarding the product described in this MSDS shall be created or inferred by any statement in this MSDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use or disposal of this product which may be covered by this MSDS. The user is responsible for full compliance.

Date Prepared – 10/05/00 By: G.C.

MATERIAL SAFETY DATA SHEET

prepared 11/23/05

HAZARDS IDENTIFICATION (ANSI Section 3)

Primary route(s) of exposure : Inhalation, skin contact, eye contact, ingestion.

Effects of overexposure :

Inhalation : Irritation of respiratory tract. Prolonged inhalation may lead to headache, nausea, chest pain, coughing, difficulty of breathing, severe lung irritation or damage, pneumoconiosis.

Skin contact : Irritation of skin.

Eye contact : Irritation of eyes.

Ingestion : Ingestion may cause mouth and throat irritation, gastro-intestinal disturbances.

Medical conditions aggravated by exposure : Eye, skin, respiratory disorders, asthma-like conditions.

FIRST-AID MEASURES (ANSI Section 4)

Inhalation : Remove to fresh air. Restore and support continued breathing. Get emergency medical attention. Have trained person give oxygen if necessary. Get medical help for any breathing difficulty. Remove to fresh air if inhalation causes eye watering, headaches, dizziness, or other discomfort.

Skin contact : Wash thoroughly with soap and water. If any product remains, gently rub petroleum jelly, vegetable or mineral/baby oil onto skin. Repeated applications may be needed. Remove contaminated clothing. Wash contaminated clothing before re-use.

Eye contact : Flush immediately with large amounts of water, especially under lids for at least 15 minutes. If irritation or other effects persist, obtain medical treatment.

Ingestion : If swallowed, obtain medical treatment immediately.

FIRE-FIGHTING MEASURES (ANSI Section 5)

Fire extinguishing media : Dry chemical or foam closed containers may burst if exposed to extreme heat or fire.

Fire fighting procedures : Water may be used to cool and protect exposed containers. Firefighters should use full protective clothing, eye protection, and self-contained breathing apparatus.

Hazardous decomposition or combustion products : Carbon monoxide, carbon dioxide.

ACCIDENTAL RELEASE MEASURES (ANSI Section 6)

Steps to be taken in case material is released or spilled : Comply with all applicable health and environmental regulations. Ventilate area. Spills may be collected with absorbent materials. Place collected material in proper container. Complete personal protective equipment must be used during cleanup. Large spills - shut off leak if safe to do so. Dike and contain spill. Pump to storage or salvage vessels. Use absorbent to pick up excess residue. Keep salvageable material and rinse water out of sewers and water courses. Small spills - use absorbent to pick up residue and dispose of properly.

HANDLING AND STORAGE (ANSI Section 7)

Handling and storage : Store below 100f (38c). Keep from freezing.

Other precautions : Use only with adequate ventilation. Do not take internally. Keep out of reach of children. Avoid contact with skin and eyes, and breathing of vapors. Wash hands thoroughly after handling, especially before eating or smoking. Keep containers tightly closed and upright when not in use. Avoid conditions which result in formation of inhalable particles such as spraying or abrading (sanding) painted surfaces. If such conditions cannot be avoided, use appropriate respiratory protection as directed under exposure controls/personal protection.

EXPOSURE CONTROLS/PERSONAL PROTECTION (ANSI Section 8)

Respiratory protection : Control environmental concentrations below applicable exposure standards when using this material. When respiratory protection is determined to be necessary, use a NIOSH/MSHA (Canadian z94.4) Approved elastomeric sealing- surface facepiece respirator outfitted with organic vapor cartridges and paint spray (dust/mist) prefilters. Determine the proper level of protection by conducting appropriate air monitoring. Consult 29CFR1910.134 For selection of respirators (Canadian z94.4).

Ventilation : Provide dilution ventilation or local exhaust to prevent build-up of vapors.

Personal protective equipment : Eye wash, safety shower, safety glasses or goggles. Impervious gloves, impervious clothing.

STABILITY AND REACTIVITY (ANSI Section 10)

Under normal conditions : Stable see section 5 fire fighting measures

Materials to avoid : Oxidizers.

Conditions to avoid : Elevated temperatures, freezing.

Hazardous polymerization : Will not occur

TOXICOLOGICAL INFORMATION (ANSI Section 11)

Supplemental health information : No additional effects are anticipated

Carcinogenicity : In a lifetime inhalation study, exposure to 250 mg/m3 titanium dioxide resulted in the development of lung tumors in rats. These tumors occurred only at dust levels that overwhelmed the animals' lung clearance mechanisms and were different from common human lung tumors in both type and location. The relevance of these findings to humans is unknown but questionable.

Reproductive effects : No reproductive effects are anticipated

Mutagenicity : No mutagenic effects are anticipated

Teratogenicity : No teratogenic effects are anticipated

ECOLOGICAL INFORMATION (ANSI Section 12)

No ecological testing has been done by ICI paints on this product as a whole.

DISPOSAL CONSIDERATIONS (ANSI Section 13)

Waste disposal : Dispose in accordance with all applicable regulations. Avoid discharge to natural waters.

REGULATORY INFORMATION (ANSI Section 15)

As of the date of this MSDS, all of the components in this product are listed (or are otherwise exempt from listing) on the TSCA inventory. This product has been classified in accordance with the hazard criteria of the CPR (controlled products regulations) and the MSDS contains all the information required by the CPR.

The information contained herein is based on data available at the time of preparation of this data sheet which ICI Paints believes to be reliable. However, no warranty is expressed or implied regarding the accuracy of this data. ICI Paints shall not be responsible for the use of this information, or of any product, method or apparatus mentioned and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and the health and safety of your employees and the users of this material.
Complies with OSHA hazard communication standard 29CFR1910.1200.

ICI Paints North America
15885 Sprague Road Strongsville, Ohio 44136
EMERGENCY TELEPHONE NO. (800) 545-2643

ULTRA-HIDE PVA PRIMER

GL1050

Physical Data (ANSI Sections 1, 9, and 14)

Product Code	Description	Wt. / Gal.	VOC gr. / ltr.	% Volatile by Volume	Flash Point	Boiling Range	HMIS	DOT, proper shipping name
GL1050-1200	glidden speedwall pva primer interior, white	9.59	73.10	84.92	none	212-212	310	paint ** protect from freezing **

Ingredients Product Codes with % by Weight (ANSI Section 2)

Chemical Name	Common Name	CAS. No.	GL1050-1200
titanium oxide	titanium dioxide	13463-67-7	1-5
nepheline syenite	feldspar-type minerals	37244-96-5	1-5
ceramic materials and wares, chemicals	calcined kaolin clay	66402-68-4	10-20
water	water	7732-18-5	70-80

Chemical Hazard Data (ANSI Sections 2, 8, 11, and 15)

		ACGIH-TLV				OSHA-PEL				S.R. Std.	S2	S3	CC					
Common Name	CAS. No.	8-Hour TWA	STEL	C	S	8-Hour TWA	STEL	C	S					H	M	N	I	O
titanium dioxide	13463-67-7	10 mg/m3	not est.	not est.	not est.	10 mg/m3	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
feldspar-type minerals	37244-96-5	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
calcined kaolin clay	66402-68-4	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n

Footnotes:

C=Ceiling - Concentration that should not be exceeded, even instantaneously.

S=Skin - Additional exposure, over and above airborn exposure, may result from skin absorption.

n/a=not applicable
not est=not established
CC=CERCLA Chemical

ppm=parts per million
mg/m3=milligrams per cubic meter
Sup Conf=Supplier Confidential

S2=Sara Section 302 EHS
S3=Sara Section 313 Chemical
S.R.Std.=Supplier Recommended Standard

H=Hazardous Air Pollutant, M=Marine Pollutant
P=Pollutant, S=Severe Pollutant
Carcinogenicity Listed By:
N=NTP, I=IARC, O=OSHA, y=yes, n=no

V764

21707-1005

Product Name: Blick Gloss Fixative
Product Code 21707-1005

Print Date: 3/23/10
Total pages: Page 1 of 7

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name: Blick Gloss Fixative
Product Code: 21707-1005 **Product Type:** Aerosol
Product Use: Art Material Coating

Manufacturer Creative Art Materials Ltd. **Revision Date:**03/22/2010
Address: 4310 Cranwood Parkway
Warrensville Heights, OH 44128 **Phone:** (216)-518-0298

NOTE: The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Creative Art Materials Ltd. provides this information as guidance for providing personal protection to your employees. The user has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. The user must meet all applicable safety and health standards.

2. Composition / Information on Ingredients

Ingredients	CAS #	Percent
Acetone	67-64-1	35-45
Isobutyl Acetate	108-21-4	2-7
Methyl Isobutyl Ketone	108-10-1	2-4
Methyl Ethyl Ketone	78-93-3	2-4
N. Butyl Acetate	123-86-4	<1
Primary Amyl Acetate	628-63-7	1-4
Diacetone Alcohol	123-42-2	2-7
VM&P	64742-89-8	1-3
Ethyl Benzene	1000-41-4	0-1
Xylene	1330-20-7	4-12
Isopropanal	67-63-0	<1
LPG	68476-86-8	15-30

3. Hazards Identification

CAUTION! CONTENTS UNDER PRESSURE EXTREMELY FLAMMABLE

Odor/Appearance: Clear mist as dispensed from aerosol can.

Potential health effects

Routes of exposure: Skin, eyes, inhalation, ingestion.

Eye Contact:
May cause immediate or delayed irritation. Irritation may show up as redness and/or swelling. May cause corneal damage.

Skin Contact:
Repeated or prolonged contact with skin may produce redness, irritation and/or dryness. May cause or aggravate dermatitis or other existing skin condition.

Inhalation:
Inhalation of vapors or spray mist may cause headaches, and/or nose and throat irritation.

Ingestion:
Ingestion may cause irritation to the mouth, esophagus, and/or stomach.

Signs or Overexposure:
Irritation of eyes, nose, throat, digestive tract.

Pre-existing Conditions Aggravated:
Skin and respiratory disorders. Alcoholism, kidney, liver, cardiovascular and nervous system disorders.

Target Organs:
Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals:. mild. reversible kidney effects, effects on hearing, central nervous system damage

4. First Aid Measures

Eye Contact:
Flush with warm water for 15 minutes. Seek medical attention.

Skin Contact:
Wash with soap and water. Remove any contaminated clothing and launder before reusing. If irritation persists, seek medical attention.

Inhalation:
Remove exposed individual to fresh air, protecting yourself. Restore breathing if necessary. Contact a physician.

Ingestion:
Immediately give the person two large glasses of water. Do not induce vomiting. Get medical attention immediately. DO NOT GIVE AN UNCONCIOUS OR CONVULSING PERSON ANYTHING BY MOUTH!

5. Fire Fighting Measures

Flash Point: Flash point of propellant <0 degrees F. Based on Propellant

Flammable limits in air, % by volume:

Upper:	No Information
Lower:	No Information

Extinguishing Media:
Dry chemical, carbon dioxide, halon, or foam is recommended. Water spray may be used to cool containers or structures. Halon may decompose into toxic materials and carbon dioxide will displace oxygen, take proper precautions when using these materials.

Unusual Fire & Explosion Hazards:
This material may be ignited by extreme heat, sparks, flames or other ignition sources (static electricity). Vapors are heavier than air and will collect in low areas (sewers) or travel considerable distances. If containers are not cooled in a fire, they may rupture and ignite.

Special Fire Fighting Procedures:
At elevated temperatures (over 130F) aerosol container may burst, vent or rupture; use equipment or shielding to protect personnel. Cooling exposed containers with streams of water may be helpful. Emergency responders should wear self-contained breathing apparatus. Wear other protective gear as conditions warrant. Keep unauthorized people out and try to contain spills or leaks if it can be done safely. Material will float on water, avoid spreading the fire.

6. Accidental Release Measures

Spill or Leak Instructions
Contain spill with dikes of soil or nonflammable absorbent to minimize contaminated area. Avoid run-off into storm sewers and ditches leading to waterways. If required, notify state and local authorities. Place leaking containers in well-ventilated area. Clean up small spills by using a nonflammable absorbent or flushing sparingly with water. Contain larger spills with nonflammable diking or absorbent. Clean up by vacuuming or sweeping.

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Assess the spill situation, as the spill may not evolve large amounts of hazardous airborne contaminants in many outdoor spill situations. It may be advisable in some cases to simply monitor the situation until spilled product is removed.

7. Handling and Storage

Handling:

Store below 120°F in cool, dry area, out of direct sunlight and away from strong oxidizers. Do not puncture or burst. Use in accordance with good work place practices. Use with adequate ventilation. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Avoid breathing vapor. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Decontaminate soiled clothing thoroughly before re-use. Destroy contaminated leather clothing.

Empty containers may contain residues from the product. Treat empty containers with the same precautions as the material last contained. Do not cut, weld or apply heat to empty containers Do not incinerate

Storage:
Store in a cool, dry area, away form heat or direct sunlight. Keep containers closed when not in use. Do not store with incompatible materials

8. Exposure Controls / Personal Protection

Protective Equipment:
Use synthetic gloves if necessary to prevent excessive skin contact. Do not wear contacts and always use ANSI approved safety glasses or splash shield.

Engineering Controls:
General or dilution ventilation is frequently sufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Use a NIOSH approved respirator if ventilation is not adequate to maintain exposures below TLV levels.

Respiratory Protection:
Use adequate ventilation to maintain exposure limits. If the exposure limits of the products or any of its components is exceeded, an approved organic vapor mask should be used (consult your safety equipment supplier). Above 1000 ppm. an approved self-contained breathing apparatus or airline respirator with full face-piece is required

Other Suggested Equipment:
Eye wash station and emergency showers should be available. Spill containment equipment should be available.

Discretion Advised:
Eveready. takes no responsibility for determining what measures are required for personal protection in any specific application. The general information should be used with discretion.

Exposure guidelines:

Ingredients	CAS #	Exposure Limits OSHA (PEL) Ppm	ACGIH (TLV) Ppm
Acetone	67-64-1	750	750
Isobutyl Acetate	108-21-4	150	150
Methyl Isobutyl Ketone	108-10-1	100	50
Methyl Ethyl Ketone	78-93-3	200	200
N. Butyl Acetate	123-86-4	150	150
Primary Amyl Acetate	628-63-7	50	100
Diacetone Alcohol	123-42-2	50	50
VM&P	64742-89-8	300	300
Ethyl Benzene	100.41-4	100	100
Xylene	1330-20-7	100	100
Isopropanal	67-63-0	400	500
LPG	68476-86-8	1000	1000

Product Name: Blick Gloss Fixative
Product Code 21707-1005

Print Date: 3/23/10
Total pages: Page 5 of 7

9. Physical and Chemical Properties

Boiling Point: NA
Specific Gravity: <1
Vapor Density: >1(Air=1)
Water Solubility: Emulsifies
Odor/Appearance: Clear mist as dispensed from aerosol can.
Evaporation Rate: Ether = 1 Slower

10. Stability and Reactivity

Stability: Stable
Conditions to Avoid: Heat, spark, and open flame
Incompatibility: Strong-Oxidizing Agents
Hazardous Decomposition: Combustion will produce Carbon Monoxide, Carbon Dioxide and nitrogen-oxygen compounds.
Hazardous Polymerization: Will not occur

11. Toxicological Information

Component Toxicological Information:

Acute oral toxicity		
	Acetone	LD 50 Rat: 5800 mg/kg
	Xyklene	LD 50 Rat 4,300 mg/kg
	Ethyl Benzene	LD 50 Rat 3,500 mg/kg
	Isopropanol	LD 50 >5,000 mg/kg
	Methyl Ethyl Ketone	LD 50 Rat 2737 mg/kg
	Methyl Isobutyl Ketone	LD 50 Rat 2080 mg/kg
Acute inhalation toxicity		
	Acetone	LC 50 Rat: > 16,000 ppm, 4h
	Xylene	no date
	Ethyl Benzene	LC Lo Rat 4,000 ppm, 4 h
	Methyl Ethyl Ketone	LC 50 Rat 23,500 mg/m3
Acute dermal toxicity		
	Acetone	LD 50 Rabbit: > 20,000 mg/kg
	Xylene	LD 50 Rabbit > 2,000 mg/kg
	Ethyl Benzene	LD 50 Rabbit 15,433 mg/kg
	Isopropanol	LD 50 > 2,000 mg/kg
	Methyl Ethyl Ketone	LD50 Rabbit 6480 mg/kg
	Methyl Isobutyl Ketone	LD 50 Rabbit >20 gm/kg

12. Ecological Information

N/A

13. Disposal Considerations

Do not puncture or burn containers. Give empty, leaking, or full containers to disposal service equipped to handle and dispose of aerosol (pressurized) containers. Dispose of spilled material in accordance with state

and local regulations for waste that is non-hazardous by Federal definition. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

Note that this handling and disposal information may also apply to empty containers, liners and rinsate. State or local regulations or restrictions are complex and may differ from federal regulations. This information is intended as an aid to proper handling and disposal; the final responsibility for handling and disposal is with the owner of the waste. See Section 9 - Physical and Chemical Properties.

14. Transport Information

Ground (US DOT) Consumer Commodity
Class ORM-D,

AIR (IATA)
Consumer Commodity, Class 9, UN/ID 8000, Packing 1900, Authorization: Limited Quantity
Vessel
Aerosol (Limited Quantity), class 2, UN No 1950

15. Regulatory Information

Environmental Regulations

SARA 311/312:
Immediate (x) Delayed ( ) Fire (x) Reactive ( ) Sudden Release of Pressure (x)

Section 313
This product contains:

Xylene	1330-20-7	8-12%
Methyl Ethyl Ketone	78-93-3	2-4%

California Prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (female) which require a warning under the stature: Toluene, Benzene

California Prop 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Benzene, Ethyl Benzine

All the chemicals used in this product are TSCA listed.
Check with your local regulators to be sure all local regulations are met.

Product Name: Blick Gloss Fixative
Product Code 21707-1005

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16. Other Information

Hazard ratings This information is intended solely for the use of individuals trained in the NFPA and/or HMIS systems.

NFPA: Level 3 Aerosol

HMIS: Health: 3 Flammability: 4 Reactivity: 0

RATING: 4-EXTREME 3-HIGH 2-MODERATE 1-SLIGHT 0-INSIGNIFICANT

Note:
For industrial use only. The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Eveready makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. This material may be released from gas, liquid, or solid materials made directly or indirectly from it. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards. Possession of an MSDS does not indicate that the possessor of the MSDS was a purchaser or user of the subject product.

Glucose Standard Sol. 1% Aqueous

Material Safety Data Sheet
Science Stuff, Inc.
1104 Newport Ave
Austin, TX 78753 Phone (512) 837-6020
Chemtrec 800-424-9300
24 Hour Emergency Assistance
Section 1 Identification
Product Number: C1790 Health: 0
Flammability 0
Reactivity 0
Hazard Rating:
Least Slight Moderate High Extreme
0 1 2 3 4
NA = Not Applicable NE = Not Established

Product Name: Glucose Standard Solution 1% Aqueous (1 ml = 10 mg)
Trade/Chemical Synonyms
Formula: N/A
RTECS:
C.A.S See Below
Section 2 Component Mixture
Sara 313 Component CAS Number % Dim Exposure Limits:

Water, Deionized ASTM Type II CAS# 7732-18-5 Balance v/v None Established

Benzoic Acid CAS# 65-85-0 0.01% W/V skin-human 6mg/Kg LDLO

Dextrose (Glucose) Anhydrous CAS# 50-99-7 0.1% W/V TXDS: orl-rat LD•: 25,800 mg/Kg

Section 3 Hazard Identification (Also see section 11)
Generally not hazardous in normal handling, however good laboratory practices should always be used. Avoid long term exposure to skin or by inhalation.
Section 4 First Aid Measures
Generally not hazardous in normal handling, however good laboratory practices should always be used. Avoid long term exposure to skin or by inhalation.

FIRST AID: SKIN: Wash exposed area with soap and water. If irritation persists, seek medical attention.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: Give several glasses of milk or water. Vomiting may occur spontaneously, but it is not necessary to induce. Never give anything by mouth to an unconscious person.
Section 5 Fire Fighting Measures

Fire Extinguisher Type: Any means suitable for extinguishing surrounding fire
Fire/Explosion Hazards: None Known.
Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

Section 6 Accidental Release Measures
Absorb spill with inert material. Flush excess down drain.

Section 7 Handling and Storage
Store in a cool dry place. This Material is not considered hazardous. Handle using safe laboratory practices.
Section 8 Exposure Controls & Personal Protection
Respiratory Protection:None required
Ventilation: Mechanical: Hand Protection: Gloves to prevent skin exposure as latex or vinyl
Local Exhaust: Eye Protection: Safety Glasses w/ Side Shields
Other Protective Equipment: Wear appropriate clothing to prevent skin exposure
Section 9 Physical and Chemical Properties
Melting Point: ~0° C Specific Gravity ~1.0
Boiling Point: ~100° C Percent Volatile by Volume: >98%
Vapor Pressure: Information not available Evaporation Rate: 1
Vapor Density: Information not available Evaporation Standard: Water =1
Solubility in Water: Soluble Auto ignition Temperature: Not applicable
Appearance and Odor: Clear odorless liquid Lower Flamm. Limit in Air: Not applicable

Flash Point: not flammable Upper Flamm. Limit in Air: Not applicable

Section 10 Stability and Reactivity Information
Stability: Stable Conditions to Avoid: Temperature extremes
Materials to Avoid:
Concentrated Acids and Bases, Water reactive materials.
Hazardous Decomposition Products:
Carbon dioxide, carbon monoxid
Hazardous Polymerization:Will Not Occur
Condition to Avoid:None known

Section 11 Additional Information
Overexposure symptoms. Acute: Essentially non-hazardous. Possible irritation of eyes/stomach. Chronic: None known. Conditions aggravated/Target organs: none known.

DOT Classification: Not Regulated
DOT regulations may change from time to time. Please consult the most recent version of the relevant regulations.
Revision No:0 Date Entered: 9/1/2006 Approved by: WPF

The information contained herein is believed to be accurate and is offered in good

faith for the user's consideration and investigation. No warranty is expressed or implied regarding the completeness or accuracy of this information, whether originating from Science Stuff, Inc. or from an alternate source. Users of this material should satisfy themselves by independent investigation of current scientific and medical information that this material may be safely handled.

Material Safety Data Sheet



Dextrose, Anhydrous

Revised: 07/13/2010
Replaces: 06/28/2010
Printed: 08/02/2010

Carolina Biological Supply Company
2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Dextrose, Anhydrous
Product Code(s): 17-1025, 20-2200, 20-2500, 20-2051, 85-7430, 85-7442, 85-7450, 85-7451, 85-7452, 84-0550, 84-0996, 84-0491, 10-1026, 25-1012, PD1031, C61411, C71928
Size: Various
Chemical Name: Dextrose
CAS Number: 50-99-7
Formula: C6H12O6
Synonyms: D-Glucose, Grape Sugar, Corn Sugar
Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F) **Chemtrec** 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 - Hazard Identification

Emergency Overview: Non-Hazardous under normal use.
Potential Health Effects:
Eyes: May cause irritation.
Skin: May cause irritation to skin.
Ingestion: May cause gastrointestinal discomfort.
Inhalation: May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Dextrose, Anhydrous
TLV units: N/A
PEL units: N/A

Section 4 - First Aid Measures

Emergency and First Aid Procedures:
Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of ... (Water, unless specified as a water reactive material).
Ingestion - If swallowed, rinse mouth with water (only if the person is conscious). If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): N/A
NFPA Rating:
Health: 0
Fire: 1
Reactivity: 0
Extinguisher Media: Use media suitable to extinguish surrounding fire.
Flammable Limits in Air % by Volume: N/A
Autoignition Temperature: N/A
Special Firefighting Procedures: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: None

Section 6 - Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Harmful if swallowed.
After contact with skin, wash immediately with plenty of ... (Water, unless specified as water-reactive).
Keep container dry.
Do not breathe dust. Keep container tightly closed in a cool, well-ventilated place.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.
Ventilation:
Local Exhaust: Preferred
Mechanical(General): Acceptable
Special: No
Other: No
Protective Gloves: Natural rubber, Neoprene, PVC or equivalent.
Eye Protection: Splash proof chemical safety goggles should be worn.
Other Protective Clothing or Equipment: Lab coat, apron, eye wash, safety shower.

Section 9 - Physical Data

Molecular Weight: 198.17 g/mol
Boiling Point: Decomposes
Vapor Density(Air=1): 6.3
Percent Volatile by Volume: 0%
Solubility in Water: Slightly Soluble
Melting Point: 146 °C
Vapor Pressure: N/A
Specific Gravity (H2O=1): 1.544
Evaporation Rate (BuAc=1): N/A
Appearance and Odor: White, odorless crystals.

Section 10 - Reactivity Data

Stability: Stable
Conditions to Avoid: Explosive when mixed with oxidising substances.

Incompatibility (Materials to Avoid): Oxidizers,
Hazardous Decomposition Products: COx,
Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: orl-rt LD50: 25,800 mg/kg
Effects of Overexposure:
Acute: See Section 2
Chronic: Reproductive data cited. Mutation data cited. Not listed as a carcinogen by IARC, NTP or OSHA.
Conditions Aggravated by Overexposure: None Known
Target Organs: No information available
Primary Route(s) of Entry: Inhalation.

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 13 - Disposal Information

Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

Section 14 - Transport Information

DOT Proper Shipping Name: N/A

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory
Hazard Category for SARA Section 311/312 Reporting: Acute

Name List:
No

Chemical Category:
No

CERCLA Section 103 RQ(lb.): No
RCRA Section 261.33: No

Section 16 - Additional Information

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS Number	Chemical Services Abstract Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency of Research on Cancer

N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 296.00
Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Dextrose

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300 **Signal Word** **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Dextrose, anhydrous	492-62-6	$C_6H_{12}O_6$	180.16	
Synonyms: alpha-D-glucose; Glucose; Sugar				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, sugars, amines, amides, imines and imides.
Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless to white crystals. Odorless.
Soluble: Water. Slightly in alcohol.

Melting point: 153-156 °C
Specific gravity: 1.544
Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Avoid strong oxidizers.
Shelf life: Good, if kept dry.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

EINECS-listed (207-757-8).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: February 6, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 373.00
Revision Date: August 10, 2015

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Glycerin

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2B). Causes skin and eye irritation (H315+H320).

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Glycerin	56-81-5	$C_3H_5(OH)_3$	92.094	
Synonyms: Glycerol; Glycerine; 1,2,3-Propanetriol				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Class IIIB combustible liquid.
Flash point: 177 °C (open cup) Autoignition Temperature: 393 °C
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
H-1
F-1
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Contain the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides.
Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: PEL 15 mg/m^3 (as total mist) (OSHA)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless viscous liquid. Odorless.
Soluble: Water and alcohol

Boiling point: 290 °C
Melting point: 18 °C
Refractive index: 1.4746
Specific gravity: 1.23 - 1.26

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizing agents such as chromium trioxide, potassium chlorate, or potassium permanganate; may produce an explosion.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye and skin irritant, nausea, headache, vomiting.
Chronic effects: N.A.
Target organs: Eyes, skin, and GI tract.

ORL-RAT LD_{50}: 12,600 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-289-5).

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: August 10, 2015

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Material Safety Data Sheet

Version 5.0
Revision Date 05/10/2011
Print Date 06/10/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Glycolic acid solution
Product Number	:	420603
Brand	:	Aldrich
Supplier	:	Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA
Telephone	:	+1 800-325-5832
Fax	:	+1 800-325-5052
Emergency Phone # (For both supplier and manufacturer)	:	(314) 776-6555
Preparation Information	:	Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Harmful by ingestion., Corrosive

GHS Classification
Acute toxicity, Oral (Category 5)
Acute toxicity, Inhalation (Category 4)
Skin corrosion (Category 1B)
Serious eye damage (Category 1)

GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H303	May be harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.

Precautionary statement(s)

P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard:	3
Flammability:	0
Physical hazards:	0

NFPA Rating

Health hazard:	3
Fire:	0

Reactivity Hazard: 0

Potential Health Effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	Harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.
Ingestion	Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Hydroxyacetic acid

Formula : $C_2H_4O_3$

CAS-No.	EC-No.	Index-No.	Concentration
Glycollic acid			
79-14-1	201-180-5	-	70 %
Water			
7732-18-5	231-791-2	-	30 %

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.Continue rinsing eyes during transport to hospital.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid
Colour	no data available

Safety data

pH	no data available
Melting point/freezing point	Melting point/range: 10 °C (50 °F)
Boiling point	112 °C (234 °F)
Flash point	no data available
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available

Density	1.25 g/mL at 25 °C (77 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
no data available

Materials to avoid
Strong oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
LD50 Oral - rat - 1,950 mg/kg (Glycollic acid)
Remarks: Behavioral:Somnolence (general depressed activity). Gastrointestinal:Other changes. Kidney, Ureter, Bladder:Other changes.

Inhalation LC50
LC50 Inhalation - rat - 4 h - 7,100 mg/m3(Glycollic acid)

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Olfaction:Other changes. Lungs, Thorax, or Respiration:Dyspnea. Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

Dermal LD50
no data available (Glycollic acid)

Other information on acute toxicity
no data available (Glycollic acid)

Skin corrosion/irritation
Skin - rabbit - Severe skin irritation (Glycollic acid)

Serious eye damage/eye irritation
Eyes - rabbit - Severe eye irritation (Glycollic acid)

Respiratory or skin sensitization
no data available (Glycollic acid)

Germ cell mutagenicity
no data available (Glycollic acid)
(Glycollic acid)

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable,

possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
Reproductive toxicity - rat - Oral
Maternal Effects: Other effects. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system. (Glycollic acid)

(Glycollic acid)

no data available (Glycollic acid)

Teratogenicity

(Glycollic acid)

no data available (Glycollic acid)

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available (Glycollic acid)

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available (Glycollic acid)

Potential health effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion	Harmful if swallowed.
Skin	Harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.

Signs and Symptoms of Exposure
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea (Glycollic acid)

Synergistic effects
no data available

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish	LC50 - Danio rerio (zebra fish) - 5,000 mg/l - 96 h (Glycollic acid)

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available (Glycollic acid)

PBT and vPvB assessment
no data available

Other adverse effects

May be harmful to aquatic organisms due to the shift of the pH. Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 3265 Class: 8 Packing group: II
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Glycollic acid)
Reportable Quantity (RQ):
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 3265 Class: 8 Packing group: II EMS-No: F-A, S-B
Proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glycollic acid)
Marine pollutant: No

IATA
UN number: 3265 Class: 8 Packing group: II
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Glycollic acid)

15. REGULATORY INFORMATION

OSHA Hazards
Harmful by ingestion., Corrosive

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Water	7732-18-5	
Glycollic acid	79-14-1	

New Jersey Right To Know Components

	CAS-No.	Revision Date
Water	7732-18-5	
Glycollic acid	79-14-1	

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information
Copyright 2011 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Date: 15 October 2012
Supercedes: 22 July 2011

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name: **GOJO® CHERRY GEL PUMICE HAND CLEANER**

Company Name & Address: GOJO Industries, Inc.
One GOJO Plaza, Suite 500
Akron, OH 44311

Emergency Phone: **1-800-424-9300 CHEMTREC**
Non-Emergency Phone: (330) 255-6000
MSDS Request Phone: (330) 255-6000 x8804

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
Petroleum Distillates (vapor)	64742-47-8	--	200 mg/m3	< 30%

Other ingredient(s) with notification requirements:	CAS NUMBER	List
Petroleum Distillates	64742-47-8	MA; NJ; PA
Oleic Acid	112-80-1	PA: CN

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 1 Flammability 1 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: Not applicable.
Ingestion: May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.
Skin Contact: Not applicable.
Inhalation: Not applicable.
Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.

5. FIRE FIGHTING MEASURES:

NFPA: Health 1 Fire 1 Reactivity 0

Flashpoint °F/°C (PMCC method): > 200° F/93° C
Unusual Fire and Explosion Hazards: None known.
Special Fire Fighting Procedures: None known.

Extinguishing Media: X Water Fog X Alcohol Foam X CO_2 X Dry Chemical ____ Other

6. ACCIDENTAL RELEASE MEASURES:

No special requirements. Water clean up and rinse. CAUTION – WILL CAUSE SLIPPERY SURFACES.

7. HANDLING AND STORAGE:

Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection:	None required under normal conditions.
Skin Protection:	None required under normal conditions.
Respiratory Protection:	None required under normal conditions.
Ventilation:	None required under normal conditions.
Protective Equipment or Clothing:	None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor	Clear red gel with cherry fragrance and abrasives
pH (undiluted):	6.5 – 8.0
VOC , %:	0

10. STABILITY AND REACTIVITY:

Stable/Non reactive product.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers and treatment plants.

13. DISPOSAL CONSIDERATIONS:

No special considerations when disposed according to local, state and Federal regulations.

14. TRANSPORT INFORMATION:

Not classified as a hazardous material.

15. REGULATORY AND OTHER INFORMATION:

TSCA: All ingredients are listed or exempt per reference 15 USC 2602 (2)(B)(vi).

Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.

WHMIS: Exempt under the Food and Drug Act

Notice: The information herein is based on data considered to be accurate as of the date of preparation of this material safety data sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

Date: 15 September 2004
Supercedes: New

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name: **GOJO® Lemon Pumice Hand Cleaner**

Company Name & Address:
GOJO Industries, Inc.
One GOJO Plaza, Suite 500
Akron, OH 44311

Emergency Phone: **1-800-424-9300 CHEMTREC**
Non-Emergency Phone: (330) 255-6000
MSDS Request Phone: (330) 255-6000 x8804

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
None				

Other ingredient(s) with notification requirements:	CAS NUMBER	List
Petroleum Distillates	8002-05-9	MA 1; NJ 1; PA 1
Propylene Glycol	57-55-6	CN 1; PA 1

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 1 Flammability 1 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: Not applicable.
Ingestion: May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.
Skin Contact: Not applicable.
Inhalation: Not applicable.
Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.

5. FIRE FIGHTING MEASURES:

NFPA: Health 0 Fire 1 Reactivity 0

Flashpoint °F/°C (PMCC method): >212°F/>100°C
Unusual Fire and Explosion Hazards: None known.
Special Fire Fighting Procedures: None known.
Extinguishing Media: X Water Fog X Alcohol Foam X CO_2 X Dry Chemical ____ Other

6. ACCIDENTAL RELEASE MEASURES:

No special requirements. Water clean up and rinse. CAUTION – WILL CAUSE SLIPPERY SURFACES.

7. HANDLING AND STORAGE:

Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection:	None required under normal conditions.
Skin Protection:	None required under normal conditions.
Respiratory Protection:	None required under normal conditions.
Ventilation:	None required under normal conditions.
Protective Equipment or Clothing:	None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor	Green opaque gel, lemon odor.
pH (undiluted):	8.5 typical
VOC , %:	3-4

10. STABILITY AND REACTIVITY:

Stable/Non reactive product.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. DISPOSAL CONSIDERATIONS:

No special considerations when disposed according to local, state and Federal regulations.

14. TRANSPORT INFORMATION:

Not classified as a hazardous material.

15. REGULATORY AND OTHER INFORMATION:

TSCA: All ingredients are listed or exempt per reference 15 USC 2602 (2)(B)(iv).
DSL: All ingredients are listed on the inventory.

Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.

Notice: The information herein is based on data considered to be accurate as of the date of preparation of this material safety data sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

SAFETY DATA SHEET

GOJO® Lotion Cream Soap

Version	Revision Date:	MSDS Number:	Date of last issue: 12/02/2014
1.2	02/10/2015	31606-00003	Date of first issue: 11/24/2014

SECTION 1. IDENTIFICATION

Product name : GOJO® Lotion Cream Soap

Manufacturer or supplier's details

Company name of supplier : GOJO Industries, Inc.

Address : One GOJO Plaza, Suite 500
Akron OH 44311

Telephone : 1 (330) 255-6000

Emergency telephone : 1-800-424-9300 CHEMTREC

Recommended use of the chemical and restrictions on use

Recommended use : Skin-care

Restrictions on use : This is a personal care or cosmetic product that is safe for consumers and other users under normal and reasonably foreseeable use. Cosmetics and consumer products, specifically defined by regulations around the world, are exempt from the requirement of an SDS for the consumer. While this material is not considered hazardous, this SDS contains valuable information critical to the safe handling and proper use of the product for industrial workplace conditions as well as unusual and unintended exposures such as large spills. This SDS should be retained and available for employees and other users of this product. For specific intended-use guidance, please refer to the information provided on the package or instruction sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Alcohols, C10-16, ethoxylated, sulfates, sodium	68585-34-2	>= 1 - < 5

salts		
Cocoamidopropyl betaine	61789-40-0	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

If inhaled	:	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	:	Wash with water and soap as a precaution. Get medical attention if symptoms occur.
In case of eye contact	:	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	:	None known.
Protection of first-aiders	:	No special precautions are necessary for first aid responders.
Notes to physician	:	Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Dry chemical Carbon dioxide (CO2)
Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	Exposure to combustion products may be a hazard to health.
Hazardous combustion products	:	Sulfur oxides Carbon oxides Metal oxides Chlorine compounds Nitrogen oxides (NOx)
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions	:	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	Use only with adequate ventilation.
Advice on safe handling	:	Handle in accordance with good industrial hygiene and safety practice. Take care to prevent spills, waste and minimize release to the environment.
Conditions for safe storage	:	Keep in properly labeled containers. Store in accordance with the particular national regulations.
Materials to avoid	:	Do not store with the following product types: Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Ingredients	CAS-No.
Alcohols, C10-16, ethoxylated, sulfates, sodium salts	68585-34-2
Cocoamidopropyl betaine	61789-40-0

Engineering measures : Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.
Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at workplaces have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m3 - total dust, 5 mg/m3 - respirable fraction; and ACGIH TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m3 - respirable particles, 10 mg/m3 - inhalable particles.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Remarks : Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:
Safety glasses

Skin and body protection : Skin should be washed after contact.

Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	opalescent, pink
Odor	:	floral
Odor Threshold	:	No data available
pH	:	4.8 - 6.2
Melting point/freezing point	:	No data available
Solidification / Setting point		2.9 °C
Initial boiling point and boiling range	:	97.00 °C
Flash point	:	> 100 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Density	:	1.00 g/cm3
Solubility(ies)		
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
Decomposition temperature	:	The substance or mixture is not classified self-reactive.
Viscosity		
Viscosity, kinematic	:	3,000 - 16,000 mm2/s (20 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Can react with strong oxidizing agents.
Conditions to avoid	:	None known.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Ingredients:

Alcohols, C10-16, ethoxylated, sulfates, sodium salts:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Assessment: The substance or mixture has no acute oral toxicity

Cocoamidopropyl betaine:

Acute oral toxicity	:	LD50: > 5,000 mg/kg Method: OECD Test Guideline 401 Remarks: Based on data from similar materials
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity Remarks: Based on data from similar materials

Skin corrosion/irritation

Not classified based on available information.

Product:

Result: No skin irritation

Ingredients:

Alcohols, C10-16, ethoxylated, sulfates, sodium salts:
Result: Skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result: No eye irritation

Ingredients:

Alcohols, C10-16, ethoxylated, sulfates, sodium salts:
Result: Irreversible effects on the eye

Cocoamidopropyl betaine:
Species: Rabbit
Result: Irreversible effects on the eye
Method: OECD Test Guideline 405
Remarks: Based on data from similar materials

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

Product:

Assessment: Does not cause skin sensitization.

Ingredients:

Cocoamidopropyl betaine:
Test Type: Maximization Test (GPMT)
Routes of exposure: Skin contact
Species: Guinea pig
Result: negative
Remarks: Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

Cocoamidopropyl betaine:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Result: negative

Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Ingredients:

Cocoamidopropyl betaine:

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Ingredients:

Cocoamidopropyl betaine:

Species: Rat
NOAEL: 250 mg/kg
Application Route: Ingestion
Exposure time: 90 d
Method: OECD Test Guideline 408
Remarks: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Cocoamidopropyl betaine:

Toxicity to fish : LC50: > 1 - 10 mg/l
Exposure time: 96 h
Method: ISO 7346/2
Remarks: Based on data from similar materials

Toxicity to bacteria : EC50: > 100 mg/l
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

Persistence and degradability

Product:

Biodegradability : Result: Biodegradable

Ingredients:

Alcohols, C10-16, ethoxylated, sulfates, sodium salts:

Biodegradability : Result: Readily biodegradable.

Cocoamidopropyl betaine:

Biodegradability : Result: Readily biodegradable.
Biodegradation: > 60 %
Exposure time: 28 d
Method: OECD Test Guideline 301
Remarks: Based on data from similar materials

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

49 CFR
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know

Water	7732-18-5	70 - 90 %
Alcohols, C10-16, ethoxylated, sulfates, sodium salts	68585-34-2	1 - 5 %
Sodium chloride	7647-14-5	1 - 5 %

New Jersey Right To Know

Water	7732-18-5	70 - 90 %
Alcohols, C10-16, ethoxylated, sulfates, sodium salts	68585-34-2	1 - 5 %
Sodium chloride	7647-14-5	1 - 5 %
Cocoamidopropyl betaine	61789-40-0	1 - 5 %

California Prop 65 This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

AICS : All ingredients listed or exempt.

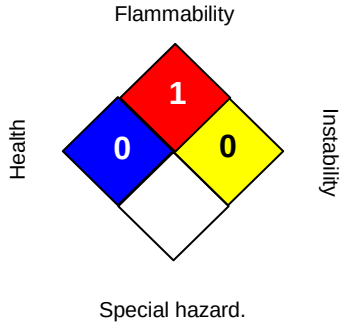
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), NECSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

Revision Date : 02/10/2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8

Date: 20 February 2014
Supercedes: 27 May 2011

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name: **GOJO® Luxury Foam Antibacterial Handwash**

Company Name & Address: GOJO Industries, Inc.
One GOJO Plaza, Suite 500
Akron, OH 44311

Emergency Phone: **1-800-424-9300 CHEMTREC**
Non-Emergency Phone: (330) 255-6000
MSDS Request Phone: (330) 255-6000 x8804

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
Ethyl Alcohol	64-17-5	1000 ppm	1000 ppm	< 5

Other ingredient(s) with notification requirements:	CAS NUMBER	List
Ethyl Alcohol	64-17-5	MA 1; NJ 1S; PA 1; CN
Propylene Glycol	57-55-6	NJ; PA 1; CN 1
Ammonium Laureth Sulfate	32612-48-9	CN

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 1 Flammability 2 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: Abnormal entry route
Ingestion: May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.
Skin Contact: In the case of allergic reactions see a physician
Inhalation: Move to fresh air
Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.

5. FIRE FIGHTING MEASURES:

NFPA: Health 1 Fire 2 Reactivity 0

Flashpoint °F/°C (PMCC method): 138˚F/58.9˚C
This material does not sustain combustion per 49 CFR 173 Appendix H

Unusual Fire and Explosion Hazards: None known.

Special Fire Fighting Procedures: None known.

Extinguishing Media: X Water Fog X Alcohol Foam X CO_2 X Dry Chemical ___Other

6. ACCIDENTAL RELEASE MEASURES:

No special requirements. Water clean up and rinse. CAUTION – WILL CAUSE SLIPPERY SURFACES.

7. HANDLING AND STORAGE:

Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection:	None required under normal conditions.
Skin Protection:	None required under normal conditions.
Respiratory Protection:	None required under normal conditions.
Ventilation:	None required under normal conditions.
Protective Equipment or Clothing:	None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor	Clear peach to amber or brown liquid with fruity fragrance
pH (undiluted):	4.5 – 8.5
VOC , %:	~ 5%

10. STABILITY AND REACTIVITY:

Stable/Non reactive product.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. DISPOSAL CONSIDERATIONS:

No special considerations when disposed according to local, state and Federal regulations.

14. TRANSPORT INFORMATION:

This material does not sustain combustion per 49 CFR 173 Appendix H, so it is not classified as a hazardous material.

15. REGULATORY AND OTHER INFORMATION:

TSCA: All ingredients are listed or exempt per reference 15 USC 2602 (2)(B)(vi).

Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.

WHMIS: Exempt under Food & Drug Act

Notice: The information herein is based on data considered to be accurate as of the date of preparation of this material safety data sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

SAFETY DATA SHEET

GOJO® NATURAL* ORANGE™ Pumice Hand Cleaner

Version	Revision Date:	MSDS Number:	Date of last issue: -
1.0	03/02/2015	68057-00001	Date of first issue: 03/02/2015

SECTION 1. IDENTIFICATION

Product name : GOJO® NATURAL* ORANGE™ Pumice Hand Cleaner

Manufacturer or supplier's details

Company name of supplier : GOJO Industries, Inc.

Address : One GOJO Plaza, Suite 500
Akron OH 44311

Telephone : 1 (330) 255-6000

Emergency telephone : 1-800-424-9300 CHEMTREC

Recommended use of the chemical and restrictions on use

Recommended use : Skin-care

Restrictions on use : This is a personal care or cosmetic product that is safe for consumers and other users under normal and reasonably foreseeable use. Cosmetics and consumer products, specifically defined by regulations around the world, are exempt from the requirement of an SDS for the consumer. While this material is not considered hazardous, this SDS contains valuable information critical to the safe handling and proper use of the product for industrial workplace conditions as well as unusual and unintended exposures such as large spills. This SDS should be retained and available for employees and other users of this product. For specific intended-use guidance, please refer to the information provided on the package or instruction sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Eye irritation : Category 2A

GHS Label element

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H319 Causes serious eye irritation.

Precautionary Statements : **Prevention:**

P264 Wash skin thoroughly after handling.
P280 Wear eye protection/ face protection.
Response:
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
1-Methyl 4-(1-Methylethenyl) Cyclohexene	5989-27-5	>= 5 - < 10
Alcohols, C12-15, ethoxylated propoxylated	68551-13-3	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact : Wash with water and soap as a precaution.
Get medical attention if symptoms occur.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed : Causes serious eye irritation.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.

Notes to physician	:	Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Dry chemical Carbon dioxide (CO2)
Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	Exposure to combustion products may be a hazard to health.
Hazardous combustion products	:	Carbon oxides
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions	:	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items

employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	Use only with adequate ventilation.
Advice on safe handling	:	Avoid inhalation of vapor or mist. Do not swallow. Do not get in eyes. Avoid prolonged or repeated contact with skin. Handle in accordance with good industrial hygiene and safety practice. Take care to prevent spills, waste and minimize release to the environment.
Conditions for safe storage	:	Keep in properly labeled containers. Store in accordance with the particular national regulations.
Materials to avoid	:	Do not store with the following product types: Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Ingredients	CAS-No.
1-Methyl 4-(1-Methylethenyl) Cyclohexene	5989-27-5
Alcohols, C12-15, ethoxylated propoxylated	68551-13-3

Engineering measures : Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.
Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at workplaces have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m3 - total dust, 5 mg/m3 - respirable fraction; and ACGIH TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m3 - respirable particles, 10 mg/m3 - inhalable particles.

Personal protective equipment

Respiratory protection	:	General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
Hand protection Material	:	Impervious gloves
Remarks	:	Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
Eye protection	:	Wear the following personal protective equipment: Safety goggles
Skin and body protection	:	Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
Hygiene measures	:	Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	gray, opaque
Odor	:	citrus
Odor Threshold	:	No data available

pH	:	5.0 - 8.0
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	95 °C
Flash point	:	> 100 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Density	:	1.0390 g/cm3
Solubility(ies)		
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
Decomposition temperature	:	The substance or mixture is not classified self-reactive.
Viscosity		
Viscosity, kinematic	:	10,000 - 50,000 mm2/s (20 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Can react with strong oxidizing agents.
Conditions to avoid	:	None known.

Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Ingredients:

1-Methyl 4-(1-Methylethenyl) Cyclohexene:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Assessment: The substance or mixture has no acute oral toxicity Remarks: Based on data from similar materials

Alcohols, C12-15, ethoxylated propoxylated:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Remarks: Based on data from similar materials
Acute inhalation toxicity	:	LC50 (Rat): > 1.6 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Based on data from similar materials
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity Remarks: Based on data from similar materials

Skin corrosion/irritation

Not classified based on available information.

Product:

Result: No skin irritation

Ingredients:

1-Methyl 4-(1-Methylethenyl) Cyclohexene:
Species: Rabbit
Result: Skin irritation

Alcohols, C12-15, ethoxylated propoxylated:
Species: Rabbit
Method: OECD Test Guideline 404

Result: No skin irritation
Remarks: Based on data from similar materials

Serious eye damage/eye irritation

Causes serious eye irritation.

Ingredients:

1-Methyl 4-(1-Methylethenyl) Cyclohexene:
Species: Rabbit
Result: No eye irritation

Alcohols, C12-15, ethoxylated propoxylated:
Result: Irreversible effects on the eye
Remarks: Based on data from similar materials

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

Product:

Assessment: Does not cause skin sensitization.

Ingredients:

1-Methyl 4-(1-Methylethenyl) Cyclohexene:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Result: positive

Assessment: Probability or evidence of skin sensitization in humans

Alcohols, C12-15, ethoxylated propoxylated:
Test Type: Maximization Test (GPMT)
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative
Remarks: Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

1-Methyl 4-(1-Methylethenyl) Cyclohexene:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Result: negative

Genotoxicity in vivo : Test Type: Transgenic rodent somatic cell gene mutation assay
Species: Rat
Application Route: Ingestion

Result: negative

Alcohols, C12-15, ethoxylated propoxylated:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

Ingredients:

1-Methyl 4-(1-Methylethenyl) Cyclohexene:
Species: Mouse
Application Route: Ingestion
Exposure time: 103 weeks
Result: negative

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Ingredients:

Alcohols, C12-15, ethoxylated propoxylated:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Skin contact
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Skin contact
Result: negative
Remarks: Based on data from similar materials

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Ingredients:

1-Methyl 4-(1-Methylethenyl) Cyclohexene:
Species: Rat
NOAEL: 600 mg/kg
Application Route: Ingestion
Exposure time: 13 w

Alcohols, C12-15, ethoxylated propoxylated:
Species: Rat
NOAEL: 500 mg/kg
Application Route: Ingestion
Exposure time: 90 d
Remarks: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Ingredients:

1-Methyl 4-(1-Methylethenyl) Cyclohexene:
The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

1-Methyl 4-(1-Methylethenyl) Cyclohexene:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 0.72 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.36 mg/l Exposure time: 48 h
Toxicity to algae	:	ErC50 (Desmodesmus subspicatus (green algae)): 150 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials
M-Factor (Acute aquatic toxicity)	:	1

Alcohols, C12-15, ethoxylated propoxylated:

Toxicity to fish	:	LC50 (Scophthalmus maximus (turbot)): 3.1 mg/l

Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.14 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.75 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 1

Toxicity to bacteria : EC50 (Pseudomonas putida): > 10,000 mg/l
Exposure time: 16.9 h
Remarks: Based on data from similar materials

Persistence and degradability

Ingredients:

1-Methyl 4-(1-Methylethenyl) Cyclohexene:
Biodegradability : Result: Readily biodegradable.
Biodegradation: 80 %
Exposure time: 28 d
Remarks: Based on data from similar materials

Alcohols, C12-15, ethoxylated propoxylated:
Biodegradability : Result: Readily biodegradable.
Biodegradation: 80 - 88 %
Exposure time: 28 d
Remarks: Based on data from similar materials

Bioaccumulative potential

Ingredients:

1-Methyl 4-(1-Methylethenyl) Cyclohexene:
Partition coefficient: n-octanol/water : log Pow: 4.38

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-Methyl 4-(1-Methylethenyl) Cyclohexene)
Class	:	9
Packing group	:	III
Labels	:	9

IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (1-Methyl 4-(1-Methylethenyl) Cyclohexene)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-Methyl 4-(1-Methylethenyl) Cyclohexene)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-Methyl 4-(1-Methylethenyl) Cyclohexene)
Class	:	9

Packing group	:	III
Labels	:	CLASS 9
ERG Code	:	171
Marine pollutant	:	yes (1-Methyl 4-(1-Methylethenyl) Cyclohexene)
Remarks	:	Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know

Water	7732-18-5	70 - 90 %
Pumice	1332-09-8	5 - 10 %
1-Methyl 4-(1-Methylethenyl) Cyclohexene	5989-27-5	5 - 10 %

New Jersey Right To Know

Water	7732-18-5	70 - 90 %
Pumice	1332-09-8	5 - 10 %
1-Methyl 4-(1-Methylethenyl) Cyclohexene	5989-27-5	5 - 10 %
Alcohols, C12-15, ethoxylated propoxylated	68551-13-3	1 - 5 %

California Prop 65 This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

REACH : All ingredients (pre-)registered or exempt.

TSCA : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory

exemption.

DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

AICS : All ingredients listed or exempt.

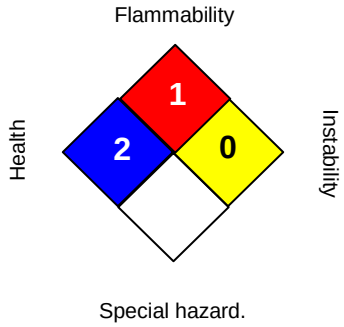
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

Revision Date : 03/02/2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8

Date: 2 March 2007
Supercedes: 15 November 2004

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name: **GOJO® NATURAL* ORANGE™ SMOOTH HAND CLEANER**

Company Name & Address: GOJO Industries, Inc.
One GOJO Plaza, Suite 500
Akron, OH 44311

Emergency Phone: **1-800-424-9300 CHEMTREC**
Non-Emergency Phone: (330) 255-6000
MSDS Request Phone: (330) 255-6000 x8804

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
None				

Other ingredient(s) with notification requirements:	CAS NUMBER	List
D-Limonene	5989-27-5	CN 1

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 0 Flammability 1 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: Not applicable.
Ingestion: May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.
Skin Contact: Not applicable.
Inhalation: Not applicable.
Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.

5. FIRE FIGHTING MEASURES:

NFPA: Health 0 Fire 1 Reactivity 0

Flashpoint °F/°C (PMCC method): Not determined.
Unusual Fire and Explosion Hazards: None known.
Special Fire Fighting Procedures: None known.
Extinguishing Media: X Water Fog X Alcohol Foam X CO_2 X Dry Chemical ____ Other

6. ACCIDENTAL RELEASE MEASURES:

No special requirements. Water clean up and rinse. CAUTION – WILL CAUSE SLIPPERY SURFACES.

7. HANDLING AND STORAGE:

Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection:	None required under normal conditions.
Skin Protection:	None required under normal conditions.
Respiratory Protection:	None required under normal conditions.
Ventilation:	None required under normal conditions.
Protective Equipment or Clothing:	None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor	Creamy opaque viscous gel, orange fragrance.
pH (undiluted):	5.0-8.0
VOC , %:	7%

10. STABILITY AND REACTIVITY:

Stable/Non reactive product.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. DISPOSAL CONSIDERATIONS:

No special considerations when disposed according to local, state and Federal regulations.

14. TRANSPORT INFORMATION:

Not classified as a hazardous material.

15. REGULATORY AND OTHER INFORMATION:

TSCA: All ingredients are listed or exempt per reference 15 USC 2602 (2)(B)(iv).

Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.

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GO-JO INDUSTRIES INC -- GOJO ORIGINAL FORMULA HEAVY DUTY HAND CLEANER -- 8520-01-064-2725

========== Product Identification ==========

Product ID:GOJO ORIGINAL FORMULA HEAVY DUTY HAND CLEANER
MSDS Date:01/08/1996
FSC:8520
NIIN:01-064-2725
MSDS Number: CDYGV
=== Responsible Party ===
Company Name:GO-JO INDUSTRIES INC
Address:144 CUYAHOGA ST
Box:991
City:AKRON
State:OH
ZIP:44309
Country:US
Info Phone Num:330-920-8100 EXT 352
Emergency Phone Num:800-321-9647 EXT 242
Preparer's Name:DONALD H. SINNER
CAGE:02905
=== Contractor Identification ===
Company Name:GOJO INDUSTRIES, INC.
Box:991
City:AKRON
State:OH
ZIP:44309-0991
Country:US
Phone:330-920-8100 EXT 352
CAGE:02905
Company Name:TIDEWATER BATTERY CO
Box:UNKNOW
CAGE:9H670

========== Composition/Information on Ingredients ==========

Ingred Name:SOLVENT REFINED, HYDROTREATED LIGHT PARAFFINIC DISTILLATE
CAS:64742-55-8
RTECS #:PY8036500
Fraction by Wt: <40%
Other REC Limits:NONE RECOMMENDED

Ingred Name:WATER
CAS:7732-18-5
RTECS #:ZC0110000
Fraction by Wt: >30%
Other REC Limits:NONE RECOMMENDED

Ingred Name:MINERAL OIL, WHITE
CAS:8042-47-5
RTECS #:PY8047000
Fraction by Wt: <13%
Other REC Limits:NONE RECOMMENDED

Ingred Name:TALLATES (PER MSDS CAS#68132-47-5)
Fraction by Wt: <13%
Other REC Limits:NONE RECOMMENDED

Ingred Name:NONYLPHENOL POLYETHOXATE (SURFACTANT)
CAS:9016-45-9
RTECS #:MD0900000
Fraction by Wt: <10%
Other REC Limits:NONE RECOMMENDED

Ingred Name:PROPYLENE GLYCOL
CAS:57-55-6
RTECS #:TY2000000
Fraction by Wt: <7%
Other REC Limits:NONE RECOMMENDED

Ingred Name:PETROLATUM
CAS:8009-03-8
RTECS #:SE6780000
Fraction by Wt: <5%
Other REC Limits:NONE RECOMMENDED

Ingred Name:LANOLIN
CAS:8006-54-0
RTECS #:OE3201000
Fraction by Wt: <1%
Other REC Limits:NONE RECOMMENDED

Ingred Name:ZINC PYRITHIONE
CAS:13463-41-7
RTECS #:ZH0950000

Fraction by Wt: <1%
Other REC Limits:NONE RECOMMENDED

========== Hazards Identification ==========

LD50 LC50 Mixture:ORAL LD50:OVER 10GM/KG(NON-TOXIC)
Routes of Entry: Inhalation:NO Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:POTENTIAL EFFECTS:MAY CAUSE EYE IRRIT.NO ACUTE TOXIC EFFECTS EXPECTED BY INHAL/INGEST/CONTACT DURING ANTICIPATED HNDLG/USAGE.NO LONG TERM CHRONIC EFFECTS.
Explanation of Carcinogenicity:PER MSDS:CARCINOGENICITY:NOT LISTED.
Effects of Overexposure:EYE IRRIT.
Medical Cond Aggravated by Exposure:NONE KNOWN.

========== First Aid Measures ==========

First Aid:EYE:FLUSH IMMED & THOROUGHLY W/WATER FOR 15MINS.IF CONDITION WORSENS OR IRRIT PERSISTS CONTACT PHYSICIAN.INGEST:DO NOT INDUCE VOMITING.IF VOMITING OCCURS LOWER PERSON'S HEAD BELOW KNEES TO AVOID ASPIR ATION.CONTACT PHYSICIAN/POISON CONTROL CENTER.

========== Fire Fighting Measures ==========

Flash Point Method:PMCC
Flash Point:>201F,>94C
Autoignition Temp:Autoignition Temp Text:NP
Lower Limits:1.1
Upper Limits:6.0
Extinguishing Media:WATER FOG, ALCOHOL FOAM, CO2, DRY CHEMICAL.
Fire Fighting Procedures:NONE KNOWN.
Unusual Fire/Explosion Hazard:NONE KNOWN.

========== Accidental Release Measures ==========

Spill Release Procedures:NOT REPORTABLE UNDER CERCLA/SARA TITLE III SEC 304.PICK UP LG SPILLS OR ABSORB ON INERT MATL.COLLECT IN SEALED APPROVED CONTAINER FOR DISPOSAL.FLUSH AREA W/WATER TO CLEAN UP SMALL AMTS & REDUCE POSSI BLE SLIPPERY FLOOR HAZARD.
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

========== Handling and Storage ==========

Handling and Storage Precautions:STORE AWAY FROM REACH OF SMALL
CHILDREN.AVOID CONTACT W/EYES.DO NOT TAKE INTERNALLY.STORE AT
AMBIENT INDOOR CONDITIONS.KEEP CNTNRS SEALED.
Other Precautions:NONE SPECIFIED BY MANUFACTURER.

========== Exposure Controls/Personal Protection ==========

Respiratory Protection:NOT REQUIRED IF USED AS DIRECTED.
Ventilation:MECHANICAL:NOT REQUIRED IF USED AS DIRECTED.LOC/SPECIAL:
NOT
REQUIRED.
Protective Gloves:NOT REQUIRED
Eye Protection:NOT REQUIRED
Other Protective Equipment:NOT REQUIRED
Work Hygienic Practices:ROUTINE PERSONAL HYGIENE.
Supplemental Safety and Health
STOCK #:1107,1109,1111,1113,1114,1115,1117,1119,1120,1129.
PH(UNDILUTED):8.6-9.6. DISPO:REGS.NOT CHARACTERISTIC HAZ OR LISTED
WASATE BY EPA/RCRA(40CFR261).SARA:NA.

========== Physical/Chemical Properties ==========

HCC:N1
Boiling Pt:B.P. Text:180F,82C
Melt/Freeze Pt:M.P/F.P Text:NA
Decomp Temp:Decomp Text:NP
Vapor Pres:10MM @100F
Vapor Density:4-5
Spec Gravity:0.88
pH:SUPPLM
Viscosity:>100000CPS
Evaporation Rate & Reference:<1.0, WATER=1
Solubility in Water:SLIGHT
Appearance and Odor:WHITE OPAQUE GEL, PLEASANT ODOR
Percent Volatiles by Volume:<60
Corrosion Rate:NP

========== Stability and Reactivity Data ==========

Stability Indicator/Materials to Avoid:YES
NONE KNOWN
Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.

Hazardous Decomposition Products:COMBUSTION MAY PRODUCE CO, CO2, NOX.

========== Disposal Considerations ==========

Waste Disposal Methods:NOT EXPECTED TO CAUSE ADVERSE ENVIRO EFFECTS. NOT
CONSIDERED ENVIRO HARMFUL FROM NORMAL DILUTION.EXPECTED USAGE/TYPICAL DRAINAGE TO SEWERS/SEPTIC SYS/TREAT PLANTS.BIODEGRADATION:YES IN NORMAL WASTE STR EAMS.DISPO IAW LOC/STATE/PROV/FED/INTERNAT (SUPPL)

Disclaimer (provided with this information by the compiling agencies):
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particular situation.

GOLDEN HARVEST UNIVERSAL WALLPAPER PASTE AND GOLDEN HARVEST UNIVERSAL BORDER PASTE (GH-57)

MATERIAL SAFETY DATA SHEET

Section 1

Manufacturer's Name:
Roman Decorating Products
824 State Street
Calumet City, Illinois 60409

Emergency Assistance:
1-800-488-6117

HMIS Hazard Rating:

FIRE=0 Least=0
HEALTH=1 Slight=1
REACTIVITY=1 Moderate=2
PERSONAL PROTECTION=B High=3
Extreme=4

Date: March 5, 2008
Revised:

Trade name and Synonyms:
GOLDEN HARVEST UNIVERSAL WALLPAPER PASTE AND
GOLDEN HARVEST UNIVERSAL BORDER PASTE GH-57
209861, 209862, 209864, 209867
Chemical Name and Synonyms: Copolymer emulsion adhesive
Chemical Family: Synthetic resin emulsion

Section 2-Hazardous Ingredients/Identity Information

CAS No.	Chemical Name(s)	OSHA PEL	ACGIH TLV	max %
	No Hazardous Ingredients			

Section 3-Physical/Chemical Characteristics

Appearance and Odor: Opaque white heavy liquid, mild acrid odor
Specific Gravity(water=1): 1.00
Percent Solids by Weight: 13-15
by Volume: 15-18
Solubility in Water: Miscible in all proportions
Boiling Point: 212F
Vapor Density: Same as water
Vapor Pressure: Same as water
Evaporation Point: Same as water
Melting Point: n.a.
Volatile Organic Compounds(VOC,less water):165 g/l (1.45 lb/gal)
VOC as a percent of the product: 2.3

Section 4-Fire and Explosion Hazard Data

Flash Point(methods used) n.a.
Extinguishing Methods:
Special Fire Fighting Procedures:
Self contained breathing apparatus should be worn in fighting all fires involving general chemicals.
Unusual Fire and Explosion Hazards: None

Section 5-Health Hazard Data

Carcinogenicity: NTP:no IARC:no OSHA regulated: no

Overexposure--Under current OSHA criteria this product is considered non-hazardous.
Emergency First Aid Procedures
Eyes- Flush with water for 15 minutes, seek medical attention.
Skin- Wash from skin at first opportunity.
Inhalation- No hazardous volatiles
Ingestion- Give water to drink if conscious, seek medical attention.

GOLDEN HARVEST UNIVERSAL WALLPAPER PASTE AND
GOLDEN HARVEST UNIVERSAL BORDER PASTE GH-57
209861, 209862, 209864, 209867

Section 6-Reactivity Data

This product is stable and compatible with all compounds that are compatible with water and water solutions. Hazardous polymerization does not occur.

Section 7-Precautions for Safe Handling and Use

Steps to be taken in case the product is released or spilled:
Small spills of 1-2 gallons or less may be diluted 50:1 with water and washed down the drain.
Large spills should be recovered as much as possible and disposed of as non-hazardous liquid waste. Remaining residues may be flushed away as in "small spill" procedure. Consult Federal, State and Local regulations. Product residues may pose a slip hazard; personnel should b careful during clean-up.

Section 8-Control Measures

Respiratory protection is not usually required, however any room where this product is used should have good ventilation,i.e., open windows, exhaust fans, etc. A good, normal precaution is to wear protective gloves and glasses. No other protection equipment is necessary.

Section 9- Special Precautions

Store at moderate temperatures (50-100 F). Protect from freezing. Keep out of the reach of children. Keep container closed when not in use.

SUPPLEMENTAL INFORMATION

Waste Disposal
This product can be handled as a non-hazardous industrial waste.

REGULATORY INFORMATION

Workplace Classifications
This product is considered non-hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200). This product is not a "controlled product" under the Canadian Workplace Hazardous Materials Information System (WHMIS).

Transportation Classifications
US DOT Shipping Class --- 60
US DOT Description --- Adhesive Paste NOI

Emergency Planning and Community Right to Know (SARA Title 3)
Section 311/312 Categorizations (40CFR 370)
This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA. Section 313 Information (40CFR 372)
This product does not contain a chemical which is listed in Section 313 above de minimis concentrations.

CERCLA Information (40CFR 302.4)
Releases of this material to air, land or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation and Liability Act or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act, Title III Section 304.

RCRA Information
When this product becomes a waste, it is classified as a non-hazardous waste under criteria of the Resource Conservation and Recovery Act (40CFR 261).

Chemical Control Law Status
All components of this product are listed on the US-EPA Toxic Substance Control Act (TSCA) Chemical Substance Inventory. All components of this product are listed on the Canadian Environmental Protection Act Domestic Substances List (CEPA-DSL).

MATERIAL SAFETY DATA SHEET
MSDS

ITEM NUMBER: C-013
IDENTITY (As Used On Label and List): Golden Jet Bee, Wasp & Hornet Killer

E M E R G E N C Y M E D I C A L Telephone# 1-800-228-5635 (24 Hrs)
Outside of the U.S.A. Call 651-632-9275
PRODUCT HAZARD RATINGS (NFPA): Health = 3, Fire = 4 , Reactivity = 0, Protective Equipment = *B
(Rating Legend: 4 = Extreme, 3 = Serious, 2 = Moderate, 1 = Slight, 0 = Minimal)

SECTION I

CLAIRE MANUFACTURING
500 VISTA AVE.
ADDISON, IL 60101

TELEPHONE NUMBER FOR INFORMATION: 1-800-252-4731

DATE PRINTED: 12/8/03
NAME OF PREPARER: Ron Cepa

SECTION II - HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Chemical Names	EXPOSURE LIMITS (LD50-ORAL RAT)	SARA Title III SEC 313	ACGIH TLV/TWA	OSHA PEL	% By Wt.
Medium Aliphatic Naphtha (CAS# 64742-88-7 / 8052-41-3)	ND	NA	100ppm	NE	80-90
Dichlorvos (CAS# 62-73-7)	56 mg/kg	YES	0.9 MG/M3	11.0 MG/M3	<0.20
Malathion (CAS# 121-75-5)	370 mg/kg	YES	10mg/m3	15mg/m3	<5
Liquefied Petroleum Gas (CAS# 68476-85-7)	ND	NA	1000	1000ppm	5 - 15

Unidentified ingredients are not considered hazardous under the Federal Hazard Communication Standard.
Components Listed As A Suspected Carcinogen: This product contains a chemical known to the State of California to cause cancer. EPA classifies DDVP as a possible carcinogen. It is not listed as a carcinogen by OSHA, ACGIH, or NTP.

SECTION III - PHYSICAL CHARACTERISTICS

Boiling Point: NA Vapor Pressure (psig): 60-70 @ 130F Specific Gravity (H20=1): <1.0
Solubility/Water: NG Vapor Density (AIR=1): >1 Evaporation Rate (Ether=1): <1
Appearance and Odor: Clear to light brown.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Aerosol Flammability: This product is considered to be extremely flammable as described in 40 CFR 156.10.
Flammable Limits - % Volume In Air (Propellant): LEL: 2.1 UEL: 9.5
Extinguishing Media: Carbon dioxide, foam and/or dry chemical may be used.
Special Fire Fighting Procedures: Containers should be cooled with water to prevent vapor pressure build up. Use equipment or shielding, as required, to protect personnel from bursting, rupturing or venting containers.
Unusual Fire and Explosion Hazards: At elevated temperatures (over 54C-130F) containers exposed to direct flame or heat contact should be cooled with water to prevent weakening of container structure.

SECTION V - REACTIVITY DATA

Stability: Stable Hazardous Polymerization: NA
Incompatibility (Materials to Avoid): Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide and additional toxic chemicals may be formed in small amounts.
Conditions to Avoid: Do not spray into the wind. Do not store above 54C-130F. Keep away from heat, direct sunlight, open flames or sparks. Dropping of containers may cause bursting.

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry - Inhalation: X Eyes: X Skin: X Ingestion: X
Signs and Symptoms of Exposure: INHALATION: May cause dizziness and drowsiness. High vapor concentration may be irritating to the nose, respiratory tract and may cause central nervous system depression. SKIN: Slightly irritating, prolonged or repeated exposure may cause defatting and drying of the skin. EYE: This product is an eye irritant.
INGESTION: May result in vomiting. Aspiration of vomitus into the lungs must be avoided, as even small quantities may result in aspiration pneumonitis, which may be evidenced by coughing, labored breathing or cyanosis (body becoming blue in color).
Medical Conditions Generally Aggravated by Exposure: Preexisting skin or eye disorders may be aggravated by exposure to this product.
Emergency and First Aid Procedures: Eye Contact: Flush eyes with plenty of water for 15 minutes while holding eyelids open. Get medical attention if irritation persists. Skin Contact: Remove contaminated clothing. Flush skin with water, follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. Inhalation: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention. Ingestion: Get medical attention. NOTE TO PHYSICIAN: If more than 2ml/kg has been ingested and vomiting has not occurred, emesis should be induced with supervision.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Releases or Spilled: Remove all sources of ignition and ventilate area. Soak up spill with an inert absorbent and place into a designated disposal container. Consult local regulatory agency for proper disposition of material.
Waste Disposal Method: Do not puncture or incinerate containers. When contents are depleted continue to depress button until all gas is expelled. Dispose of container in accordance with local, state, and federal regulations.
Handling And Storing: Avoid breathing vapor. Keep away from heat and flame. Use with adequate ventilation. Do not puncture or incinerate containers. Do not expose to direct sun light or store at temperatures above 130F (54C). Store as Level 3 Aerosol (NFPA 30B).
Other Precautions: Please read and follow the directions on the product label; they are your best guide to using this product in the most effective way, and give the necessary safety precautions to protect your health.

SECTION VIII - EMPLOYEE PROTECTION

Respiratory Protection (Type): None required if good ventilation is maintained. If exposure may exceed occupational exposure limits (Sec. II), use a NIOSH approved respirator to prevent overexposure.
Ventilation: Local exhaust is adequate under normal conditions, mechanical ventilation is optional.
Protective Gloves: Chemical resistant gloves*.
Eye Protection: Chemical safety glasses are recommended*.
Other Protective Clothing or Equipment: Wear impervious clothing to prevent skin contact.
Work/Hygienic Practices: Ensure strict sanitary conditions are conformed to when working around chemicals.
Protective clothing and equipment should be in accordance with 29 CFR 1910.132 and CFR 1910.133.

SECTION IX - OTHER REGULATORY CONTROLS

Governmental Listings: Ingredients of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

SECTION X - TRANSPORTATION REQUIREMENTS (D.O.T. CLASSIFICATION)

Shipping Name: Consumer Commodity Hazard Class: ORM-D
NG-- Negligible NA-- Not Applicable NE-- Not Established UN-- Unavailable ND-- Not Determined
While the information set forth herein is believed to be accurate as of the date hereof, the Company makes no warranty or guarantee, express or implied, and disclaims all liability arising out of the use of this information.
As of: April 22, 1998

MATERIAL SAFETY DATA SHEET

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SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

==========

TRADE NAME (AS LABELED):	**GOO GONE ALL PURPOSE CLEANER**
PRODUCT CODE:	GG66
SUPPLIER:	**MAGIC AMERICAN PRODUCTS**
ADDRESS:	26901 CANNON ROAD, SUITE 190 BEDFORD HEIGHTS, OH 44146
TELEPHONE:	800-729-9029 M-F, 9-5 EST
CHEMTREC EMERGENCY NO.:	1-800-424-9300 (UNITED STATES) 1-703-527-3887 (INTERNATIONAL COLLECT)
DATE OF PREPARATION:	February 26, 2010

==========

SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS

==========

CHEMICAL NAME	CAS NUMBER	WEIGHT %
ALCOHOLS, C9-11, ETHOXYLATED	68439-46-3	1-5

*The ingredients in the balance of this product do not contribute significant hazards beyond those described in this document. All pertinent health, safety and environmental information has been presented, per the requirements of the US Federal OSHA Hazard Communication Standard (29CFR 1910.1200).

==========

SECTION 3 – HAZARDS IDENTIFICATION

==========

Potential Acute Health Effects:
Eye: Causes eye irritation, possibly severe.
Skin: Causes skin irritation. Prolonged or repeated contact may cause drying or cracking.
Ingestion: Ingestion of large amounts may cause gastrointestinal disturbances, irritation, and diarrhea.
Inhalation: Inhalation of spray mists causes respiratory tract irritation.
Aggravation of Pre-existing Conditions: Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product.
Primary Route(s) of Exposure: Eye contact, skin contact and inhalation

==========

SECTION 4 - FIRST AID MEASURES

==========

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.
Skin: Immediately wash with water for 15 minutes. Remove contaminated clothing and launder before reuse. Seek medical attention if irritation persists.
Eye: Immediately flush with water for 15 minutes. Hold eyelids apart while flushing and lids with water. Seek medical attention if irritation persists.
Ingestion: If swallowed, get medical attention immediately. Do Not Induce Vomiting. Never give anything by mouth to an unconscious person.

==========

SECTION 5 - FIRE FIGHTING MEASURES

==========

Flash Point (Method): > 200 F
LEL: Not Determined
UEL: Not Determined
Autoignition Temperature : Not Applicable
Extinguishing Media: Water spray, foam, carbon dioxide, and dry chemical.
Special Fire Fighting Procedures: Evacuate personnel to a safe area. Avoid breathing decomposition products. Wear self-contained breathing apparatus and full body protection.

==========

SECTION 6 – ACCIDENTAL RELEASE MEASURES

==========

Leak and Spill Procedure: Ventilate area. Avoid breathing vapors. Wear appropriate personal protective equipment, including appropriate respiratory protection. Contain spill if possible. Wipe up or absorb on suitable material and shovel up. Prevent entry into sewers and waterways. Avoid contact with skin, eyes or clothing. Dispose of collected material in accordance with federal, state and local requirements.

==========

SECTION 7 – HANDLING AND STORAGE

==========

Keep container closed and upright. Avoid skin and eye contact.
Keep Out Of Reach Of Children.

==========

SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

==========

Engineering Controls: Not normally required. General dilution ventilation.
Respiratory protection: Not normally required. Avoid breathing spray mists.
Eye protection: Use chemical goggles or glasses with side shields.
Skin protection: Use chemical resistant gloves.
Other protective clothing or equipment: Eye wash, Safety Shower, Protective Clothing.
Work Hygienic Practices: The usual precaution for the handling of chemicals must be observed.

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SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

==========

APPEARANCE AND ODOR:	Orange liquid with slight citrus odor
BOILING POINT:	> 212 F
FREEZING POINT:	Not Determined
WATER SOLUBILITY:	Partial
VAPOR PRESSURE:	Not Determined
PH:	7 – 9
EVAPORATION RATE:	Not Determined
VOC:	< 1% by CARB Definition for Consumer Products
SPECIFIC GRAVITY:	1

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SECTION 10 – STABILITY AND REACTIVITY

==========

Stability: Stable.
Conditions to Avoid: Avoid prolonged storage at elevated temperatures.
Incompatible Materials: Copper, copper alloys, aluminum, strong acids and strong oxidizers,
Hazardous Polymerization: Will not occur.
Hazardous Decomposition Products: Thermal decomposition includes carbon dioxide and carbon monoxide.

==========

SECTION 11 - TOXICOLOGICAL INFORMATION

==========

THIS PRODUCT WAS NOT TESTED. THE FOLLOWING IS COMPONENT DATA:

ALCOHOLS, C9-11, ETHOXYLATED (68439-46-3)
ORAL RAT LD50: > 1300 MG/KG

==========

SECTION 12 – ECOLOGICAL INFORMATION

==========

THIS PRODUCT WAS NOT TESTED AS A WHOLE.

==========

SECTION 13 – DISPOSAL CONSIDERATIONS

==========

Follow federal, provincial or state and local government requirements for disposal.

==========

SECTION 14 - TRANSPORT INFORMATION

==========

This product is not regulated by ground transport.

==========

SECTION 15 - REGULATORY INFORMATION

==========

TOXIC SUBSTANCES CONTROL ACT (TSCA): ALL THE INGREDIENTS ARE LISTED ON THE INVENTORY

SARA 302 CHEMICALS:
NONE

SARA 313 CHEMICALS:
NONE

CERCLA CHEMICALS:
NONE

PROP 65 CHEMICALS:
NONE

OSHA & WHMIS: MSDS PREPARED PURSUANT TO THE HAZARD COMMUNICATION STANDARD (CFR29 1910.1200) AND CANADIAN WHMIS REGULATIONS (CONTROLLED PRODUCTS REGULATIONS UNDER THE HAZARDOUS PRODUCTS ACT).

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SECTION 16 - OTHER INFORMATION

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THIS PRODUCT IS SOLD TO CONSUMERS FOR HOUSEHOLD USE IN CONTAINERS OF RELATIVELY SMALL VOLUME (I.E. 5 GALLON OR LESS IN SIZE). THIS MSDS HAS BEEN DEVELOPED TO ADDRESS SAFETY CONCERNS AFFECTING THOSE INDIVIDUALS WORKING IN WAREHOUSES AND OTHER PLACES WHERE LARGE NUMBERS OF THESE CONTAINERS ARE STORED, AS WELL AS THOSE AFFECTING POTENTIAL USERS OF THIS PRODUCT IN INDUSTRIAL /OCCUPATIONAL SETTINGS. ALL PERTINENT HEALTH, SAFETY AND ENVIRONMENTAL INFORMATION HAVE BEEN PRESENTED IN THIS DOCUMENT, PER THE REQUIREMENTS OF THE US FEDERAL OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) AND CANADIAN WHMIS.

DISCLAIMER: THIS INFORMATION IS PROVIDED IN GOOD FAITH BUT WITHOUT EXPRESS OR IMPLIED WARRANTY. BUYER ASSUMES ALL RESPONSIBILITY FOR SAFETY AND USE NOT IN ACCORDANCE WITH LABEL INSTRUCTIONS. JUDGEMENTS AS TO THE SUITABILITY OF INFORMATION HEREIN FOR THE INDIVIDUAL'S OWN USE OR PURPOSES ARE NECESSARILY THE INDIVIDUAL'S OWN RESPONSIBILITY. ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF SUCH INFORMATION, AS MANUFACTURER OR DISTRIBUTOR, WE EXTEND NO WARRANTIES, MAKE NO REPRESENTATIONS, AND ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OR SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO THE INDIVIDUAL'S PURPOSES OR THE CONSEQUENCES OF ITS USE.

SAFETY DATA SHEET
Goof Off Professional Strength VOC Compliant

Printed: 08/31/2015
Revision: 08/31/2015
Supersedes Revision: 07/27/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Goof Off Professional Strength VOC Compliant

Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113

Phone Number: (901)775-0100

Web site address: www.wmbarr.com

Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892

Product Category: General Purpose Adhesive Remover

Intended Use: Mult-Purpose Remover for tar, ink, paint, adhesive, etc.

Product Code: FG603, FG603BULK, FG612, FG650, FG650SK, FG650LWS, FG650LDS, FG651, FG651BULK, FG651BULK2, FG651BULK3, FG653, FG653B, FG653BBLK, FG654, FG654BWS, FG654LWS, FG655B, FG655BUL, FG655BWS, FG657, FG683, FG690, FG750, 2410B.4, FG661

Additional Information This product is regulated by the United States Consumer Product Safety Commission and is subject to certain labeling requirements under the Federal Hazardous Substances Act. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS). The product label also includes other important information, including directions for use, and should always be read in its entirety prior to using the product.

2. HAZARDS IDENTIFICATION

Flammable Liquids, Category 2
Acute Toxicity: Inhalation, Category 4
Serious Eye Damage/Eye Irritation, Category 2
Carcinogenicity, Category 2
Specific Target Organ Toxicity (single exposure), Category 1



GHS Signal Word: **Danger**

GHS Hazard Phrases:
H225: Highly flammable liquid and vapor.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H351: Suspected of causing cancer {if inhaled}.
H370: Causes damage to organs {ears, liver, kidneys, eyes, respiratory system, central nervous system}.

GHS Precaution Phrases:
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P260: Do not breathe gas/mist/vapors/spray.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

GHS Response Phrases:

P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307+311: IF exposed: Call a POISON CENTER or doctor/physician.
P308+313: IF exposed or concerned: Get medical attention/advice.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P321: Specific treatment see label.
P337+313: If eye irritation persists, get medical advice/attention.
P370+378: In case of fire, use dry chemical powder to extinguish.

GHS Storage and Disposal Phrases:

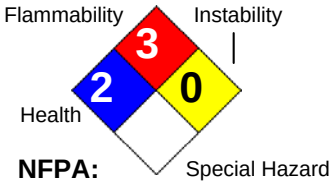
P403+235: Store in cool/well-ventilated place.
P405: Store locked up.
P501: Dispose of contents/container according to local, state and federal regulations.

Hazard Rating System:

HMIS:

HEALTH	* 2
FLAMMABILITY	3
PHYSICAL	0
PPE	X

NFPA:



OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic): This product has not been tested as a whole to determine health effects. The health effects listed below are associated with the individual ingredients listed in Section 3.

INHALATION:
High vapor concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, headaches, cyanosis, loss of consciousness and even death). Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal.

EYES:
High vapor concentrations may cause irritation of the eyes. May cause eye burning pain, irritation, conjuctivitis, corneal vacuolation, and keratitis.

SKIN:
Prolonged or repeated contact may cause drying, cracking, or irritation.

INGESTION:
Harmful or fatal if swallowed. May cause nausea, vomiting, diarrhea and inflammation of the lungs. Irritating to the throat, mouth, and stomach. May produce central nervous system effects, which include dizziness, loss of balance and coordination, unconsciousness, coma and even death.

This product contain methanol, which can cause metabolic acidosis, blindness, seizures, and comma.

CHRONIC OVEREXPOSURE EFFECTS:
Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal. Overexposure may cause

liver and kidney injury.

TARGET ORGANS: eyes, respiratory system, liver, kidneys, central nervous system

PRIMARY ROUTES OF ENTRY: inhalation, ingestion, absorption

Medical Conditions Generally Aggravated By Exposure: The following diseases or disorders may be aggravated by exposure to this product: skin, eye, liver, kidney, nervous system, respiratory system

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration	RTECS #
67-64-1	Acetone {2-Propanone}	60.0 -100.0 %	AL3150000
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	<10.0 %	ZE2100000
100-41-4	Ethylbenzene {Ethylbenzol; Phenylethane}	< 5.0 %	DA0700000
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	< 5.0 %	PC1400000

Additional Chemical Information Specific percentage of composition is being withheld as a trade secret.

4. FIRST AID MEASURES

Emergency and First Aid Procedures:

Skin:
Immediately begin washing the skin thoroughly with large amounts of water and mild soap, if available, while removing contaminated clothing. Seek medical attention if irritation persists.

Eyes:
Immediately begin to flush eyes with water, remove any contact lens. Continue to flush the eyes for at least 15 minutes, then seek immediate medical attention.

Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

Ingestion:
If swallowed, do NOT induce vomiting. Seek immediate medical attention. Call a physician, hospital emergency room, or poison control center immediately. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than hips to prevent aspiration.

Signs and Symptoms Of Exposure: See Potential Health Effects.

Note to Physician: Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

Flammability Classification:	NFPA Class IB
Flash Pt:	1.00 F Method Used: Setaflash Closed Cup (Rapid Setaflash)
Explosive Limits:	LEL: No data. UEL: No data.
Autoignition Pt:	No data.
Suitable Extinguishing Media:	Carbon dioxide, dry chemical, foam and/or water fog.
Unsuitable Extinguishing Media:	None known.
Fire Fighting Instructions:	Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.
Flammable Properties and Hazards:	Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, sparks, flame, and other ignition sources distant from material handling point.

6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled:

Vapors may cause flash fire or ignite explosively.

Clean up: Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area. Use non-sparking tools. Use proper bonding and grounding methods for all equipment and processes. Keep out of waterways and bodies of water. Be cautious of vapors collecting in small enclosed spaces, sewers, low lying areas, confined spaces, etc.

Small spills: Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills: Dike far ahead of spill for later disposal.

Waste Disposal: Dispose in accordance with applicable local, state and federal regulations.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling:

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Do not use this product near any source of heat or open flame, furnace areas, pilot lights, stoves, etc.

Do not use in small enclosed spaces, such as basements and bathrooms. Vapors can accumulate and explode if ignited.

Do not spread this product over large surface areas because fire and health safety risks will increase dramatically.

Precautions To Be Taken in Storing:

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

Other Precautions: Keep away from heat, sparks and open flame. No smoking.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
67-64-1	Acetone {2-Propanone}	PEL: 1000 ppm	TLV: 500 ppm STEL: 750 ppm	No data.
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	PEL: 100 ppm	TLV: 100 ppm STEL: 150 ppm	No data.
100-41-4	Ethylbenzene {Ethylbenzol; Phenylethane}	PEL: 100 ppm	TLV: 100 ppm STEL: 125 ppm	No data.
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	PEL: 200 ppm	TLV: 200 ppm STEL: 250 ppm	No data.

Respiratory Equipment (Specify Type): If exposure cannot be controlled below applicable limits, use the appropriate NIOSH approved respirator such as an air
purifying respirator with organic vapor cartridge. Consult the respirator manufacturer's literature to ensure that the respirator will provide adequate protection. Read and follow all respirator manufacturer's instructions.

Eye Protection: Chemical goggles, also wear a face shield if a splashing hazard exists.

Protective Gloves: Appropriate chemical resistant gloves should be worn, such as nitrile rubber. Wear gloves with as much resistance to the chemical ingredients as possible. Other glove materials may provide protection. Glove selection should be based on chemicals being used and conditions of use. Consult your glove supplier for additional information. Gloves contaminated with product should be discarded and not reused.

Other Protective Clothing: To prevent skin contact wear protective clothing covering all exposed areas.

Various application methods can dictate the use of additional protective safety equipment, such as impermeable aprons to minimize exposure.

Engineering Controls (Ventilation etc.): Use only in well-ventilated areas. Ensure adequate ventilation, especially in confined areas. Where the product is used in a hazardous classified area, use explosion-proof electrical/ventilating/lighting/equipment.

Work/Hygienic/Maintenance Practices: Wash hands thoroughly after use and before eating, drinking, smoking, or using the restroom.

Do not eat, drink, or smoke in the work area.

Discard any clothing or other protective equipment that cannot be decontaminated.

Facilities storing or handling this material should be equipped with an emergency eyewash and safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States:	[ ] Gas [X] Liquid [ ] Solid
Appearance and Odor:	Water white, free and clear.
Melting Point:	No data.
Boiling Point:	150.00 F
Autoignition Pt:	No data.
Flash Pt:	1.00 F Method Used: Setaflash Closed Cup (Rapid Setaflash)
Explosive Limits:	LEL: No data. UEL: No data.
Specific Gravity (Water = 1):	0.797 - 0.8021
Density:	6.65 LB/GL
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	> 1
Evaporation Rate:	> 1
Solubility in Water:	Partial
Viscosity:	< 5 cps
Percent Volatile:	100.0 % by weight.
VOC / Volume:	20.0000 % WT
Additional Physical Information	VOC (g/L): 161 g/L max

10. STABILITY AND REACTIVITY

Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	No data available.
Incompatibility - Materials To Avoid:	Strong oxidizing agents.
Hazardous Decomposition or Byproducts:	Carbon monoxide, carbon dioxide.
Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	None known

11. TOXICOLOGICAL INFORMATION

Toxicological Information: This product has not been tested as a whole. Refer to section 2 for acute and chronic effects.

Chronic Toxicological Effects:

CAS# 67-64-1:
Standard Draize Test, Eyes, Species: Rabbit, 20.00 MG, Severe.
Result:
Behavioral: Change in motor activity (specific assay).
Behavioral: Alteration of classical conditioning.
- American Journal of Ophthalmology., Ophthalmic Pub. Co., 435 N. Michigan Ave., Suite 1415, Chicago, IL 60611, Vol/p/yr: 29,1363, 1946

CAS# 1330-20-7:
Acute toxicity, LC50, Inhalation, Rat, 5000. PPM, 4 H.
Result:
Behavioral: Muscle contraction or spasticity.
Lungs, Thorax, or Respiration:Other changes.
- Raw Material Data Handbook, Vol.1: Organic Solvents, 1974., National Assoc. of Printing Ink Research Institute, Francis McDonald Sinclair Memorial Labor, Lehigh Univ., Bethlehem, PA 18015, Vol/p/yr: 1,123, 1974

Standard Draize Test, Eyes, Species: Rabbit, 5.000 MG, 24 H, Severe.
Result:
Behavioral: General anesthetic.
Behavioral: Somnolence (general depressed activity).
Behavioral: Irritability.
- "Sbornik Vysledku Toxixologickeho Vysetreni Latek A Pripravku," , Institut Pro Vychovu Vedoucicn P, Marhold, J.V., Institut Pro Vychovu Vedoucicn, Pracovniku Chemickeho, Prumyclu Praha Czechoslovakia, Vol/p/yr: -,24, 1972

CAS# 100-41-4:
Tumorigenic Effects:, TCLo, Inhalation, Rat, 750.0 ppm.
Result:
Tumorigenic: Carcinogenic by RTECS criteria.
Kidney, Ureter, Bladder: Tumors.

Standard Draize Test, Eyes, Species: Rabbit, 500.0 MG, Severe.
Result:
Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth).
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).
- American Journal of Ophthalmology., Ophthalmic Pub. Co., 435 N. Michigan Ave., Suite 1415, Chicago, IL 60611, Vol/p/yr: 29,1363, 1946

Carcinogenicity/Other Information: ACGIH A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
ACGIH A4 - Not Classifiable as a Human Carcinogen
IARC 2B - Possibly Carcinogenic to Humans
IARC 3: Not Classifiable as to Carcinogenicity in Humans.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
67-64-1	Acetone {2-Propanone}	n.a.	n.a.	A4	n.a.
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	n.a.	3	A4	n.a.
100-41-4	Ethylbenzene {Ethylbenzol; Phenylethane}	n.a.	2B	A3	n.a.
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	n.a.	n.a.	n.a.	n.a.

12. ECOLOGICAL INFORMATION

General Ecological Information: This product has not been tested as a whole. Information below will be for individual ingredients.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of waste at an approved hazardous waste treatment/disposal facility in accordance with applicable local, provincial and federal regulations.

Do not place material in general trash.

Do not allow material to enter bodies of water or sewers.

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Paint Related Material
DOT Hazard Class: 3 FLAMMABLE LIQUID
UN/NA Number: UN1263 **Packing Group:** II



LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Paint Related Material

Additional Transport Information: The shipper/supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
67-64-1	Acetone {2-Propanone}	No	Yes 5000 LB	No
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	No	Yes 100 LB	Yes
100-41-4	Ethylbenzene {Ethylbenzol; Phenylethane}	No	Yes 1000 LB	Yes
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	No	Yes 5000 LB	Yes

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:	[X] Yes [ ] No	Acute (immediate) Health Hazard
	[X] Yes [ ] No	Chronic (delayed) Health Hazard
	[X] Yes [ ] No	Fire Hazard
	[ ] Yes [X] No	Sudden Release of Pressure Hazard

[ ] Yes [X] No Reactive Hazard

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
67-64-1	Acetone {2-Propanone}	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory, 4 Test; CA PROP.65: No
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	CAA HAP,ODC: HAP; CWA NPDES: Yes; TSCA: Yes - Inventory; CA PROP.65: No
100-41-4	Ethylbenzene {Ethylbenzol; Phenylethane}	CAA HAP,ODC: HAP; CWA NPDES: Yes; TSCA: Yes - Inventory, 4 Test; CA PROP.65: Yes
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	CAA HAP,ODC: HAP; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: Yes

Regulatory Information:

16. OTHER INFORMATION

Revision Date: 08/31/2015

Preparer Name: W.M. Barr EHS Dept (901)775-0100

Additional Information About This Product: No data available.

Company Policy or Disclaimer: The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identification

Product ID:	**011.0002616.092**
Product Name:	GOOF OFF2 22OZ 12 PACK
Product Use:	None specified.
Print date:	16/Mar/2010
Revision Date:	10/Dec/2008

Company Identification
The Valspar Corporation
PO Box 1461
Minneapolis, MN 55440

Manufacturer's Phone:	1-612-332-7371
24-Hour Medical Emergency Phone:	1-888-345-5732

2. HAZARDS IDENTIFICATION

Primary Routes of Exposure:
Inhalation
Ingestion
Skin absorption

Eye Contact:

- Moderate eye irritation
- Risk of serious damage to eyes.

Skin Contact:

- Causes skin irritation.
- Dermatitis
- Harmful if absorbed through skin.

Ingestion:

- Irritation of the mouth, throat, and stomach.
- Harmful if swallowed.

Inhalation:

- Causes respiratory tract irritation.
- Harmful by inhalation.

Target Organ and Other Health Effects:
- Spleen damage may occur.
- Liver injury may occur.
- Kidney injury may occur.
- Causes headache, drowsiness or other effects to the central nervous system.
- Contains glycol ether which has been shown to cause blood effects damage in laboratory animals.

This product contains ingredients that may contribute to the following potential chronic health effects:
- Notice: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

3. COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS

Ingredient Name CAS-No.	Approx. Weight %	Chemical Name
ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2	20 - 25	2-Butoxyethanol
NORMAL PROPYL ALCOHOL 71-23-8	5 - 10	n-Propyl alcohol
PROPYLENE GLYCOL N-BUTYL ETHER 5131-66-8	5 - 10	1-Butoxy-2-propanol
PROPRIETARY ADDITIVE	1 - 5	PROPRIETARY ADDITIVE

If this section is blank there are no hazardous components per OSHA guidelines.

4. FIRST AID MEASURES

Eye Contact:
Remove any contact lenses and open eyes wide apart. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If medical assistance is not immediately available, flush an additional 15 minutes. Get medical attention immediately.

Skin Contact:
Remove contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention, if symptoms develop or persist.

Ingestion:
Rinse mouth with water. Give one or two glasses of water. Only induce vomiting at the instruction of medical personnel. Get medical attention. Never give anything by mouth to an unconscious person.

Inhalation:
Move injured person into fresh air and keep person calm under observation. Get medical attention immediately.

Medical conditions aggravated by exposure:
Any respiratory or skin condition.

5. FIRE FIGHTING MEASURES

Flash point (Fahrenheit):	119
Flash point (Celsius):	48
Lower explosive limit (%):	1

5. FIRE FIGHTING MEASURES

Upper explosive limit (%):	14
Autoignition temperature:	not determined
Sensitivity to impact:	no
Sensitivity to static discharge:	Can be sensitive to static discharge hazards. Please see bonding and grounding information in Section 7.
Hazardous combustion products:	See Section 10.

Unusual fire and explosion hazards:
None known.

Extinguishing media:
Carbon dioxide, dry chemical, foam and/or water fog.

Fire fighting procedures:
Firefighters should be equipped with self-contained breathing apparatus and turn out gear. Keep containers and surroundings cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Action to be taken if material is released or spilled:
Ventilate the area. Avoid breathing dust or vapor. Use self-containing breathing apparatus or airmask for large spills in a confined area. Wipe, scrape or soak up in an inert material and put in a container for disposal. See section 7, "Handling and Storage", for proper container and storage procedures. Remove all sources of ignition. Soak up with inert absorbent material. Use only non-sparking tools. Avoid contact with eyes.

7. HANDLING AND STORAGE

Precautions to be taken in handling and storage:
Keep away from heat, sparks and open flame. - No smoking. Keep container closed when not in use. Do not store above 120 degrees F. (49 degrees C). Based on flash point and vapor pressure, suitable storage should be provided in accordance with OSHA regulation 1910.106, Ontario OH&S regulation 851 section 22. Empty containers may contain product residue, including flammable or explosive vapors. Do not cut, puncture or weld on or near container. All label warnings must be observed until the container has been commercially cleaned or reconditioned. If the product is used near or above the flashpoint, an ignition hazard may be present. Activities, uses, or operations which liberate vapor (such as mixing or free fall of liquids) may also present an ignition hazard. Please ensure containers and other interconnected equipment are properly bonded and grounded at all times.

8. PERSONAL PROTECTIVE EQUIPMENT AND EXPOSURE CONTROLS

Personal Protective Equipment

Eye and face protection:
Wear chemical goggles with splash shields or face shield. Contact lenses should not be worn when working with chemicals because contact lenses may contribute to the severity of an eye injury in case of exposure.

Skin protection:
Appropriate chemical resistant gloves should be worn.

Other Personel Protection Data:
Ensure that eyewash stations and safety showers are close to the workstation location. To prevent skin contact wear protective clothing covering all exposed areas.

Respiratory protection:
If exposure cannot be controlled below applicable limits, use the appropriate NIOSH approved respirator such as an air purifying respirator with organic vapor cartridge and dust/mist filter. Consult the respirator manufacturer's literature to ensure that the respirator will provide adequate protection. Read and follow all respirator manufacturer's instructions.

Ventilation
Use only in well-ventilated areas. Ensure adequate ventilation, especially in confined areas. Ovens used for curing should contain a fresh air purge to prevent vapours from accumulating and creating a possible explosive mixture. Where the product is used in a hazardous classified area, use explosion-proof electrical/ventilating/lighting/equipment.

Exposure Guidelines

OSHA Permissible Exposure Limits (PEL's)

Ingredient Name CAS-No.	Approx. Weight %	TWA (final)	Ceilings limits (final)	Skin designations
ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2	20 - 25	240 mg/m^3 TWA 50 ppm TWA		prevent or reduce skin absorption
NORMAL PROPYL ALCOHOL 71-23-8	5 - 10	200 ppm TWA 500 mg/m^3 TWA		

ACGIH Threshold Limit Value (TLV's)

Ingredient Name CAS-No.	Approx. Weight %	TWA	STEL	Ceiling limits	Skin designations
ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2	20 - 25	20 ppm TWA			
NORMAL PROPYL ALCOHOL 71-23-8	5 - 10	100 ppm TWA			

9. PHYSICAL PROPERTIES

Odor:	Normal for this product type.
Physical State:	liquid
pH:	not determined
Vapor pressure:	24 mmHg @ 77ºF (25ºC)
Vapor density (air = 1.0):	4.55
Boiling point:	not determined
Solubility in water:	not determined
Coefficient of water/oil distribution:	not determined
Density (lbs per US gallon):	7.93
Specific Gravity:	.95
Evaporation rate (butyl acetate = 1.0):	1.3
Flash point (Fahrenheit):	119
Flash point (Celsius):	48
Lower explosive limit (%):	1
Upper explosive limit (%):	14
Autoignition temperature:	not determined

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions.
Conditions to Avoid:	Heat.
Incompatibility:	Strong oxidizing agents
Hazardous Polymerization:	None anticipated.
Hazardous Decomposition Products:	Carbon monoxide and carbon dioxide.

10. STABILITY AND REACTIVITY

Sensitivity to static discharge: Can be sensitive to static discharge hazards. Please see bonding and grounding information in Section 7.

11. TOXICOLOGICAL INFORMATION

Ingredient Name CAS-No.	Approx. Weight %	NIOSH - Selected LD50s and LC50s
ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2	20 - 25	= 2.21 mg/L Inhalation LC50 Rat 4 h = 220 mg/kg Dermal LD50 Rabbit = 2270 mg/kg Dermal LD50 Rat = 450 ppm Inhalation LC50 Rat 4 h = 470 mg/kg Oral LD50 Rat
NORMAL PROPYL ALCOHOL 71-23-8	5 - 10	= 1870 mg/kg Oral LD50 Rat > 13548 ppm Inhalation LC50 Rat 4 h
PROPYLENE GLYCOL N-BUTYL ETHER 5131-66-8	5 - 10	= 3100 mg/kg Dermal LD50 Rabbit = 5660 µL/kg Oral LD50 Rat

Mutagens/Teratogens/Carcinogens: None known.

Ingredient Name CAS-No.	Approx. Weight %	NTP Known Carcinogens	NTP Suspect Carcinogens	NTP Evidence of Carcinogenicity
ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2	20 - 25			male rat-no evidence; female rat-equivocal evidence; male mice-some evidence; female mice-some evidence

Ingredient Name CAS-No.	Approx. Weight %	OSHA - Hazard Communication Carcinogens	OSHA - Specifically Regulated Carcinogens	ACGIH Carcinogens
ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2	20 - 25			A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans

12. ECOLOGICAL DATA

No information on ecology is available.

13. DISPOSAL CONSIDERATIONS

Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

U.S. Department of Transportation

UN ID Number (msds): NRLUBE
Proper Shipping Name: LUBRICANT, NOT REGULATED
Hazardous Ingredient (Land) 1 NORMAL PROPYL ALCOHOL

14. TRANSPORTATION INFORMATION

U.S. Highway & Rail Shipments

The supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

Reportable Quantity Description:

International Air Transport Association (IATA):

UN ID Number (msds):	UN1993
Proper Shipping Name:	Flammable liquid, n.o.s.
Hazard Class:	3
Packing Group:	III
IATA N.O.S. Technical Name 1	NORMAL PROPYL ALCOHOL

International Maritime Organization (IMO):

IMO UN/ID Number (msds):	UN1993
Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S.
Hazard Class:	3
Packing Group:	III
IMDG N.O.S. Technical Name 1	NORMAL PROPYL ALCOHOL

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

Ingredient Name CAS-No.	Approx. Weight %	SARA 302	SARA 313	CERCLA RQ in lbs.
ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2	20 - 25		YES	

SARA 311/312 Hazard Class:

Acute:	yes
Chronic:	yes
Flammability:	yes
Reactivity:	no
Sudden Pressure:	no

U.S. STATE REGULATIONS:

Right to Know:

The specific chemical identity of a component may be withheld as a trade secret under 34 Pennsylvania Code, Chapter 317.

Pennsylvania Right To Know:

PROPRIETARY ADDITIVE	Trade Secret
NORMAL PROPYL ALCOHOL	71-23-8
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2
PROPYLENE GLYCOL N-BUTYL ETHER	5131-66-8

Additional Non-Hazardous Materials

WATER	7732-18-5

Rule 66 status of product Not photochemically reactive.

INTERNATIONAL REGULATIONS - Chemical Inventories

US TSCA Inventory:
All components of this product are in compliance with U.S. TSCA Chemical Substance Inventory Requirements.

Canada Domestic Substances List:
All components of this product are listed on the Domestic Substances List.

16. OTHER INFORMATION

HMIS Codes

Health:	2*
Flammability:	2
Reactivity:	1
PPE:	X - See Section 8 for Personal Protective Equipment (PPE).

Abbreviations:
OSHA - Occupational Safety and Health Administration, IARC - International Agency for Research on Cancer, NIOSH - National Institute of Occupational Safety and Health, NTP - National Toxicology Program, ACGIH - American Conference of Governmental Industrial Hygienists, SCAQMD - South Coast Air Quality Management District, TSCA - Toxic Substances Control Act, IATA - International Air Transport Association, IMO - International Maritime Organization, DOT - Department of Transportation, NA - Not applicable, NOT ESTAB - Not established, N.A.V. - Not available, RQ - Reportable quantity, WT - Weight, MG/CU M - Milligrams per cubic meter, G/L - Grams per liter, MM - Millimeters, MPPCF - Millions of particles per cubic foot, PPM - parts per million, PPT - parts per thousand, TCC/PM - Tag closed cup / Pensky-Martens, PB - Lead, PEL - Permissible exposure level, TWA - Time Weighted Average, STEL - Short term exposure limit, C - Celsius, F - Fahrenheit.

Disclaimer:
The data on this sheet represent typical values. Since application variables are a major factor in product performance, this information should serve only as a general guide. Valspar assumes no obligation or liability for use of this information. UNLESS VALSPAR AGREES OTHERWISE IN WRITING, VALSPAR MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT. VALSPAR WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. Your only remedy for any defect in this product is the replacement of the defective product, or a refund of its purchase price, at our option. This MSDS contains additional information required by the state of Pennsylvania.

Preparation Information:

Prepared By:	Regulatory Affairs Department
Print date:	16/Mar/2010
Revision Date:	10/Dec/2008

Safety Data Sheet - Gorilla Super Glue

Date Revised: 08/09/2015
Date Issued: 05/22/2015
Version: 1.1

FOR CHEMICAL EMERGENCY:
During Business Hours: (800) 966-3458 | Outside Business Hours: (800) 420-7186

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture
Product Name: Gorilla Super Glue
Synonyms: Ethyl Cyanoacrylate Adhesive

Intended Use of the Product

Adhesive for metal, wood, ceramics, leather, paper, most plastics and more

Name, Address, and Telephone of the Responsible Party

Company
The Gorilla Glue Company
4550 Red Bank Expressway
Cincinnati, Ohio 45227
513-271-3300
www.gorillatough.com

Emergency Telephone Number

Emergency number : 1-800-420-7186 (Prosar)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)
Flam. Liq. 4 H227
Skin Irrit. 2 H315
Eye Irrit. 2A H319
STOT SE 3 H335
Full text of H-phrases: see section 16

Label Elements

GHS-US Labeling
Hazard Pictograms (GHS-US) :



GHS07

Signal Word (GHS-US) : Warning
Hazard Statements (GHS-US) : H227 - Combustible liquid.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
Precautionary Statements (GHS-US) : P210 - Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.
P261 - Avoid breathing vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing, and eye protection.
P302+P352 - If on skin: Wash with plenty of water.
P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 - Call a poison center or doctor if you feel unwell.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P370+P378 - In case of fire: Use appropriate media (see section 5) to extinguish.
P233 - Keep container tightly closed.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Other Hazards

Other Hazards Not Contributing to the Classification: Rapid polymerization occurs upon contact with water or alkaline substances. As a result, heat is generated. Skin inflammation or burns may occur upon contact during this polymerization. Contains Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Ethyl cyanoacrylate	(CAS No) 7085-85-0	86 - 100	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

Skin Contact: Remove contaminated clothing. Gently wash with plenty of soap and water followed by rinsing with water for at least 15 minutes. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Rinse mouth. Do not induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Irritation to eyes, skin and respiratory tract.

Inhalation: May cause respiratory irritation.

Skin Contact: Causes skin irritation.

Eye Contact: Causes serious eye irritation.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: Bonds skin and eyes in seconds.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO_2).

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.
Explosion Hazard: Product is not explosive.
Reactivity: Rapid polymerization occurs upon contact with water or alkaline substances. As a result, heat is generated. Skin inflammation or burns may occur upon contact during this polymerization. May react with strong oxidizers, increasing risk of fire or explosion.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.
Firefighting Instructions: Do not allow run-off from fire fighting to enter drains or water courses.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
Hazardous Combustion Products: Irritating organic vapors may be formed.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).
Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

Environmental Precautions

Prevent entry to sewers and public waters.

Methods and Material for Containment and Cleaning Up

For Containment: Absorb and/or contain spill with inert material, then place in suitable container. Take up in non-combustible materials.
Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Use only non-sparking tools.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see item 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Store away from heat and incompatible materials. Protect from moisture.
Incompatible Materials: Strong acids, strong bases, strong oxidizers. Water.
Storage Temperature: 5 - 25 °C (41 - 77 °F)

Specific End Use(s) Adhesive for metal, wood, ceramics, leather, paper, most plastics and more.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

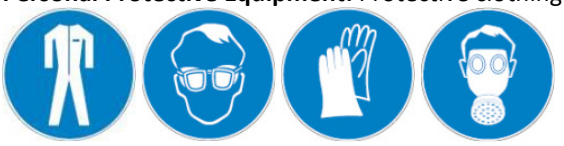
For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Ethyl cyanoacrylate (7085-85-0)		
USA ACGIH	ACGIH TWA (ppm)	0.2 ppm
Alberta	OEL TWA (mg/m³)	1 mg/m³
Alberta	OEL TWA (ppm)	0.2 ppm
British Columbia	OEL TWA (ppm)	0.2 ppm
Manitoba	OEL TWA (ppm)	0.2 ppm
Newfoundland & Labrador	OEL TWA (ppm)	0.2 ppm
Nova Scotia	OEL TWA (ppm)	0.2 ppm
Ontario	OEL TWA (ppm)	0.2 ppm
Prince Edward Island	OEL TWA (ppm)	0.2 ppm
Saskatchewan	OEL STEL (ppm)	0.6 ppm
Saskatchewan	OEL TWA (ppm)	0.2 ppm

Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide sufficient ventilation to keep vapors below permissible exposure limit. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective clothing. Safety glasses. Gloves. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	:	Liquid
Appearance	:	White Water / Straw colored
Odor	:	Sharp, irritating
Odor Threshold	:	Not available
pH	:	Not applicable
Evaporation Rate	:	Not available
Melting Point	:	Not available
Freezing Point	:	Not available
Boiling Point	:	> 100 °C (212 °F)
Flash Point	:	> 81 °C (177.8 °F)
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Lower Flammable Limit	:	Not available
Upper Flammable Limit	:	Not available
Vapor Pressure	:	< 0.5 mm Hg
Relative Vapor Density at 20 °C	:	Not available

Relative Density	:	1.1 (water = 1)
Specific Gravity	:	1.1
Solubility	:	Immiscible in water.
Partition Coefficient: N-Octanol/Water	:	Not available
Viscosity	:	Not available
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge.
VOC Content	:	< 20 g/l estimated (California SCAQMD Method 316B)

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Rapid polymerization occurs upon contact with water or alkaline substances. As a result, heat is generated. Skin inflammation or burns may occur upon contact during this polymerization. May react with strong oxidizers, increasing risk of fire or explosion.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Water.

Hazardous Decomposition Products: Carbon Oxides (CO and CO_2) and other irritating compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified
LD50 and LC50 Data: Not available
Skin Corrosion/Irritation: Causes skin irritation.
pH: Not applicable
Serious Eye Damage/Irritation: Causes serious eye irritation.
pH: Not applicable
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Teratogenicity: Not available
Carcinogenicity: Not classified
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation.
Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: May cause respiratory irritation.
Symptoms/Injuries After Skin Contact: Causes skin irritation.
Symptoms/Injuries After Eye Contact: Causes serious eye irritation.
Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data: Estimated Oral LD50: >5000 mg/kg; Estimated Dermal LD50: >2000 mg/kg;
Estimated Inhalation LC50: Vapors may be irritating.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity Not classified

Persistence and Degradability Not available

Bioaccumulative Potential Not available

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT Not regulated for transport
In Accordance with IMDG Not regulated for transport
In Accordance with IATA Not regulated for transport
In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Gorilla Super Glue	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

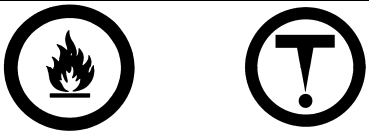
Ethyl cyanoacrylate (7085-85-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

Gorilla Super Glue
California Prop 65: To the best of our knowledge, this product does not contain any of the listed chemicals, which the State of California has found to cause cancer, birth defects or reproductive harm.
Ethyl cyanoacrylate (7085-85-0)
U.S. - New Jersey - Right to Know Hazardous Substance List

Canadian Regulations

Gorilla Super Glue	
WHMIS Classification	Class B Division 3 - Combustible Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects



Ethyl cyanoacrylate (7085-85-0)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class B Division 3 - Combustible Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 05/22/2015
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 4	Flammable liquids Category 4
Skin Irrit. 2	Skin corrosion/irritation Category 2

STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H227	Combustible liquid
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

Party Responsible for the Preparation of This Document
The Gorilla Glue Company
+1 513-271-3300

The information presented in this Safety Data Sheet was prepared by qualified personnel and to the best of our knowledge is true and accurate. The information and recommendations are furnished for this product with the understanding that the purchaser will independently determine the suitability of the product for this purpose. This data does not constitute a warranty, expressed or implied, statutory or otherwise, nor is it representation for which The Gorilla Glue Company assumes legal responsibility. The data is submitted for the user's information and consideration only. Any use of this product must be determined by the user to be in accordance with applicable federal, state, provincial and local laws and regulations.

North America GHS US 2012 & WHMIS 2 GG

Material Safety Data Sheet

MANUFACTURER:
GPM
201 Jandus Road
Cary, IL 60013

EMERGENCY TELEPHONE NUMBER: (866)257-3981
TECHNICAL INFORMATION: (847)639-5383
HMIS: H *[2] F [4] R [0]
DATE: March 01, 2010
SUPERSEDES: October 22, 2007

SECTION 1- PRODUCT IDENTIFICATION

PRODUCT CODE: PDS-Line 1-6, 11-12, 15-16, 21-22, 24-25, 29-31, 33-35, 40-41, 43-44, 50, 52-53, 56, 60, 70-71, 80, 95-100
PRODUCT NAME: Premium Decor Enamel
PRODUCT CLASS: Aerosol Paint

SECTION 2 - HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	WT.%	OCCUPATIONAL EXPOSURE LIMITS TLV	PEL	VAPOR PRESSURE mmHg@20°C
Acetone	67-64-1	25-32	750 ppm	1000 ppm	186.0
Hydrocarbon Propellant	Mixture	26-31	1000 ppm	1000 ppm	80 p.s.i.
(S) Toluene	108-88-3	9-21	20 ppm	100 ppm	22.0
Talc(1)	14807-96-6	3-9	2 mg/m^3	2 mg/m^3	NA
Carbon Black(2)	1333-86-4	.1-.7	3.5 mg/m^3	3.5 mg/m^3	NA
Crystalline Silica(3)	14464-46-1	.5-.9	.05mg/m^3	.05mg/m^3	NA
(S) Xylene	1330-20-7	.2-2	100 ppm	100 ppm	14.0
(S) Ethyl Benzene	100-41-4	.07-.8	100 ppm	100 ppm	12.0
VM&P Naphtha	8032-32-4	4-14	300 ppm	300 ppm	5.2
Yellow Iron Oxide (4)	51274-00-1	1-2	5 mg/m^3	5 mg/m^3	NA
(S)Napthalene (5)	91-20-3	0.1-0.15	10 ppm	10 ppm	.087
Propylene Glycol Monomethyl Ether Acetate (6)	108-65-6	1-2	NE	NE	3.7

(1) - Only in PDS-3, 4, 5, 6 (2) - Only in PDS-2, 4, 6, 30, 35, 53, 60,70-71 (3) Only in PDS-5, 6
(4) – In PDS-50, 52, 60. (5) – In PDS-29, 96, 97, 99 only. (6) – In PDS-96 only.
(S) - This ingredient is subject to the reporting requirements of Section 313 SARA Title III.
NA - Not applicable. NE - Not established.

SECTION 3 - PHYSICAL DATA

VAPOR DENSITY: [X] HEAVIER [ ] LIGHTER THAN AIR
BOILING RANGE: <0°F
EVAPORATION RATE: [ ] FASTER [X] SLOWER THAN ETHER
85-96% VOLATILE VOLUME
APPEARANCE/ODOR: Colored liquid/solvent
DENSITY: 5.7-6.9 Wt(lbs)/Gal
VOLATILE ORGANIC COMPOUND(VOC) MAXIMUM: Nonflat 65% Flat 60%
MIR: Flat 1.20 Nonflat 1.40

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA Class IA DOT ORM-D
FLASH POINT: <20°F
LEL: 2.0

EXTINGUISHING MEDIA:
[X] FOAM [ ] ALCOHOL FOAM [X] CO_2 [X] DRY CHEMICAL [X] WATER FOG [ ] OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may explode when exposed to extreme heat. Isolate from heat, sparks and open flame. Vapors may accumulate and travel to ignition sources distant from handling site.

SPECIAL FIRE FIGHTING PROCEDURES: Use a self-contained breathing apparatus with full face mask in a positive pressure demand mode. Treat as a volatile liquid fire. Water spray may be ineffective. If water spray is used, fog nozzles are preferable. Water may be used to cool sealed containers to prevent pressure build-up and possible explosion or auto-ignition when exposed to the heat of a fire.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and unidentified organic compounds.

SECTION 5 - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

INHALATION: Exposure to vapors, mists, or sanding dusts may cause moderate irritation to the lungs, nose, and throat. May also cause dizziness, nausea or fatigue. Vapors or spray mists may be irritating to eyes, nose or throat. Prolonged overexposure may cause coughing, shortness of breath, dizziness, and intoxication. This product contains crystalline silica (cs), which is considered a hazard by inhalation.

SKIN CONTACT: Exposure may cause mild irritation. Prolonged exposure may cause drying and cracking.

EYE CONTACT: Causes irritation, including redness, stinging and watering.

INGESTION: Moderately toxic in large amounts. Could cause drowsiness, nausea or headache. (See additional information in Section 9).

CARCINOGENICITY: This product contains carbon black, crystalline silica, napthalene and ethyl benzene (see section 2). Carbon black and ethyl benzene have been classified by IARC (not NTP or OSHA) as possible carcinogens for humans (2B) from lab animal studies. Crystalline silica has been classified by IARC and NTP as a carcinogen for humans (Group 1) from lab animal studies. Napthalene has been classified by NTP as a (class C) reasonably anticipated human carcinogen and by IARC as group 2B (possibly carcinogenic to humans).

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: Preexisting skin, eye and respiratory disorders may be aggravated by exposure to this product.

PRIMARY ROUTE(S) OF ENTRY: [X] DERMAL [X] INHALATION [ ] INGESTION

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove to fresh air. Use artificial respiration if necessary. Seek medical attention.

SKIN CONTACT: Remove contaminated clothing. Wash affected area with soap and water. Wash clothing before reuse.

EYE CONTACT: Immediately flush eyes with large amounts of water. If symptoms persist, seek medical attention.

INGESTION: Give 1 or 2 glasses of water to dilute. Do not induce vomiting. Get medical attention immediately.

SECTION 6 - REACTIVITY DATA

STABILITY: Stable HAZARDOUS POLYMERIZATION: Will not occur

INCOMPATIBILITY (Materials to avoid): Avoid contact with strong oxidizing agents.

SECTION 7 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Eliminate all ignition sources. Contain spill, absorb liquid with clay, sand or floor absorbent. Prevent run-off to sewers, streams or other bodies of water.

WASTE DISPOSAL METHOD: Observe all federal, state and local regulations regarding proper disposal.

SECTION 8 - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: NIOSH/MSHA jointly approved air purifying respirator if TLV limits are exceeded. Approved mechanical filter to remove solid airborne particles of overspray during application.

VENTILATION: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV.

PROTECTIVE CLOTHING: Wear safety glasses with side shields to prevent eye contact. Contact lenses should not be worn. Use solvent resistant gloves to avoid prolonged contact.

OTHER PROTECTIVE EQUIPMENT: Eyewash fountains and safety showers in the event of an accident.

HYGIENIC PRACTICES: Wash hands thoroughly after use, and before eating, drinking or smoking.

SECTION 9 - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Handle as an extremely flammable material. Keep liquid and vapor away from heat, sparks, and open flame. Close container after each use. Store in a cool dry area. Do not expose container to temperatures above 120^0F.

OTHER PRECAUTIONS: CAUTION: Keep out of reach of children. Reports have associated repeated and prolonged occupational exposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal.

WARNING: This product contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

The information contained in this MSDS is based on information and data provided by the supplier of the raw material used in the manufacture of this product. Although GPM believes such information and data to be reliable, GPM makes no warranty, expressed or implied, regarding the accuracy and completeness of such information and data.

Material Safety Data Sheet

Complies with OSHA's Hazard Communication Standard 29 CFR 1910.1200

NFPA Fire: 4
Health: 3
Reactivity: 1

SECTION I - IDENTITY AND MANUFACTURER'S INFORMATION

Manufacturer's Name, Address: Franklin Cleaning Technology - PO Box 214 Great Bend KS 67530

Product Name: Graf-It-Out
Product Number: F4290
Chemical Family: Pressurized mixture of solvents.
Package Size: 16 oz.

EPA Reg. No: N/A
Emergency Telephone No. 620-792-1711
Preparer: Bill Dayton
Date: 11/18/02
Signature:

SECTION II - HAZARDOUS INGREDIENTS IDENTITY INFORMATION

Hazardous Components	CAS#	OSHA TWA	ACGIH TWA	Percent
d-Limonene	5989-27-5	NE	NE	<20
**Xylene	1330-20-7	100 ppm	100 ppm	42
Isopropyl Alcohol	67-63-0	400 ppm	400 ppm	<15
Isobutane	75-28-5	1000 ppm	800 ppm	<15
Propane	74-98-6	1000 ppm	1000 ppm	<12

SECTION III - PHYSICAL AND CHEMICAL CHARACTERISTICS

No Physical Hazards		Flammable Gas		Flammable Liquid/Solid		Water Reactive	
Combustible		Flammable Aerosol	x	Pyrophoric		Oxidizer	
Compressed Gas		Explosive		Unstable - Reactive:		Organic Peroxide	

Boiling Point, °F: Compressed Gas
Solubility in Water: Insoluble
Evaporation Rate: >1
Vapor Pressure: 50 psig
Specific Gravity (water =1): 0.907
pH: N/A
Vapor Density: unknown
%Volatiles by Weight: 100

Appearance and Odor: Clear, typical solvent odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method): 55 F (SCC) Conc.
Flammable Limits: LEL: Unknown
UEL: Unknown
Extinguishing Media: CO2, Dry Chemical, Foam, Water Fog

Special Fire Fighting Procedures: Keep aerosols cooled with water to prevent bursting.

Unusual Fire and Explosion Hazards: EXTREMELY FLAMMABLE AEROSOL: Temperatures exceeding 130 F may cause bursting. Contents of ruptured cans contribute combustible materials in the event of fire.

SECTION V - REACTIVITY DATA

Stability: Unstable [ ] Stable [x]
Conditions to Avoid: Heat and open flames

Incompatibility: (Materials to Avoid): Do not mix with any other material. Avoid contact with strong oxidizers, nitric acid, and sulfuric acid.

Hazardous Decomposition Products or Byproducts: With extreme heat or fire typical hydrocarbon by-products are released.

Hazardous Polymerization: May Occur: [ ] Will Not Occur: [x]
Conditions to Avoid: N/A

Comments:

* *This product contains toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. See the Hazardous Components in Section I.

SECTION VI - HEALTH HAZARD DATA

Route (s) of entry:	Inhalation	x	Skin:	x	Eye:	x	Ingestion:	x

No Health Hazard		Reproductive toxin		Sensitizer	
Toxic		Irritant	x	Carcinogen	
Highly Toxic		Corrosive		See Target Organs	x

TARGET ORGANS

Lungs	x	Eyes	x	Blood	x	Teratogen		Mucous Membranes	x		
Heart	x	Skin	x	Liver	x	Central Nervous System	x	Autonomic Nervous System			
Kidney		Prostrate		Mutagen		Cardiovascular System		Respiratory System	x		

Carcinogenicity:	None Known	x	NTP:		IARC:		OSHA Regulated	

Medical Conditions Generally Aggravated by Exposure:
Preexisting eye, skin and respiratory disorders.

Signs and Symptoms of Exposure:
Harmful or fatal if swallowed. Eye and skin irritation. Vapor harmful. May cause giddiness, headache, dizziness, nausea and unconsciousness.

Emergency and First Aid Procedures:
In case of eye or skin contact, rinse with water for 15 minutes. Contact a physician. Ingestion: DO NOT induce vomiting. Contact a physician or Poison Control Center immediately.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:
Eliminate all ignition sources. Mop up, rinse with detergent and water.

Waste Disposal Method:
Do not puncture or incerate container. For single units, wrap in newspaper and discard in trash container. Dispose of multiple units in accordance with Local, State and Federal Regulations.

Potential EPA Hazardous Waste Code(s): D001

Steps to be taken in handling and storage:
NFPA "Level 3 Aerosol". Do not spray near heat, sparks, or open flame. Store at 40 - 90F. Read and follow label use directions. Keep out of reach of children.

SECTION VIII - CONTROL MEASURES

Respiratory Protection(Specify Type):
NIOSH -approved respirator. Type for organic mist recommended. Avoid prolonged or repeated breating of vapors.

Ventilation: Local Exhaust: Special:
Mechanical: Required

Protective Gloves: Recommended Eye Protection: Recommended

Other Protective Clothing and Equipment:
None required

SECTION IX - SHIPPING INFORMATION

DOT Proper Shipping Name and Number:
Consumer Commodity, ORM-D

NE = Not Established
N/A = Not Applicable

MATERIAL SAFETY DATA SHEET

COMPLIES WITH OSHA'S HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

SECTION I · PRODUCT IDENTIFICATION

Product Name: GRAF-X
Product Number: 7072100
Product Type: AEROSOL
Supplier's Name: MKG Sales & Associates
Supplier's Address: 130 Miller Road, Medford, NJ 08055
D.O.T. Hazard Class: CONSUMER COMMODITY · ORM-D

Formula: Proprietary
Date Prepared: 02/26/04
Emergency Phone: (800) 255-3924
Information Phone: (609) 953-4700

HMIS Rating (Based on Aerosol Conc.):
0-Minimal 1- Slight 2- Moderate
3-Serious 4- Extreme
HEALTH1 FIRE: 4 REACTIVITY: 0
Personal Protection: B

SECTION II · INGREDIENTS

CHEMICAL NAME	CAS #	%WT	313/Chem	Skin	Carcinogen	PEL	TWA/TLV
Toluene	108-88-3	40-60	YES	NO	NO	100 ppm	100 ppm
Diacetone Alcohol	123-42-2	05-10	NO	NO	NO	50 ppm	50 ppm
Isopropyl Alcohol	67-63-0	05-10	NO	NO	NO	400 ppm	400 ppm
Liquified Petroleum Gas	68476-85-7	10-20	NO	NO	NO	1000 ppm	1000 ppm

SECTION III · PHYSICAL DATA

Data Below Based On Aerosol Concentrate Only:
Boiling Point: ~194°F
pH: N/A
Solubility In Water: Emulsifies
Appearance/Odor: Creamy White Jel, Mild Odor
Data Below Based On Total Contents:
Vapor Pressure of can (psig @70°F): 45
Total VOC%: ~ 87%

Vapor Density(Air=1): >1
Specific Gravity (H_2O=1)@75°F: 0.913

SECTION IV · FIRE AND EXPLOSION DATA

Flash Point (of Concentrate Only): 54°F (T.O.C.)
Extinguishing Media: Foam, CO_2, Dry Media

Flammability (as per USA Flame Projection Test)**:** Extremely Flammable Spray

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Cool fire exposed containers to prevent rupturing.
Unusual Fire and Explosion Hazards: Exposure to temperature above 120° F may cause bursting.

SECTION V · REACTIVITY DATA

Stability: Material Stable.
Hazardous Polymerization: Will not Occur.
Incompatibility: Avoid contact with strong oxidizing agents.
Hazardous Decomposition Products: Carbon Dioxide, Carbon Monoxides.

SECTION VI · STORAGE AND HANDLING

KEEP OUT OF REACH OF CHILDREN.
For Industrial and Institutional use only.
Store in a cool, dry area away from heat or open flame.
Do not store at temperatures above 120° F.

NFPA Code 30B Rating: Level 2 Aerosol.

SECTION VII · HEALTH AND FIRST AID

PRIMARY ROUTES OF ENTRY & EFFECTS OF OVER EXPOSURE:
Eyes: May cause slight irritation but does not injure eye tissue.
Skin: Frequent or prolonged contact may cause irritation.
Inhalation: Inhalation of mist can cause irritation of nasal and respiratory passages. Abusive or excessive inhalation may cause irritation to the upper respiratory tract, dizziness, nausea and other central nervous system effects.
Ingestion: Can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of material into the lungs can cause chemical pneumonitis.

FIRST AID PROCEDURES:
Eyes: Flush with large amounts of cool running water for at least 15 minutes while holding upper and lower lids open. If irritation persists get medical attention immediately.
Skin: Wash with soap and water. If irritation persists seek medical attention.
Inhalation: Remove to fresh air. Seek medical attention immediately. If breathing stops give artificial respiration.
Ingestion: Do not induce vomiting. Seek medical attention immediately.

SECTION VIII · SPECIAL PROTECTION DATA

Respiratory Protection: None needed for proper use in accordance with label directions.
Ventilation: Provide local exhaust to keep TLV of Section II ingredients below acceptable limits.
Protective Gloves: None needed for proper use in accordance with label directions. Use chemical resistant gloves if hand contact will be made.
Eye Protection: None needed unless it is anticipated that a splash or spray back will occur, then wear safety glasses or chemical proof goggles.

SECTION IX · SPILL OR LEAK PROTECTION

STEPS TO BE TAKEN IN CASE OF SPILL OR LEAK: Allow propellant to evaporate. Maintain local exhaust and adequate ventilation. No smoking. Keep sparks, heat sources and open flame far away from spill or leak. Cover with absorbent material and sweep up. Wash area to prevent slipping. Dispose of soaked absorbent material in accordance with Federal, State and local laws.
WASTE DISPOSAL METHOD: Aerosol cans, when emptied and depressurized through normal use, pose no disposal hazard and should be recycled. Consult Federal, State and local authorities for approved procedures.

N/A= NOT APPLICABLE · N/E=NOT ESTABLISHED · N/D=NOT DETERMINED · <=LESS THAN · >=MORE THAN

NOTICE: The information contained on this Material Safety Data Sheet is considered accurate as of the date of publication. It is not necessarily all inclusive nor fully adequate in every circumstance. The suggestions should not be confused with, nor followed in violation of applicable laws, regulations, rules or insurance requirements. No warranty, express or implied, of merchantability, fitness, accuracy of data, or the results to be obtained from the use thereof is made. The vendor assumes no responsibility for injury or damages resulting from the inappropriate use of this product.

MATERIAL SAFETY DATA SHEET: GREASE RELEASE WIPES, 6 P ER PKG, MM

Section I - General Information

(000000-000000- - 4317)

Date of Issue:
3/27/2007 12:00:00 AM

Supercedes:
2/21/2007 12:00:00 AM

Chemical Name & Synonyms:
N/A

Trade Name & Synonyms:
GREASE RELEASE WIPES, 6 P ER PKG, MM

Chemical Family:
SODIUM METASILICATE BLEND

Formula is a mixture: [√]

Manufacturer Name:
CHEMSEARCH DIV. OF NCH CORP.

Manufacturer Address:
BOX 152170
IRVING, TX 75015

Prepared By:
E LEVI/CHEMIST

Product Code Number:
4317

Emergency Phone Number:
800-424-9300

Section II - Hazardous Ingredients

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
SODIUM METASILICATE	IRRITANT	N/E 1	N/E 2	N/E	6834-92-0
SODIUM TRIPOLYPHOSPHATE	IRRITANT	5 MG/M3 3	5 MG/M3 3	N/E	7758-29-4
NONYLPHENOL POLYETHOXY ETHANOL	IRRITANT	N/E 1	N/E 2	N/E	9016-45-9

Section III - Physical Data

Boiling Point (°F): 212°**
Vapor Pressure (mm Hg): 18
Vapor Density (Air=1): >1
pH @ 100% : 12.4
% Volatile by Volume: 90
H_2O Solubility: COMPLETE

Specific Gravity (H_2O=1): 1.02
Color: YELLOW
Odor: MILD DETERGENT
Clarity: OPAQUE
Evaporation Rate (BuAc=1): <1
Viscosity: TOWEL

Section IV - Fire and Explosion Hazard

Flash Point: > 212°F
Method Used: P.M.C.C.
Flammable Limits: HYDROGEN GAS
UEL: 75%
LEL: 4.0%
Aerosol Level (NFPA 30B): N/A

:tinguishing Media:

Foam	[√] Alcohol Foam	[√] CO2
[√] Dry Chemical	[√] Water Spray	[ ] Other

NFPA 704 Hazard Rating:

4-Extreme
3-High
2-Moderate
1-Slight
0-Insignificant

Health: 3
Flammability: 1
Instability: 0
Special:

Special Fire Fighting Procedures:
FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. EXTINGUISHING MEDIA SHOULD BE CHOSEN BASED ON THE NATURE OF THE SURROUNDING FIRE.

Unusual Fire and Explosion Hazards:
PROLONGED CONTACT WITH REACTIVE METALS, SUCH AS ALUMINUM, COPPER, BRASS, BRONZE, CHROMIUM, MAGNESIUM, TIN, ZINC, AND ALLOYS, CAN CAUSE THE FORMATION OF FLAMMABLE HYDROGEN GAS WHICH CAN FORM AN EXPLOSIVE MIXTURE WITH AIR. THE USE OF WATER SPRAY (FOG) WHILE EFFECTIVE, MAY CAUSE FROTHING AND FOAMING. NEVER USE A WATER JET AS THIS WILL JUST SPREAD THE FIRE. USE CARE AS SPILLS MAY BE SLIPPERY.

Section V - Health and Hazard Data

Threshold Limit Value:
NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:

Acute: (Short Term Exposure)
EYE CONTACT: CAUSES SEVERE IRRITATION SEEN AS SWELLING, STINGING, TEARING, REDNESS, AND A BURNING SENSATION.
SKIN CONTACT: CAUSES SEVERE IRRITATION SEEN AS REDNESS, ITCHING, DRYING, CRACKING, AND A BURNING SENSATION. PRODUCT MAY BE ABSORBED THROUGH THE SKIN IN HARMFUL AMOUNTS.
INHALATION: MAY CAUSE RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING.
INGESTION: CAUSES IRRITATION WITH POSSIBLE NAUSEA, VOMITING, AND DIARRHEA.

Chronic: (Long Term Exposure)
CHRONIC SKIN CONTACT MAY PROMOTE DERMATITIS AND OIL ACNE. IN RARER CASES, AN INCREASED SENSTIVITY TO SUNLIGHT (PHOTOSENSITIVITY) MAY OCCUR.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS.
TARGET ORGANS: NONE KNOWN. THE PRIMARY ROUTES OF EXPOSURE ARE SKIN AND EYE CONTACT.

Primary Routes of Entry

[ ] Inhalation	[ ] Ingestion	[√] Absorption

Emergency First Aid Procedures:

Inhalation:
REMOVE FROM THE AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

Eye Contact:
IMMEDIATELY RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING FOR AT LEAST 15 MINUTES. HOLD THE EYELIDS APART TO ENSURE RINSING OF THE ENTIRE SURFACE OF THE EYES AND LIDS WITH WATER. GET IMMEDIATE MEDICAL ATTENTION.

Skin Contact:
IMMEDIATELY REMOVE CONTAMINATED CLOTHING AND SHOES. FLUSH AFFECTED AREAS WITH LARGE AMOUNTS OF WATER FOR 20 TO 30 MINUTES. GET IMMEDIATE MEDICAL ATTENTION. DISCARD CLOTHING AND SHOES.

Ingestion:
GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

Notes to Physician:
THERE IS NO SPECIFIC ANTIDOTE. TREAT THE PATIENT SYMPTOMATICALLY.

Section VI - Toxicity Information

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

[ ] IARC [ ] NTP [ ] OSHA [ ] ACGIH [ ] Other

** THE PHYSICAL CHARACTERSTICS ARE THOSE OF THE LIQUID PRIOR TO IT BEING IMPREGNATED ONTO THE TOWEL.

VOC CONTENT: 0.1% BY WEIGHT; .99 G/L

SODIUM METASILICATE ANHYDROUS
SKN-HMN SDT: 250 MG/24H SEVERE 4.
SKN-RBT SDT: 250 MG/24H SEVERE 4.
ORL-HMN(MAN) TDLo: 1 ML/KG 4.
ORL-RAT LD50: 1153 MG/KG 4.

SODIUM TRIPOLYPHOSPHATE
ORL-RAT LD50: 3120 MG/KG 4.
SKN-RBT LD50: >4640 MG/KG 4.
SKN-RBT-SDT: 500 MG/24H MODERATE 4.

RATS FED SODIUM TRIPOLYPHOSPHATE IN THEIR DIET FOR TWO YEARS EXHIBITED DECREASED GROWTH, INCREASED KIDNEY/BODY WEIGHT RATIOS AND KIDNEY CHANGES. 3.

NONYLPHENOXY POLYETHOXY ETHANOL
ORL-RAT LD50: 1310 MG/KG 4.
SKN-RBT LD50: >2 ML/KG 4.
SKN-RBT: 1.5/8.0; SLIGHTLY IRRITATING 3.
EYE-RBT: 29/110; SEVERELY IRRITATING 3.
EYE-RBT SDT: 5 MG SEVERE 4.

NECROSIS WAS SEEN ON ANIMALS A FEW DAYS AFTER DERMAL APPLICATION; HOWEVER, THE SKIN RETURNED TO A NORMAL CONDITION WITHIN THE OBSERVATION PERIOD. 3.

ALKYL DIMETHYL BENZYL AMMONIUM CHLORIDE
EYE-HMN SDT: 50 UG SEVERE 3.
SKN-HMN SDT: 150 UG/3D (INTERMITTENT) MILD 3.
ORL-HMN (WOMAN) TDLo: 266 MG/KG 3.
ORL-RAT LD50: 240 MG/KG 3.
SKN-RAT LD50: 4700 MG/KG 5.

ALKYL DIMETHYL ETHYLBENZYL AMMONIUM CHLORIDE
NO TOXICITY DATA AVAILABLE

Section VII - Reactivity Data

Stability

[√] Stable [ ] Unstable

Conditions to Avoid:
N/A

Hazardous Polymerization

[√] Will not occur [ ] May occur

Conditions to Avoid:
N/A

Incompatibility (Materials to Avoid):
STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE; STRONG ACIDS, REACTIVE METALS SUCH AS ALUMINUM, ZINC, MAGNESIUM, COPPER, AND THEIR ALLOYS; MATERIALS REACTIVE WITH HYDROXYL COMPOUNDS; LEATHER AND WOOL.

Hazardous Decomposition Products:
OXIDES OF CARBON, NITROGEN AND POTASSIUM; AMMONIA AND POTENTIALLY TOXIC FUMES FROM THE THERMAL DEGRADATION OF PLASTIC.

Section VIII - Spill Or Leak Procedures

Steps to be Taken if Material is Released or Spilled:
PRODUCT IS A MOISTENED TOWEL IN A PLASTIC OVERWRAP. PICK UP FOR REUSE.

Waste Disposal Method(s):
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

Neutralizing Agent:
N/A

Section IX - Special Protection Information

Required Ventilation:
GENERAL VENTILATION IS NORMALLY ADEQUATE. LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE EXCESSIVE LEVELS OF MISTS. LOCAL VENTILATION IS PREFERRED, BECAUSE IT PREVENTS DISPERSION INTO WORK AREAS BY CONTROLLING IT AT ITS SOURCE.

Respiratory Protection:
NONE REQUIRED UNDER NORMAL CONDITIONS OF USE. RESPIRATORS SHOULD BE SELECTED BY AND USED UNDER THE DIRECTION OF A TRAINED HEALTH AND SAFETY PROFESSIONAL FOLLOWING REQUIREMENTS FOUND IN OSHA'S RESPIRATOR STANDARD (29 CFR 1910.134) AND ANSI'S STANDARD FOR RESPIRATORY PROTECTION (Z88.2-1992). FOR CONCENTRATIONS ABOVE THE TLV AND/OR PEL BUT LESS THAN 10 TIMES THESE LIMITS, A NIOSH APPROVED HALF-FACEPIECE RESPIRATOR EQUIPPED WITH APPROPRIATE CHEMICAL CARTRIDGES MAY BE USED. FOR CONCENTRATIONS GREATER THAN 10 TIMES THE TLV AND/OR PEL, CONSULT THE NIOSH RESPIRATOR DECISION LOGIC FOUND IN PUBLICATION NO. 87-116 OR ANSI Z88.2-1992.

Glove Protection:
NEOPRENE OR NITRILE RUBBER GLOVES SHOULD BE WORN. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR HAND PROTECTION, 29 CFR 1910.138.

Eye Protection:
CHEMICAL GOGGLES SHOULD BE WORN WHEN HANDLING. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR EYE AND FACE PROTECTION, 29 CFR 1910.133.

Other Protection:
AR PROTECTIVE CLOTHING WHEN HANDLING. A SAFETY SHOWER AND AN EYEWASH STATION SHOULD BE AVAILABLE.

Section X - Storage and Handling Information

Storage Temperature
Max: 120°F Min: 35°F

Storage Conditions
[√] Indoors [ ] Outdoors [ ] Heated [ ] Refrigerated

Precautions to be Taken in Handling and Storing:
KEEP IN PLASTIC OVERWRAP TO PREVENT THE TOWEL FROM DRYING OUT.

Other Precautions:
KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

Section XI - Regulatory Information

Chemical Name	CAS Number	Upper % Limit
None.		

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Please call 1-800-527-9919 for additional information if you are a California customer. This MSDS is not intended for users in the state of California.

Section XII - References

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2006.
2. OSHA PEL.
3. VENDOR'S MSDS.
4. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFOWeb, 2007.

ALL THE COMPONENTS OF THIS PRODUCT ARE IN COMPLIANCE WITH THE TOXIC SUBSTANCES CONTROL ACT (TSCA) AND ARE EITHER LISTED ON THE TSCA INVENTORY OR OTHERWISE EXEMPTED FROM LISTING.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, TOX:TOXIC, IHL:INHALATION, COMB:COMBUSTIBLE, CORR:CORROSIVE, CARC:CARCINOGENIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, HMN:HUMAN, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, ORL:ORAL, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOC:PARTICULATES NOT OTHERWISE CLASSIFIED, PNOR:PARTICULATES NOT OTHERWISE REGULATED, PNOS:PARTICLES (INSOLUBLE) NOT OTHERWISE SPECIFIED, SDT:STANDARD DRAIZE TEST

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a ner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage, or disposal of the product.

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SAFETY DATA SHEET

GREASESTRIP PLUS

Section 1. Chemical product and company identification

Product name : GREASESTRIP PLUS

Recommended use and restrictions : Degreaser

Use only for the purpose on the product label.

Product dilution information : Not applicable

Supplier's information : Ecolab Inc. Institutional Division
370 N. Wabasha Street
St. Paul, MN 55102
1-800-352-5326

Code : 905117

Date of issue : **06 May 2013**

EMERGENCY HEALTH INFORMATION: 1-800-328-0026
Outside United States and Canada CALL 1-651-222-5352 (in USA)

Section 2. Hazards identification

Product AS SOLD

GHS Classification : CORROSIVE TO METALS - Category 1
SKIN CORROSION/IRRITATION - Category 1
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

GHS label elements

Signal word : Danger

Symbol :



Hazard statements : May be corrosive to metals.
Causes severe skin burns and eye damage.

Precautionary statements

Prevention : Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep only in original container. Wash hands thoroughly after handling.

Response : Absorb spillage to prevent material damage. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with

Product AT USE DILUTION

Product is sold ready to use.

Section 2. Hazards identification

water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Store in corrosive resistant container with a resistant inner liner.

Disposal : See section 13 for waste disposal information.

Other hazards : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Product AS SOLD

Hazardous ingredients	Concentration Range (%)	CAS number
SODIUM HYDROXIDE	7	1310-73-2

Product AT USE DILUTION

Hazardous ingredients	Concentration Range (%)	CAS number
Product is sold ready to use.		

Section 4. First aid measures

Product AS SOLD

Eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Skin contact : Take off immediately all contaminated clothing. Rinse skin with water or shower. Get medical attention immediately. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.

Ingestion : Get medical attention immediately. Rinse mouth. Do not induce vomiting.

Product AT USE DILUTION

Product is sold ready to use.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See toxicological information (section 11)

Section 5. Fire-fighting measures

Product AS SOLD

Suitable fire extinguishing media : Use water spray, fog or foam.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products :

Section 5. Fire-fighting measures

Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Specific fire-fighting methods : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Product AS SOLD

Personal precautions : Initiate company's spill response procedures immediately. Keep people out of area. Put on appropriate personal protective equipment (see section 8). Do not touch or walk through spilled material.

Environmental precautions : Avoid contact of spilled material and runoff with soil and surface waterways.

Methods for cleaning up : Follow company's spill procedures. Keep people away from spill. Put on appropriate personal protective equipment (see section 8). Absorb/ neutralize liquid material. Use a tool to scoop up solid or absorbed material and put into appropriate labeled container. Use a tool to scoop up solid or absorbed material and place into appropriate labeled waste container. Use a water rinse for final clean-up.

Product AT USE DILUTION

Product is sold ready to use.

Section 7. Handling and storage

Product AS SOLD

Handling : Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Use only with adequate ventilation. Wash thoroughly after handling.

Storage : Keep out of reach of children. Keep container tightly closed.

Store between the following temperatures: 0 and 50°C

Product AT USE DILUTION

Product is sold ready to use.

Section 8. Exposure controls/personal protection

Control parameters

Ingredient name	Exposure limits
SODIUM HYDROXIDE	**ACGIH TLV (United States, 3/2012).** C: 2 mg/m³ **OSHA PEL (United States, 6/2010).** TWA: 2 mg/m³ 8 hours. **NIOSH REL (United States, 6/2009).** CEIL: 2 mg/m³

Section 8. Exposure controls/personal protection

Product AS SOLD

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Product AT USE DILUTION

Product is sold ready to use.

Personal protection

Eye protection : Use chemical splash goggles. For continued or severe exposure wear a face shield over the goggles.

Hand protection : Use chemical-resistant, impervious gloves.

Skin protection : Use synthetic apron, other protective equipment as necessary to prevent skin contact.

Respiratory protection : A respirator is not needed under normal and intended conditions of product use.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Section 9. Physical and chemical properties

Product AS SOLD

Physical state : Liquid.

Color : Orange [Dark]

Odor : Odorless

pH : 13.5 (100%)

Flash point : > 100°C

Explosion limits : Not available.

Flammability (solid, gas) : Not available.

Melting point : Not available.

Boiling point : Not available.

Evaporation rate (butyl acetate = 1) : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 1.08 (Water = 1)

Solubility : Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Odor threshold : Not available.

Viscosity : Not available.

Product AT USE DILUTION

Product is sold ready to use.

Section 10. Stability and reactivity

Product AS SOLD

Stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Materials to avoid : Extremely reactive or incompatible with the following materials: acids.
Reactive or incompatible with the following materials: metals.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Route of exposure : Skin contact, Eye contact, Inhalation, Ingestion

Product AS SOLD

Symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Inhalation : Adverse symptoms may include the following:
coughing
Respiratory tract irritation

Ingestion : Adverse symptoms may include the following:
stomach pains

Acute toxicity

Eye contact : Causes serious eye damage.

Skin contact : Causes severe burns.

Inhalation : May cause respiratory irritation.

Ingestion : May cause burns to mouth, throat and stomach.

Product AT USE DILUTION

Product is sold ready to use.

Toxicity data

Product/ingredient name
Not applicable.

Chronic toxicity

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Section 12. Ecological information

Product AS SOLD

Ecotoxicity : This material is harmful to aquatic life.

Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
sodium hydroxide	Acute EC50 40 mg/l	Daphnia	48 hours

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Product AS SOLD

Disposal methods : Avoid disposal. Attempt to use product completely in accordance with intended use. Disposal should be in accordance with applicable regional, national and local laws and regulations.

RCRA classification : Unused product is D002 (Corrosive)

Product AT USE DILUTION

Product is sold ready to use.

Section 14. Transport information

Certain shipping modes or package sizes may have exceptions from the transport regulations. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes.

DOT

DOT Classification	UN1824
DOT Proper shipping name	Sodium hydroxide solution
Class	8
Packing group	II

IMO/IMDG

IMO/IMDG Classification	UN1824
IMO/IMDG Proper shipping name	SODIUM HYDROXIDE SOLUTION
Class	8
Packing group	II

For transport in bulk, see shipping documents for specific transportation information.

Product AT USE DILUTION

Not intended for transport.

Section 15. Regulatory information

Product AS SOLD

U.S. Federal regulations

TSCA 8(b) inventory : All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No listed substance

SARA 302/304 emergency planning and notification: No listed substance

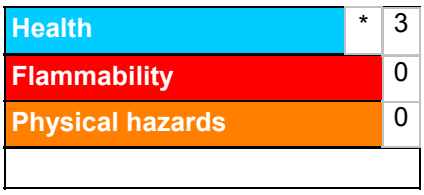
SARA 313	**Product name**	**CAS number**	**Concentration**
Form R - Reporting requirements :	No listed substance		

California Prop. 65 : No listed substance

Section 16. Other information

Product AS SOLD

Hazardous Material Information System (U.S.A.) :



Section 16. Other information

National Fire Protection Association (U.S.A.) :



Date of issue : **06 May 2013**

Prepared by : Regulatory Affairs
1-800-352-5326

Notice to reader

The above information is believed to be correct with respect to the formula used to manufacture the product in the country of origin. As data, standards, and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.

Material Safety Data Sheet
The Dow Chemical Company

Product Name: GREAT STUFF (TM) Big Gap Filler Foam Sealant 16 oz HC Qtr

Issue Date: 04/17/2008

Print Date: 18 Apr 2008

The Dow Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name

GREAT STUFF (TM) Big Gap Filler Foam Sealant 16 oz HC Qtr

COMPANY IDENTIFICATION

The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
USA

Customer Information Number: 800-258-2436

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 989-636-4400
Local Emergency Contact: 989-636-4400

2. Hazards Identification

Emergency Overview

Color: Yellow
Physical State: Foam
Odor: Mild
Hazards of product:

DANGER! Flammable gas - May cause flash fire. May cause allergic skin reaction. May cause allergic respiratory reaction. May cause eye irritation. May cause skin irritation. May cause lung injury. Vapor reduces oxygen available for breathing. May cause anesthetic effects. May cause respiratory tract irritation. May react with water. Evacuate area. Keep upwind of spill. Stay out of low areas. Elevated temperatures can cause hazardous polymerization. Toxic fumes may be released in fire situations. Contents under pressure. Avoid temperatures above 105F (41C).

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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Potential Health Effects

Eye Contact: May cause eye irritation. May cause slight temporary corneal injury.
Skin Contact: Prolonged contact may cause moderate skin irritation with local redness. Material may stick to skin causing irritation upon removal. May stain skin.
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Skin Sensitization: Skin contact may cause an allergic skin reaction. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.
Inhalation: In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause pulmonary edema (fluid in the lungs.) Effects may be delayed. May cause central nervous system depression. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). Decreased lung function has been associated with overexposure to isocyanates.
Respiratory Sensitization: May cause allergic respiratory response. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.
Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Observations in animals include: Gastrointestinal irritation.
Effects of Repeated Exposure: Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols. Contains component(s) which have been reported to cause effects on the following organs in animals: Kidney. Liver. Bone marrow. Contains a component which is reported to be a weak organophosphate-type cholinesterase inhibitor. Excessive exposure may produce organophosphate type cholinesterase inhibition. Signs and symptoms of excessive exposure may be headache, dizziness, incoordination, muscle twitching, tremors, nausea, abdominal cramps, diarrhea, sweating, pinpoint pupils, blurred vision, salivation, tearing, tightness in chest, excessive urination, convulsions.
Cancer Information: Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 mg/m3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.
Birth Defects/Developmental Effects: In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

3. Composition Information

Component	CAS #	Amount
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9	>= 10.0 - <= 30.0 %
4,4' -Methylenediphenyl diisocyanate	101-68-8	>= 5.0 - <= 10.0 %
Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alpha.,.alpha.',.alpha."-1,2,3-propanetriyltris[.omega.-hydroxypoly	57029-46-6	>= 15.0 - <= 40.0 %
Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer	53862-89-8	>= 15.0 - <= 40.0 %
Paraffin waxes and Hydrocarbon waxes, chlorinated	63449-39-8	>= 5.0 - <= 10.0 %
Tris(1-chloro-2-propyl) phosphate	13674-84-5	>= 5.0 - <= 10.0 %
Isobutane	75-28-5	>= 5.0 - <= 10.0 %
Propane	74-98-6	>= 1.0 - <= 5.0 %
Methyl ether	115-10-6	>= 1.0 - <= 5.0 %

Note: CAS 101-68-8 is an MDI isomer that is part of CAS 9016-87-9.

4. First-aid measures

Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.
Skin Contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.
Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.
Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.
Notes to Physician: Maintain adequate ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. Although cholinesterase depression has been reported with this material, it is not of benefit in determining exposure and need not be considered in the treatment of persons exposed to the material. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
Medical Conditions Aggravated by Exposure: Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

5. Fire Fighting Measures

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Do not use direct water stream. May spread fire. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Use water spray to cool fire-exposed containers and fire-affected zone until fire is out.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.
Unusual Fire and Explosion Hazards: Contains flammable propellant. Aerosol cans exposed to fire can rupture and become flaming projectiles. Propellant release may result in a fireball. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Dense smoke is produced when product burns.
Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Isocyanates. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Contain spilled material if possible. Absorb with materials such as: Sawdust. Dirt. Vermiculite. Sand. Clay. Cob grit. Milsorb®. Do NOT use absorbent materials such as: Cement powder (Note: may generate heat). Collect in suitable and properly labeled open containers. Do not place in sealed containers. Suitable containers include: Metal drums. Plastic drums. Polylined fiber pacs. Wash the spill site with large quantities of water. Attempt to neutralize by adding suitable decontaminant solution: Formulation 1: sodium carbonate 5 - 10%; liquid detergent 0.2 - 2%; water to make up to 100%, OR Formulation 2: concentrated ammonia solution 3 - 8%; liquid detergent 0.2 - 2%; water to make up to 100%. If ammonia is used, use good ventilation to prevent vapor exposure. Pump with explosion-proof equipment. If available, use foam to smother or suppress. Contact Dow for clean-up assistance. See Section 13, Disposal Considerations, for additional information.
Personal Precautions: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Evacuate area. Refer to Section 7, Handling, for additional precautionary measures. Keep personnel out of low areas. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Only trained and properly protected personnel must be involved in clean-up operations. Confined space entry procedures must be followed before entering the area. If available, use foam to suppress vapors. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. For large spills, warn public of downwind explosion hazard. Vapor explosion hazard. Keep out of sewers. See Section 10 for more specific information.
Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling

General Handling: Keep away from heat, sparks and flame. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Avoid breathing vapor. Use only with adequate ventilation. Keep container closed. No smoking, open flames or sources of ignition in handling and storage area. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Contents under pressure. Do not puncture or incinerate container. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Do not enter confined spaces unless adequately ventilated. Keep out of reach of children. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage

Store in a dry place. Protect from atmospheric moisture. Minimize sources of ignition, such as static build-up, heat, spark or flame. Do not store product contaminated with water to prevent potential hazardous reaction. See Section 10 for more specific information.

Storage Period: 12 Months
Storage temperature: 20 - 30 °C

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
4,4' -Methylenediphenyl diisocyanate	ACGIH	TWA	0.005 ppm
	OSHA Table Z-1	Ceiling	0.2 mg/m3 0.02 ppm
Methyl ether	WEEL	TWA	1,880 mg/m3 1,000 ppm

Isobutane	ACGIH	TWA	1,000 ppm
Propane	OSHA Table Z-1	PEL	1,800 mg/m3 1,000 ppm
	ACGIH	TWA	1,000 ppm

Personal Protection

Eye/Face Protection: Use safety glasses. Eye wash fountain should be located in immediate work area.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Viton. Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure.

9. Physical and Chemical Properties

Physical State	Foam
Color	Yellow
Odor	Mild
Flash Point - Closed Cup	-104 °C (-155 °F) *Estimated*
Flammable Limits In Air	**Lower**: No test data available
	Upper: No test data available
Autoignition Temperature	No test data available
Vapor Pressure	1,151 kPa @ 55 °C *Estimated*
Boiling Point (760 mmHg)	Not applicable.
Vapor Density (air = 1)	No test data available
Specific Gravity (H2O = 1)	1.06 *Estimated*
Freezing Point	No test data available
Melting Point	No test data available

Solubility in Water (by weight)	Insoluble
pH	*Not applicable*
Kinematic Viscosity	Not applicable

10. Stability and Reactivity

Stability/Instability

Stable under recommended storage conditions. See Storage, Section 7. Unstable at elevated temperatures.
Conditions to Avoid: Avoid temperatures above 49 °C (120 °F). Elevated temperatures can cause container to vent and/or rupture. Exposure to elevated temperatures can cause product to decompose.

Incompatible Materials: Avoid contact with: Acids. Alcohols. Amines. Ammonia. Bases. Metal compounds. Strong oxidizers. Products based on diisocyanates like TDI and MDI react with many materials to release heat. The reaction rate increases with temperature as well as with increased contact; these reactions can become violent. Contact is increased by stirring or if the other material acts as a solvent. Products based on diisocyanates such as TDI and MDI are not soluble in water and will sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. Reaction with water will generate carbon dioxide and heat.

Hazardous Polymerization

Can occur. Elevated temperatures can cause hazardous polymerization.

Thermal Decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials. Toxic gases are released during decomposition.

11. Toxicological Information

Acute Toxicity

Ingestion

Single dose oral LD50 has not been determined. Estimated LD50, Rat > 2,000 mg/kg

Skin Absorption

The LD50 has not been determined.

Sensitization

Skin

Skin contact may cause an allergic skin reaction. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.

Respiratory

May cause allergic respiratory response. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

Repeated Dose Toxicity

Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols. Contains component(s) which have been reported to cause effects on the following organs in animals: Kidney. Liver. Bone marrow. Contains a component which is reported to be a weak organophosphate-type cholinesterase inhibitor. Excessive exposure may produce organophosphate type cholinesterase inhibition. Signs and symptoms of excessive exposure may be headache, dizziness, incoordination, muscle twitching, tremors, nausea, abdominal cramps, diarrhea, sweating, pinpoint pupils, blurred vision, salivation, tearing, tightness in chest, excessive urination, convulsions.

Chronic Toxicity and Carcinogenicity

Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 mg/m3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Developmental Toxicity

In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

Genetic Toxicology

In vitro genetic toxicity studies were negative for component(s) tested. Genetic toxicity data on MDI are inconclusive. MDI was weakly positive in some in vitro studies; other in vitro studies were negative. Animal mutagenicity studies were predominantly negative.

12. Ecological Information

ENVIRONMENTAL FATE

Data for Component: **Diphenylmethane Diisocyanate, isomers and homologues**

Movement & Partitioning

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Persistence and Degradability

In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

Data for Component: **4,4' -Methylenediphenyl diisocyanate**

Movement & Partitioning

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Persistence and Degradability

In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

Data for Component: **Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alpha.,.alpha.',.alpha.''-1,2,3-propanetriyltris[.omega.-hydroxypoly**

Movement & Partitioning

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Persistence and Degradability

In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

Data for Component: **Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer**

Movement & Partitioning

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Persistence and Degradability

In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is

expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

Data for Component: **Paraffin waxes and Hydrocarbon waxes, chlorinated**

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7). Expected to be relatively immobile in soil (Koc > 5000). Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Henry's Law Constant (H): < 1.0E-07 atm*m3/mole; 25 °C Estimated
Partition coefficient, n-octanol/water (log Pow): 7.4 Estimated
Partition coefficient, soil organic carbon/water (Koc): > 5,000 Estimated

Persistence and Degradability

Expected to degrade only slowly in the environment.
Theoretical Oxygen Demand: 2.89 mg/mg

Data for Component: **Tris(1-chloro-2-propyl) phosphate**

Movement & Partitioning

Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Potential for mobility in soil is low (Koc between 500 and 2000).
Henry's Law Constant (H): < 1.35E-5 atm*m3/mole; 25 °C Estimated
Partition coefficient, n-octanol/water (log Pow): 2.59 Measured
Partition coefficient, soil organic carbon/water (Koc): 1,300 Estimated
Bioconcentration Factor (BCF): 0.8 - 4.6; common carp (Cyprinus carpio); Measured

Persistence and Degradability

Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
4.47E-11 cm3/s	0.24 d	Estimated

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
14 %	28 d	OECD 301E Test

Theoretical Oxygen Demand: 1.17 mg/mg

Data for Component: **Isobutane**

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).
Henry's Law Constant (H): 1.19E+00 atm*m3/mole; 25 °C Measured
Partition coefficient, n-octanol/water (log Pow): 2.76 Measured
Partition coefficient, soil organic carbon/water (Koc): 35 Estimated
Distribution in Environment: Mackay Level 1 Fugacity Model:

Air	Water.	Biota	Soil	Sediment
100 %	0 %	0 %	0 %	0 %

Persistence and Degradability

Biodegradation may occur under aerobic conditions (in the presence of oxygen).
Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
2.44E-12 cm3/s	4.4 d	Estimated

Theoretical Oxygen Demand: 3.58 mg/mg

Data for Component: **Propane**

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).
Henry's Law Constant (H): 7.07E-01 atm*m3/mole; 25 °C Measured
Partition coefficient, n-octanol/water (log Pow): 2.36 Measured
Partition coefficient, soil organic carbon/water (Koc): 24 - 460 Estimated
Distribution in Environment: Mackay Level 1 Fugacity Model:

Air	Water.	Biota	Soil	Sediment
100 %	0 %	0 %	0 %	0 %

Persistence and Degradability

No relevant information found.

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.27E-12 cm3/s	8.4 d	Estimated

Theoretical Oxygen Demand: 3.64 mg/mg

Data for Component: **Methyl ether**

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).
Henry's Law Constant (H): 9.78E-4 atm*m3/mole; 25 °C Measured
Partition coefficient, n-octanol/water (log Pow): 0.10 Measured
Partition coefficient, soil organic carbon/water (Koc): 1.29 - 14 Estimated

Persistence and Degradability

Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.66E-12 cm3/s	6.4 d	Estimated

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
5 %	28 d	OECD 301A Test

Theoretical Oxygen Demand: 2.08 mg/mg

ECOTOXICITY

Data for Component: **Diphenylmethane Diisocyanate, isomers and homologues**

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Toxicity to Soil Dwelling Organisms

LC50, Earthworm Eisenia foetida, adult, 14 d: > 1,000 mg/kg

Data for Component: **4,4' -Methylenediphenyl diisocyanate**

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Toxicity to Soil Dwelling Organisms

LC50, Earthworm Eisenia foetida, adult, 14 d: > 1,000 mg/kg

Data for Component: **Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alpha.,.alpha.',.alpha.''-1,2,3-propanetriyltris[.omega.-hydroxypoly**

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Toxicity to Soil Dwelling Organisms

LC50, Earthworm Eisenia foetida, adult, 14 d: > 1,000 mg/kg

Data for Component: **Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer**

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Toxicity to Soil Dwelling Organisms

LC50, Earthworm Eisenia foetida, adult, 14 d: > 1,000 mg/kg

Data for Component: **Paraffin waxes and Hydrocarbon waxes, chlorinated**

Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in most sensitive species).

Fish Acute & Prolonged Toxicity
LC50, rainbow trout (Oncorhynchus mykiss), static, 96 h: > 100 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, water flea Daphnia magna, immobilization: 0.037 mg/l

Data for Component: **Tris(1-chloro-2-propyl) phosphate**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity
LC50, bluegill (Lepomis macrochirus), 96 h: 84 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, water flea Daphnia magna, 48 h, immobilization: 63 mg/l
Aquatic Plant Toxicity
EC50, green alga Selenastrum capricornutum, biomass growth inhibition, 96 h: 47 mg/l
EC50, alga Scenedesmus sp., biomass growth inhibition, 72 h: 45 mg/l
Toxicity to Micro-organisms
EC50, OECD 209 Test; activated sludge, respiration inhibition, 3 h: 784 mg/l

Data for Component: **Isobutane**

No relevant information found.

Data for Component: **Propane**

No relevant information found.

Data for Component: **Methyl ether**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity
LC50, guppy (Poecilia reticulata), 96 h: > 4,000 mg/l
Aquatic Invertebrate Acute Toxicity
LC50, water flea Daphnia magna, 48 h: > 4,000 mg/l

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Group at 1-800-258-2436 or 1-989-832-1556 (U.S.), or 1-800-331-6451 (Canada) for further details.

14. Transport Information

DOT Non-Bulk
NOT REGULATED

CONSUMER COMMODITY RECLASSIFIED AS ORM-D MATERIAL

DOT Bulk
NOT REGULATED

IMDG
Proper Shipping Name: AEROSOLS
Hazard Class: 2.1 **ID Number:** UN1950
EMS Number: F-D,S-U

LIMITED QUANTITY

ICAO/IATA
Proper Shipping Name: AEROSOLS
Hazard Class: 2.1 **ID Number:** UN1950**Cargo Packing Instruction:** 203
Passenger Packing Instruction: 203

LIMITED QUANTITY

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	Yes
Reactive Hazard	No
Sudden Release of Pressure Hazard	Yes

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Component	CAS #	Amount
4,4' -Methylenediphenyl diisocyanate	101-68-8	>= 5.0 - <= 10.0 %
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9	>= 5.0 - <= 10.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:
The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
4,4' -Methylenediphenyl diisocyanate	101-68-8	>= 5.0 - <= 10.0 %
Isobutane	75-28-5	>= 5.0 - <= 10.0 %
Methyl ether	115-10-6	>= 1.0 - <= 5.0 %
Propane	74-98-6	>= 1.0 - <= 5.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:
The following product components are cited in the Pennsylvania Special Hazardous Substance List, and are present at levels which require reporting.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

US. Toxic Substances Control Act
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30
CEPA - Domestic Substances List (DSL)
All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

16. Other Information

Recommended Uses and Restrictions
Polyurethane foam.

Revision
Identification Number: 67482 / 0000 / Issue Date 04/17/2008 / Version: 2.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

The Dow Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

Material Safety Data Sheet
The Dow Chemical Company

Product Name: GREAT STUFF™ Fireblock Insulating Foam Sealant 12oz HC **Issue Date:** 12/14/2012

Print Date: 18 Dec 2012

The Dow Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name
GREAT STUFF™ Fireblock Insulating Foam Sealant 12oz HC

COMPANY IDENTIFICATION
The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
United States

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 989-636-4400
Local Emergency Contact: 989-636-4400

2. Hazards Identification

Emergency Overview
Color: Orange
Physical State: Foam
Odor: Odorless
Hazards of product:

DANGER! Flammable gas - May cause flash fire. May cause allergic skin reaction. May cause allergic respiratory reaction. May cause eye irritation. May cause skin irritation. Vapor reduces oxygen available for breathing. May cause anesthetic effects. May cause respiratory tract irritation. Vapors may travel a long distance; ignition and/or flash back may occur. Evacuate area. Keep upwind of spill. Stay out of low areas. Aerosol cans exposed to fire can rupture becoming flaming projectiles. Elevated temperatures can cause hazardous polymerization. Toxic fumes may be released in fire situations. Contents under pressure. Avoid temperatures above 49°C (120.2°F)

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Health Effects

Eye Contact: May cause eye irritation. May cause slight temporary corneal injury.
Skin Contact: Prolonged contact may cause moderate skin irritation with local redness. Material may stick to skin causing irritation upon removal. May stain skin.
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Skin Sensitization: Skin contact may cause an allergic skin reaction. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.
Inhalation: In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause pulmonary edema (fluid in the lungs.) Effects may be delayed. May cause central nervous system depression. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). Decreased lung function has been associated with overexposure to isocyanates.
Respiratory Sensitization: May cause allergic respiratory response. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.
Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Observations in animals include: Gastrointestinal irritation.
Aspiration hazard: Based on physical properties, not likely to be an aspiration hazard.
Effects of Repeated Exposure: Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols. Contains component(s) which have been reported to cause effects on the following organs in animals: Kidney. Liver.
Cancer Information: Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 mg/m3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.
Birth Defects/Developmental Effects: In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

3. Composition Information

Component	CAS #	Amount
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9	>= 10.0 - <= 30.0 %
4,4' -Methylenediphenyl diisocyanate	101-68-8	>= 5.0 - <= 10.0 %
Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alpha.,.alpha.',.alpha."-1,2,3-propanetriyltris[.omega.-hydroxypoly	57029-46-6	>= 30.0 - <= 60.0 %
Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer	53862-89-8	>= 10.0 - <= 30.0 %
Tris(1-chloro-2-propyl) phosphate	13674-84-5	>= 5.0 - <= 10.0 %
Paraffin waxes and Hydrocarbon waxes, chlorinated	63449-39-8	>= 5.0 - <= 10.0 %
Isobutane	75-28-5	>= 5.0 - < 10.0 %
Propane	74-98-6	>= 1.0 - <= 5.0 %
Methyl ether	115-10-6	>= 1.0 - <= 5.0 %

Note: CAS 101-68-8 is an MDI isomer that is part of CAS 9016-87-9.

4. First-aid measures

Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.
Skin Contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Suitable emergency safety shower facility should be available in work area.
Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.
Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed
Maintain adequate ventilation and oxygenation of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. Although cholinesterase depression has been reported with this material, it is not of benefit in determining exposure and need not be considered in the treatment of persons exposed to the material. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome). Repeated excessive exposure may aggravate preexisting lung disease.

5. Fire Fighting Measures

Suitable extinguishing media
Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
Extinguishing Media to Avoid: Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire.

Special hazards arising from the substance or mixture

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Isocyanates. Hydrogen chloride. Carbon monoxide. Carbon dioxide. Hydrogen cyanide.

Unusual Fire and Explosion Hazards: Contains flammable propellant. Aerosol cans exposed to fire can rupture and become flaming projectiles. Propellant release may result in a fireball. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Dense smoke is produced when product burns.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Do not use direct water stream. May spread fire. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Use water spray to cool fire-exposed containers and fire-affected zone until fire is out.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Evacuate area. Only trained and properly protected personnel must be involved in clean-up operations. Keep personnel out of low areas. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Confined space entry procedures must be followed before entering the area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. See Section 10 for more specific information. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Isolate area until gas has dispersed. Use non-sparking tools in cleanup operations. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Collect in suitable and properly labeled containers. Absorb with materials such as: Clay. Dirt. Milsorb®. Sand. Sawdust. Vermiculite. See Section 10 for more specific information. See Section 13, Disposal Considerations, for additional information.

7. Handling and Storage

Handling

General Handling: Keep away from heat, sparks and flame. No smoking, open flames or sources of ignition in handling and storage area. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Avoid breathing vapor. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. Keep out of reach of children. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Contents under pressure. Do not puncture or incinerate container. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Do not enter confined spaces unless adequately ventilated. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Other Precautions: Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Storage

Minimize sources of ignition, such as static build-up, heat, spark or flame. Store in a dry place. See Section 10 for more specific information.

Shelf life: Use within	Do not store above:
12 Months	49 °C

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
4,4' -Methylenediphenyl diisocyanate	ACGIH	TWA	0.005 ppm
	OSHA Table Z-1	Ceiling	0.2 mg/m3 0.02 ppm
Methyl ether	AIHA WEEL	TWA	1,880 mg/m3 1,000 ppm
Isobutane	ACGIH	TWA	1,000 ppm
Propane	OSHA Table Z-1	PEL	1,800 mg/m3 1,000 ppm
	ACGIH	TWA	1,000 ppm

Personal Protection

Eye/Face Protection: Use safety glasses (with side shields).

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Viton. Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are

inadequate to warn of excessive exposure. Lethal concentrations may exist in areas with poor ventilation.

9. Physical and Chemical Properties

Appearance	
Physical State	Foam
Color	Orange
Odor	Odorless
Odor Threshold	No test data available
pH	Not applicable
Melting Point	No test data available
Freezing Point	No test data available
Boiling Point (760 mmHg)	No test data available.
Flash Point - Closed Cup	-104 °C (-155 °F) *Estimated.*
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Flammable gas.
Flammable Limits In Air	**Lower**: No test data available **Upper**: No test data available
Vapor Pressure	1,179 kPa @ 55 °C *Calculated*
Vapor Density (air = 1)	No test data available
Specific Gravity (H2O = 1)	1.069 25 °C/25 °C
Solubility in water (by weight)	Insoluble
Partition coefficient, n-octanol/water (log Pow)	Reacts with water.
Autoignition Temperature	No test data available
Decomposition Temperature	No test data available
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	No

10. Stability and Reactivity

Reactivity
No dangerous reaction known under conditions of normal use.

Chemical stability
Stable under recommended storage conditions. See Storage, Section 7. Unstable at elevated temperatures.

Possibility of hazardous reactions
Can occur. Elevated temperatures can cause hazardous polymerization.

Conditions to Avoid: Avoid temperatures above 116 °C (241 °F). Elevated temperatures can cause container to vent and/or rupture. Exposure to elevated temperatures can cause product to decompose.

Incompatible Materials: Avoid contact with: Acids. Alcohols. Amines. Ammonia. Bases. Metal compounds. Strong oxidizers. Products based on diisocyanates like TDI and MDI react with many materials to release heat. The reaction rate increases with temperature as well as with increased contact; these reactions can become violent. Contact is increased by stirring or if the other material acts as a solvent. Products based on diisocyanates such as TDI and MDI are not soluble in water and will sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. Reaction with water will generate carbon dioxide and heat.

Hazardous decomposition products
Decomposition products depend upon temperature, air supply and the presence of other materials. Toxic gases are released during decomposition.

11. Toxicological Information

Acute Toxicity
Ingestion
As product: Single dose oral LD50 has not been determined.
Estimated. LD50, rat > 2,000 mg/kg
Dermal
As product: The dermal LD50 has not been determined.
Estimated. LD50, rabbit > 2,000 mg/kg
Inhalation
As product: The LC50 has not been determined.

Eye damage/eye irritation
May cause eye irritation. May cause slight temporary corneal injury.

Skin corrosion/irritation
Prolonged contact may cause moderate skin irritation with local redness. Material may stick to skin causing irritation upon removal. May stain skin.

Sensitization
Skin
Skin contact may cause an allergic skin reaction. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.
Respiratory
May cause allergic respiratory response. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

Repeated Dose Toxicity
Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols. Contains component(s) which have been reported to cause effects on the following organs in animals: Kidney. Liver.

Chronic Toxicity and Carcinogenicity
Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 mg/m3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Developmental Toxicity
In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

Reproductive Toxicity
No relevant data found.

Genetic Toxicology
In vitro genetic toxicity studies were negative for component(s) tested. Genetic toxicity data on MDI are inconclusive. MDI was weakly positive in some in vitro studies; other in vitro studies were negative. Animal mutagenicity studies were predominantly negative.

12. Ecological Information

Toxicity

Data for Component: **Diphenylmethane Diisocyanate, isomers and homologues**

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic

organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity
Based on information for a similar material: LC50, Danio rerio (zebra fish), static test, 96 h: > 1,000 mg/l
Aquatic Invertebrate Acute Toxicity
Based on information for a similar material: EC50, Daphnia magna (Water flea), static test, 24 h: > 1,000 mg/l
Aquatic Plant Toxicity
Based on information for a similar material: NOEC, Desmodesmus subspicatus (green algae), static test, Growth rate inhibition, 72 h: 1,640 mg/l
Toxicity to Micro-organisms
Based on information for a similar material: EC50; activated sludge, static test, 3 h: > 100 mg/l
Toxicity to Soil Dwelling Organisms
EC50, Eisenia fetida (earthworms), 14 d: > 1,000 mg/kg

Data for Component: **4,4' -Methylenediphenyl diisocyanate**

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity
Based on information for a similar material: LC50, Danio rerio (zebra fish), static test, 96 h: > 1,000 mg/l
Aquatic Invertebrate Acute Toxicity
Based on information for a similar material: EC50, Daphnia magna (Water flea), static test, 24 h: > 1,000 mg/l
Aquatic Plant Toxicity
Based on information for a similar material: NOEC, Desmodesmus subspicatus (green algae), static test, Growth rate inhibition, 72 h: 1,640 mg/l
Toxicity to Micro-organisms
Based on information for a similar material: EC50; activated sludge, static test, 3 h: > 100 mg/l
Toxicity to Soil Dwelling Organisms
EC50, Eisenia fetida (earthworms), 14 d: > 1,000 mg/kg

Data for Component: **Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alpha.,.alpha.',.alpha.''-1,2,3-propanetriyltris[.omega.-hydroxypoly**

Not expected to be acutely toxic to aquatic organisms.

Data for Component: **Tris(1-chloro-2-propyl) phosphate**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity
LC50, Lepomis macrochirus (Bluegill sunfish), static test, 96 h: 84 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, Daphnia magna (Water flea), 48 h, immobilization: 131 mg/l
Aquatic Plant Toxicity
ErC50, Pseudokirchneriella subcapitata (green algae), static test, Growth rate inhibition, 96 h: 82 mg/l
Toxicity to Micro-organisms
EC50, OECD 209 Test; activated sludge, Respiration inhibition, 3 h: 784 mg/l
Aquatic Invertebrates Chronic Toxicity Value
Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, NOEC: 32 mg/l

Data for Component: **Paraffin waxes and Hydrocarbon waxes, chlorinated**

Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

Fish Acute & Prolonged Toxicity

LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 h: > 100 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: 0.037 mg/l

Data for Component: **Isobutane**

No relevant data found.

Data for Component: **Propane**

No relevant data found.

Data for Component: **Methyl ether**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, Poecilia reticulata (guppy), semi-static test, 96 h: > 4,000 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, Daphnia magna (Water flea), 48 h, immobilization: > 4,000 mg/l

Persistence and Degradability

Data for Component: **Diphenylmethane Diisocyanate, isomers and homologues**

In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

OECD Biodegradation Tests: Based on information for a similar material:

Biodegradation	Exposure Time	Method	10 Day Window
0 %	28 d	OECD 302C Test	Not applicable

Data for Component: **4,4' -Methylenediphenyl diisocyanate**

In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

OECD Biodegradation Tests: Based on information for a similar material:

Biodegradation	Exposure Time	Method	10 Day Window
0 %	28 d	OECD 302C Test	Not applicable

Data for Component: **Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alpha.,.alpha.',.alpha."-1,2,3-propanetriyltris[.omega.-hydroxypoly**

Expected to degrade only slowly in the environment.

Data for Component: **Tris(1-chloro-2-propyl) phosphate**

Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
14 %	28 d	OECD 301E Test	fail
95 %	64 d	OECD 302A Test	Not applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
4.47E-11 cm3/s	0.24 d	Estimated.

Theoretical Oxygen Demand: 1.17 mg/mg

Data for Component: **Paraffin waxes and Hydrocarbon waxes, chlorinated**

Expected to degrade only slowly in the environment.

Theoretical Oxygen Demand: 2.89 mg/mg

Data for Component: **Isobutane**

Biodegradation may occur under aerobic conditions (in the presence of oxygen).

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
2.44E-12 cm3/s	4.4 d	Estimated.

Theoretical Oxygen Demand: 3.58 mg/mg

Data for Component: **Propane**

No relevant data found.

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.27E-12 cm3/s	8.4 d	Estimated.

Theoretical Oxygen Demand: 3.64 mg/mg

Data for Component: **Methyl ether**

Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
5 %	28 d	OECD 301A Test	fail

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.66E-12 cm3/s	6.4 d	Estimated.

Theoretical Oxygen Demand: 2.08 mg/mg

Bioaccumulative potential

Data for Component: **Diphenylmethane Diisocyanate, isomers and homologues**

Bioaccumulation: In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Data for Component: **4,4' -Methylenediphenyl diisocyanate**

Bioaccumulation: In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Data for Component: **Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alpha.,.alpha.',.alpha.''-1,2,3-propanetriyltris[.omega.-hydroxypoly**

Bioaccumulation: In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Data for Component: **Tris(1-chloro-2-propyl) phosphate**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient, n-octanol/water (log Pow): 2.59 Measured
Bioconcentration Factor (BCF): 0.8 - 4.6; Cyprinus carpio (Carp); Measured

Data for Component: **Paraffin waxes and Hydrocarbon waxes, chlorinated**

Bioaccumulation: Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).
Partition coefficient, n-octanol/water (log Pow): 7.4 Estimated.

Data for Component: **Isobutane**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient, n-octanol/water (log Pow): 2.76 Measured

Data for Component: **Propane**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient, n-octanol/water (log Pow): 2.36 Measured

Data for Component: **Methyl ether**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient, n-octanol/water (log Pow): 0.10 Measured

Mobility in soil

Data for Component: **Diphenylmethane Diisocyanate, isomers and homologues**

Mobility in soil: In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Data for Component: **4,4' -Methylenediphenyl diisocyanate**

Mobility in soil: In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Data for Component: **Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alpha.,.alpha.',.alpha.''-1,2,3-propanetriyltris[.omega.-hydroxypoly**

Mobility in soil: In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Data for Component: **Tris(1-chloro-2-propyl) phosphate**

Mobility in soil: Potential for mobility in soil is slight (Koc between 2000 and 5000).
Partition coefficient, soil organic carbon/water (Koc): 1,300 Estimated.
Henry's Law Constant (H): < 1.35E-05 atm*m3/mole; 25 °C Estimated.

Data for Component: **Paraffin waxes and Hydrocarbon waxes, chlorinated**

Mobility in soil: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Expected to be relatively immobile in soil (Koc > 5000).
Partition coefficient, soil organic carbon/water (Koc): > 5,000 Estimated.
Henry's Law Constant (H): < 1.0E-07 atm*m3/mole; 25 °C Estimated.

Data for Component: **Isobutane**

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient, soil organic carbon/water (Koc): 35 Estimated.
Henry's Law Constant (H): 1.19E+00 atm*m3/mole; 25 °C Measured
Distribution in Environment: Mackay Level 1 Fugacity Model:

Air	Water.	Biota	Soil	Sediment
100 %	0 %	0 %	0 %	0 %

Data for Component: **Propane**

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient, soil organic carbon/water (Koc): 24 - 460 Estimated.
Henry's Law Constant (H): 7.07E-01 atm*m3/mole; 25 °C Measured
Distribution in Environment: Mackay Level 1 Fugacity Model:

Air	Water.	Biota	Soil	Sediment
100 %	0 %	0 %	0 %	0 %

Data for Component: **Methyl ether**

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient, soil organic carbon/water (Koc): 1.29 - 14 Estimated.
Henry's Law Constant (H): 9.78E-04 atm*m3/mole; 25 °C Measured

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

14. Transport Information

DOT Non-Bulk
Proper Shipping Name: AEROSOLS, FLAMMABLE
Hazard Class: 2.1 **ID Number:** UN1950
LIMITED QUANTITY

Material may be reclassified to ship as ORM-D

DOT Bulk
NOT AVAILABLE IN BULK CONTAINERS

IMDG
Proper Shipping Name: AEROSOLS
Hazard Class: 2.1 **ID Number:** UN1950
EMS Number: F-D,S-U
Marine pollutant.: Yes

LIMITED QUANTITY

ICAO/IATA
Proper Shipping Name: AEROSOLS, FLAMMABLE
Hazard Class: 2.1 **ID Number:** UN1950**Cargo Packing Instruction:** 203
Passenger Packing Instruction: 203

LIMITED QUANTITY
Additional Information

MARINE POLLUTANT

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	Yes
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Component	CAS #	Amount
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9	>= 10.0 - <= 30.0 %
4,4' -Methylenediphenyl diisocyanate	101-68-8	>= 5.0 - <= 10.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:
The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Diphenylmethane Diisocyanate, isomers and	9016-87-9	>= 10.0 - <= 30.0 %

homologues		
4,4' -Methylenediphenyl diisocyanate	101-68-8	>= 5.0 - <= 10.0 %
Isobutane	75-28-5	>= 5.0 - <= 10.0 %
Methyl ether	115-10-6	>= 1.0 - <= 5.0 %
Propane	74-98-6	>= 1.0 - <= 5.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103
This product contains the following substances which are subject to CERCLA Section 103 reporting requirements and which are listed in 40 CFR 302.4.

Component	CAS #	Amount
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9	>= 10.0 - <= 30.0 %
4,4' -Methylenediphenyl diisocyanate	101-68-8	>= 5.0 - <= 10.0 %
Isobutane	75-28-5	>= 5.0 - <= 10.0 %
Methyl ether	115-10-6	>= 1.0 - <= 5.0 %
Propane	74-98-6	>= 1.0 - <= 5.0 %

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Toxic Substances Control Act (TSCA)
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30
CEPA - Domestic Substances List (DSL)
All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

16. Other Information

Recommended Uses and Restrictions
Identified uses
Polyurethane foam.

Revision
Identification Number: 1014933 / 1001 / Issue Date 12/14/2012 / Version: 2.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline

WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

The Dow Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

Product name: GREAT STUFF PRO™ Gaps & Cracks Insulating Foam Sealant GUN 24oz HC ES 12ct

Issue Date: 04/10/2015

Print Date: 06/19/2015

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: GREAT STUFF PRO™ Gaps & Cracks Insulating Foam Sealant GUN 24oz HC ES 12ct

Recommended use of the chemical and restrictions on use
Identified uses: Polyurethane foam.

COMPANY IDENTIFICATION
THE DOW CHEMICAL COMPANY
2030 WILLARD H DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 800-424-9300
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.
Flammable aerosols - Category 2
Acute toxicity - Category 4 - Inhalation
Skin irritation - Category 2
Eye irritation - Category 2B
Respiratory sensitisation - Category 1
Skin sensitisation - Category 1
Carcinogenicity - Category 2
Effects on or via lactation
Specific target organ toxicity - single exposure - Category 3
Specific target organ toxicity - repeated exposure - Category 2 - Inhalation

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Label elements
Hazard pictograms



Signal word: **DANGER!**

Hazards
Flammable aerosol.
Causes skin and eye irritation.
May cause an allergic skin reaction.
Harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
Suspected of causing cancer.
May cause harm to breast-fed children.
May cause damage to organs (Respiratory system) through prolonged or repeated exposure if inhaled.

Precautionary statements

Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Avoid contact during pregnancy/ while nursing.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
Use personal protective equipment as required.
In case of inadequate ventilation wear respiratory protection.

Response
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.

Storage
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Disposal
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer	57029-46-6	>= 30.0 - <= 60.0 %
Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer	53862-89-8	>= 5.0 - <= 10.0 %
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9	>= 10.0 - <= 30.0 %
Paraffin waxes and Hydrocarbon waxes, chlorinated	63449-39-8	>= 5.0 - <= 10.0 %
Isobutane	75-28-5	>= 3.0 - <= 7.0 %
Propane	74-98-6	>= 1.0 - <= 5.0 %
Methyl ether	115-10-6	>= 1.0 - <= 5.0 %
4,4' -Methylenediphenyl diisocyanate	101-68-8	>= 7.0 - <= 13.0 %
N,N'-Dimorpholinodiethylether	6425-39-4	>= 0.5 - <= 5.0 %

Note
Note: CAS 101-68-8 is an MDI isomer that is part of CAS 9016-87-9.

4. FIRST AID MEASURES

Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Suitable emergency safety shower facility should be available in work area.

Eye contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome). Repeated excessive exposure may aggravate preexisting lung disease. Maintain adequate ventilation and oxygenation of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. Although cholinesterase depression has been reported with this material, it is not of benefit in determining exposure and need not be considered in the treatment of persons exposed to the material. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media: Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire.

Special hazards arising from the substance or mixture
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Isocyanates. Hydrogen chloride. Carbon monoxide. Carbon dioxide. Hydrogen cyanide.

Unusual Fire and Explosion Hazards: Contains flammable propellant. Aerosol cans exposed to fire can rupture and become flaming projectiles. Propellant release may result in a fireball. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Dense smoke is produced when product burns.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Do not use direct water stream. May spread fire. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Use water spray to cool fire-exposed containers and fire-affected zone until fire is out.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Evacuate area. Only trained and properly protected personnel must be involved in clean-up operations. Keep personnel out of low areas. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. For large spills, warn public of downwind explosion hazard. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. Keep out of sewers. See Section 10 for more specific information. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to section 7, Handling, for additional precautionary measures.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Ground and bond all containers and handling equipment. Isolate area until gas has dispersed. Use non-sparking tools in cleanup operations. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Collect in suitable and properly labeled containers. Absorb with materials such as: Clay. Dirt. Milsorb®. Sand. Sawdust. Vermiculite. See

Section 10 for more specific information. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep away from heat, sparks and flame. Avoid contact with eyes. Avoid contact with skin and clothing. Avoid prolonged or repeated contact with skin. Avoid breathing vapor. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. Keep out of reach of children. No smoking, open flames or sources of ignition in handling and storage area. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Contents under pressure. Do not puncture or incinerate container. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Do not enter confined spaces unless adequately ventilated. Never use air pressure for transferring product. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Minimize sources of ignition, such as static build-up, heat, spark or flame. Store in a dry place. See Section 10 for more specific information.

Storage stability

Storage temperature:	Shelf life: Use within
49 °C (120 °F)	12 Month

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Isobutane	ACGIH	STEL	1,000 ppm
Propane	ACGIH		
	OSHA Z-1	TWA	1,800 mg/m3 1,000 ppm
Methyl ether	US WEEL	TWA	1,000 ppm
4,4' -Methylenediphenyl diisocyanate	ACGIH	TWA	0.005 ppm
	OSHA Z-1	C	0.2 mg/m3 0.02 ppm

Exposure controls

Engineering controls: Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilationto control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure. Lethal concentrations may exist in areas with poor ventilation.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene.

Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Viton. Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Foam
Color	Orange
Odor	Odorless
Odor Threshold	No test data available
pH	Not applicable
Melting point/range	No test data available
Freezing point	No test data available
Boiling point (760 mmHg)	Not applicable
Flash point	**closed cup** -104 °C (-155 °F) *Estimated.*
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Flammable gas.
Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapor Pressure	1,100 kPa at 55 °C (131 °F) *Supplier*
Relative Vapor Density (air = 1)	No test data available
Relative Density (water = 1)	1.06 *Calculated.*
Water solubility	Insoluble

Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	No
Molecular weight	no data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: no data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7. Unstable at elevated temperatures.

Possibility of hazardous reactions: Can occur. Exposure to elevated temperatures can cause product to decompose and generate gas. This can cause pressure build-up and/or rupturing of closed containers. Acids.

Conditions to avoid: Avoid temperatures above 50 °C
Elevated temperatures can cause container to vent and/or rupture. Exposure to elevated temperatures can cause product to decompose.

Incompatible materials: Avoid contact with: Acids. Alcohols. Amines. Ammonia. Bases. Metal compounds. Strong oxidizers. Products based on diisocyanates like TDI and MDI react with many materials to release heat. The reaction rate increases with temperature as well as with increased contact; these reactions can become violent. Contact is increased by stirring or if the other material acts as a solvent. Products based on diisocyanates such as TDI and MDI are not soluble in water and will sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. Reaction with water will generate carbon dioxide and heat.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Toxic gases are released during decomposition.

11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Acute toxicity

Acute oral toxicity

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Observations in animals include: Gastrointestinal irritation.

As product: Single dose oral LD50 has not been determined.

LD50, Rat, > 2,000 mg/kg Estimated.

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

LD50, Rabbit, > 2,000 mg/kg Estimated.

Acute inhalation toxicity
In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause pulmonary edema (fluid in the lungs.) Effects may be delayed. May cause central nervous system depression. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). Decreased lung function has been associated with overexposure to isocyanates.
As product: The LC50 has not been determined.

Skin corrosion/irritation
Prolonged contact may cause moderate skin irritation with local redness.
Material may stick to skin causing irritation upon removal.
May stain skin.

Serious eye damage/eye irritation
May cause eye irritation.
May cause slight temporary corneal injury.

Sensitization
Skin contact may cause an allergic skin reaction.
Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.

May cause allergic respiratory reaction.
MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized.
Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

Specific Target Organ Systemic Toxicity (Single Exposure)
May cause respiratory irritation.
Route of Exposure: Inhalation

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols.
Contains component(s) which have been reported to cause effects on the following organs in animals: kidney
Liver.

Carcinogenicity
Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 mg/m3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Teratogenicity
In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

Reproductive toxicity
Based on information for component(s): May cause harm to breastfed babies.

Mutagenicity
In vitro genetic toxicity studies were negative for component(s) tested. Genetic toxicity data on MDI are inconclusive. MDI was weakly positive in some in vitro studies; other in vitro studies were negative. Animal mutagenicity studies were predominantly negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer

Acute inhalation toxicity
The LC50 has not been determined.

Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer

Acute inhalation toxicity
The LC50 has not been determined.

Diphenylmethane Diisocyanate, isomers and homologues

Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, 0.49 mg/l

For similar material(s): 2,4'-Diphenylmethane diisocyanate (CAS 5873-54-1). LC50, Rat, 4 Hour, Aerosol, 0.31 mg/l

For similar material(s): 4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8). LC50, Rat, 1 Hour, Aerosol, 2.24 mg/l

Paraffin waxes and Hydrocarbon waxes, chlorinated

Acute inhalation toxicity
The LC50 has not been determined.

Isobutane

Acute inhalation toxicity

LC50, Mouse, 1 Hour, 52 mg/l

Propane

Acute inhalation toxicity
LC50, Rat, male and female, 4 Hour, vapour, > 425000 ppm

Methyl ether

Acute inhalation toxicity
LC50, Rat, 4 Hour, gas, 164000 ppm

4,4' -Methylenediphenyl diisocyanate

Acute inhalation toxicity
LC50, Rat, 1 Hour, dust/mist, 2.24 mg/l

N,N'-Dimorpholinodiethylether

Acute inhalation toxicity
The LC50 has not been determined.

Carcinogenicity

Component	**List**	**Classification**
Paraffin waxes and Hydrocarbon waxes, chlorinated	IARC	Group 2B: Possibly carcinogenic to humans
	US NTP	Reasonably anticipated to be a human carcinogen

12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

Toxicity

Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer

Acute toxicity to fish
For this family of materials:
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer

Acute toxicity to fish
Not expected to be acutely toxic to aquatic organisms.

Diphenylmethane Diisocyanate, isomers and homologues

Acute toxicity to fish
The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species.
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
Based on information for a similar material:

LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
Based on information for a similar material:
EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
Based on information for a similar material:
NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1,640 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
Based on information for a similar material:
EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l

Toxicity to soil-dwelling organisms
EC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 1,000 mg/kg

Toxicity to terrestrial plants
EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l
EC50, Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

Paraffin waxes and Hydrocarbon waxes, chlorinated

Acute toxicity to fish
Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 0.1 mg/l

Isobutane

Acute toxicity to fish
No relevant data found.

Propane

Acute toxicity to fish
No relevant data found.

Methyl ether

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Poecilia reticulata (guppy), semi-static test, 96 Hour, > 4,000 mg/l

Acute toxicity to aquatic invertebrates
LC50, Daphnia magna (Water flea), 48 Hour, > 4,000 mg/l, OECD Test Guideline 202 or Equivalent

4,4' -Methylenediphenyl diisocyanate

Acute toxicity to fish
The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species.

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
Based on information for a similar material:
LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
Based on information for a similar material:
EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
Based on information for a similar material:
NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1,640 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
Based on information for a similar material:
EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l

Toxicity to soil-dwelling organisms
EC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 1,000 mg/kg

Toxicity to terrestrial plants
EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l
EC50, Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

N,N'-Dimorpholinodiethylether

Acute toxicity to fish
Material is practically non-toxic to fish on an acute basis (LC50 > 100 mg/L).
May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.
LC50, Danio rerio (zebra fish), static test, 96 Hour, > 2,150 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia (water flea), static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
ErC50, Algae, static test, 72 Hour, > 100 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
EC50, Bacteria, static test, 3 Hour, 100 mg/l, activated sludge test (OECD 209)

Persistence and degradability

Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer

Biodegradability: For this family of materials: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer

Biodegradability: Expected to degrade slowly in the environment.

Diphenylmethane Diisocyanate, isomers and homologues

Biodegradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.
10-day Window: Not applicable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

Paraffin waxes and Hydrocarbon waxes, chlorinated

Biodegradability: Expected to degrade slowly in the environment.

Theoretical Oxygen Demand: 2.89 mg/mg

Isobutane

Biodegradability: Biodegradation may occur under aerobic conditions (in the presence of oxygen).

Theoretical Oxygen Demand: 3.58 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 4.4 d
Method: Estimated.

Propane

Biodegradability: No relevant data found.

Theoretical Oxygen Demand: 3.64 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 8.4 d
Method: Estimated.

Methyl ether

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 5 %
Exposure time: 28 d
Method: OECD Test Guideline 301A or Equivalent

Theoretical Oxygen Demand: 2.08 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals

Atmospheric half-life: 6.4 d
Method: Estimated.

4,4' -Methylenediphenyl diisocyanate

Biodegradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.
10-day Window: Not applicable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

N,N'-Dimorpholinodiethylether

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 0 - 10 %
Exposure time: 28 d
Method: OECD Test Guideline 301A or Equivalent

Theoretical Oxygen Demand: 2.49 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 0.03 d
Method: Estimated.

Bioaccumulative potential

Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer

Bioaccumulation: No relevant data found.

Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer

Bioaccumulation: In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Diphenylmethane Diisocyanate, isomers and homologues

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Reacts with water. In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.
Bioconcentration factor (BCF): 92 Cyprinus carpio (Carp) 28 d

Paraffin waxes and Hydrocarbon waxes, chlorinated

Bioaccumulation: Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).
Partition coefficient: n-octanol/water(log Pow): 7.4 Estimated.

Isobutane

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.76 Measured

Propane

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.36 Measured

Methyl ether

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 0.10 Measured

4,4' -Methylenediphenyl diisocyanate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Reacts with water. In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.
Bioconcentration factor (BCF): 92 Cyprinus carpio (Carp) 28 d

N,N'-Dimorpholinodiethylether

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 0.5 Estimated.

Mobility in soil

Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer

No relevant data found.

Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Diphenylmethane Diisocyanate, isomers and homologues

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Paraffin waxes and Hydrocarbon waxes, chlorinated

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Expected to be relatively immobile in soil (Koc > 5000).
Partition coefficient(Koc): > 5000 Estimated.

Isobutane

Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient(Koc): 35 Estimated.

Propane

Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient(Koc): 24 - 460 Estimated.

Methyl ether

Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient(Koc): 1.29 - 14 Estimated.

4,4' -Methylenediphenyl diisocyanate

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

N,N'-Dimorpholinodiethylether

Potential for mobility in soil is low (Koc between 500 and 2000).
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Partition coefficient(Koc): 784 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Aerosols
UN number	UN 1950
Class	2.1
Packing group	

Classification for SEA transport (IMO-IMDG):

Proper shipping name	AEROSOLS
UN number	UN 1950
Class	2.1
Packing group	
Marine pollutant	Paraffin waxes and Hydrocarbon waxes, chlorinated
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Aerosols, flammable
UN number	UN 1950
Class	2.1
Packing group	

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container

volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Acute Health Hazard
Chronic Health Hazard
Fire Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Components	**CASRN**
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9
4,4' -Methylenediphenyl diisocyanate	101-68-8

Pennsylvania Worker and Community Right-To-Know Act:
The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	**CASRN**
Isobutane	75-28-5
Propane	74-98-6
Methyl ether	115-10-6

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances knownto the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

:

16. OTHER INFORMATION

Revision
Identification Number: 101216112 / A001 / Issue Date: 04/10/2015 / Version: 3.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
C	Ceiling
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
STEL	Short-term exposure limit
TWA	8-hour, time-weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Product Name/Trade Name	**Clear Ammonia**
	Ref# 40000027 / 40000292
Manufacturer:	KIK CUSTOM PRODUCTS
	2921 Corder Street.
	Houston, TX USA 77054
Contact Number:	Tel: 905-660-0444
24 Hour Emergency Contact:	Tel: 1-800-255-3924
Prepared By:	KIK CUSTOM PRODUCTS Laboratory
Date Last Revised:	**November 15, 2011**
Replaces Date:	October 18, 2011

Section 2. Hazardous Ingredients

Name	%	CAS#	LD50/LC50
Aqua Ammonia	< 3	1336-21-6	350 mg/kg (oral rat)/ 2115ppm/4hr mouse.

Section 3. Physical Data

State	Liquid	**pH**	11.5 – 12.0
Appearance	Clear	**% Volatile**	99
Odour	Ammonia	**Boiling Point**	Approx. 100°C.
Specific Gravity	0.990 – 1.005	**Vapour Pressure**	N Av.
Solubility	100% in water		

Section 4. Fire & Explosion

Flammable: YES NO X
Conditions: Heat, source of ignition

Means of Extinction: Water, Carbon Dioxide, Dry Chemical or Foam

Special Procedures: Fire Fighters should wear self-contained breathing apparatus.

Flash Point: & Method: > 95°C TCC

Hazardous Combustion Products: Oxides of Carbon

Section 5. Reactivity Data

Chemical Stability: YES NO X

Conditions: Intense heat or exposure to sunlight
Incompatibility: YES X NO

What Substances: sodium hypochlorite

Reactivity / Conditions: Not Applicable

Hazardous Decomposition Products:. N Av.

Section 6. Toxicological Properties

Route of Entry

	Skin Contact	X	Skin Absorption	Eye Contact	X
	Inhalation Acute		Inhalation Chronic	Ingestion	X

Effects of Acute Exposure: Contact will burn the eyes. Harmful if swallowed, can cause gastro-intestinal irritation, nausea, vomiting and diarrhea.
Effects of chronic exposure: Prolonged and repeated exposure with skin may cause drying, irritation, and dermatitis.
Carcinogenicity Reproductive Effects: None known.

Section 7. Preventative Measures

Protective Equipment

Gloves:	Recommended	Eyes: Not normally required
Respiratory:	Not normally required.	Footwear: Not Applicable

LEAK AND SPILL PROTECTION: FOR SMALL SPILLS WIPE UP OR MOP UP**.** For large spills control spill with absorbent; transfer to non-leaking containers. Rinse area thoroughly.
WASTE DISPOSAL: Reclaim or dispose in accordance with local regulations.
STORAGE REQUIREMENTS: Store in a cool, dry and well ventilated area.

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Section 8. First Aid Measures

Skin: Wash with soap and water for 15 minutes.

Eyes: Flush eyes with cool running water holding eye lids apart to ensure thorough rinsing for 15 minutes. Remove contact lenses.

Inhalation: Move to fresh air and restore breathing, if required.

Ingestion: DO NOT INDUCE VOMITING! Drink large amounts of water. Do not give anything by mouth to a convulsing or unconscious person. See a doctor immediately.

General Advice: If irritation occurs, see a doctor immediately.

Section 9. Regulatory Information

WHMIS:
Health: 1
Flammability: 0
Reactivity: 2

DOT : Not Restricted

As the handling and use of products under user's conditions are beyond our control, no warranty, expressed or implied, is made concerning this product. The information contained herein is offered only as a guide to the handling of this specific material and is not intended to be all-inclusive in the manner and conditions of use and handling. The user assumes all risks of use or handling, whether or not in accordance with any directions or suggestions of the manufacturer. Manufacturer shall not be liable to purchaser or any other person for loss or damages directly or indirectly arising from the use of our product.

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 1 Flammability = 0 Reactivity = 0
HMIS RATING: Health = 1 Flammability = 0 Reactivity = 0

SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (543N-71A)

Manufacturer's Name: HILLYARD INDUSTRIES **Product Name: GREEN SELECT FOAMING HAND SOAP**

Address: 302 North Fourth Street, St. Joseph, MO 64501 **Date Prepared:** September 17, 2008 (version 1)
Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.) **Other information calls:** (816) 233-1321(Ext. 8285)
http://www.hillyard.com

SECTION II -- INGREDIENTS/IDENTITY INFORMATION

Components Specific Chemical Identity: Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	none	none	N/A	---
Mild Anionic Surfactant mixture (Sodium Lauryl Sulfoacetate)	1847-58-1	none	none	N/A	---

VOC = 0.0%

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: corrected. 201°F **Specific Gravity (H20 = 1):** 25°C = 1.00 & 39°C = 1.00
Vapor Pressure (mm Hg.): 17.53 **Percent Volatile by Volume (%):** 98.7%
Vapor Density (AIR = 1): 0.6216 **Evaporation Rate (ethyl ether = 1):** less than 1
Solubility in Water : complete **Appearance and Odor:** clear liquid; mild odor
pH = 6.25 – 7.25

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: None to boiling (PMCC) **Flammable Limits:** LEL = N/A UEL = N/A
Extinguishing Media: Water
Special Fire Fighting Procedures: None
Unusual Fire and Explosion Hazards: None known by manufacturer

SECTION V -- PHYSICAL HAZARDS

Stability: Stable **Conditions to Avoid:** N/A
Incompatibility (Materials to Avoid): None of which we have knowledge
Hazardous Decomposition Products or Byproducts: None
Hazardous Polymerization: Will not occur **Conditions to Avoid:** N/A

SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? No Skin? No Ingestion? No

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. According to Eye Irritation Test (FHSA), product concentrate is an eye irritant. Prolonged overexposure to concentrate without thorough water rinse may cause eye irritation. According to Primary Skin Irritation Test (FHSA), product concentrate is not a primary skin irritant. Product concentrate was not acutely toxic to laboratory animals following oral administration at 5g/kg. 2. None known by Hillyard Industries.

Chemical listed as Carcinogen or Potential Carcinogen:
National Toxicology Program = No **I.A.R.C. Monographs =** No **OSHA =** No
This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

SECTION VI -- HEALTH HAZARD DATA cont.
Signs and Symptoms of Exposure: N/A
Medical Conditions Generally Aggravated by Exposure: None known
Emergency and First Aid Procedures: Eye contact with concentrate: Flush eyes with plenty of water for 15 minutes; call physician.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE
Steps To Be Taken In Case Material Is Released Or Spilled: Rinse area with water and pick up with wet vac or mop.
Waste Disposal Method: Normal sewage disposal
Precautions To Be Taken In Handling And Storing: N/A
Other Precautions: This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR part 372.

SECTION VIII -- CONTROL MEASURES:
Respiratory Protection (Specify Type): N/A
Ventilation:
Local Exhaust = N/A **Mechanical (General) =** N/A **Special =** N/A **Other =** N/A
Protective Gloves: N/A **Eye Protection:** N/A
Other Protective Clothing or Equipment: Not needed
Work / Hygienic Practices: Rinse cleaner off skin with water.

SECTION IX - TRANSPORTATION INFORMATION:
Applicable Regulations: DOT = No; **IMCO =** No; **IATA =** No.
Proper shipping name: Cleaning compound
UN NO.: not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable
Labels required: not required **DOT Exception:** not applicable
EPA Hazardous waste number/code: not listed
Hazardous waste characteristics:
Ignitability = not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.
The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.
THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

Material Safety Data Sheet: GRENADIER PLUS

Supercedes Date 05/10/2010 **Issuing Date** 03/21/2012

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name GRENADIER PLUS
Recommended use Disinfectants and general biocidal products
Information on Manufacturer
CHECK-MARK DIV. OF DM RESOURCES, INC.
1310 E. NORTHGATE DRIVE
IRVING, TEXAS 75062

Product Code 0909
Chemical nature Aqueous solution
Emergency Telephone Number
CHEMTREC® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
DANGER
Corrosive
Causes skin and eye burns
Harmful if inhaled and may cause delayed lung injury
Harmful or fatal if swallowed

Color Yellow **Physical State** Liquid **Odor** Pleasant

Potential Health Effects

Principle Route of Exposure Skin contact, Eye contact, Inhalation, (mist).

Primary Routes of Entry None known

Acute Effects

Eyes Corrosive to the eyes and may cause severe damage including blindness.

Skin Causes skin burns.

Inhalation Harmful by inhalation. Causes burns.

Ingestion If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Chronic Toxicity Inhaled corrosive substances can lead to a toxic edema of the lungs.

Target Organ Effects Respiratory system, Eyes, Skin.

Aggravated Medical Conditions Skin disorders, Respiratory disorders.

Potential Environmental Effects See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Alcohols, C 12-14 secondary, ethoxylated	84133-50-6
Sodium carbonate	497-19-8
Alkyl dimethyl ethylbenzyl ammonium chloride (C12-14)	85409-23-0
Alkyl dimethyl benzyl ammonium chloride (C12-18)	68391-01-5
Tetrasodium ethylenediaminetetraacetate	64-02-8

4. FIRST AID MEASURES

General Advice Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist.

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.

Skin Contact Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.

Inhalation Move to fresh air. If breathing has stopped, apply artificial respiration. In case of shortness of breath, give oxygen. Get medical attention immediately.

Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.

Notes to physician The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed.

5. FIRE-FIGHTING MEASURES

Flash Point > 201 °F / > 94 °C **Method** Seta closed cup

Autoignition Temperature No information available.

Flammability Limits in Air % Mixture. **Upper** 75 **Lower** 4

Suitable Extinguishing Media

Water spray. Carbon dioxide (CO2). Foam. Alcohol-resistant foam. Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Contact with metals may evolve flammable hydrogen gas. Material can create slippery conditions.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA	**Health** 3	**Flammability** 1	**Instability** 0
HMIS	**Health** 3	**Flammability** 1	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.

Environmental Precautions Do not flush into surface water or sanitary sewer system.

Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Methods for Cleaning Up Pick up and transfer to properly labeled containers.

Neutralizing Agent None known.

7. HANDLING AND STORAGE

Handling Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist.

Storage Keep container tightly closed in a dry and well-ventilated place. Metal containers must be lined. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.

Storage Temperature **Minimum** 35 °F / 2 °C **Maximum** 120 °F / 49 °C

Storage Conditions **Indoor** X **Outdoor** X **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Alcohols, C 12-14 secondary, ethoxylated	No data available	No data available	No data available
Sodium carbonate	No data available	No data available	No data available
Alkyl dimethyl ethylbenzyl ammonium chloride (C12-14)	No data available	No data available	No data available
Alkyl dimethyl benzyl ammonium chloride (C12-18)	No data available	No data available	No data available
Tetrasodium ethylenediaminetetraacetate	No data available	No data available	No data available

Engineering Measures Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Personal Protective Equipment

Eye/Face Protection Tightly fitting safety goggles. Face-shield.

Skin Protection Wear suitable protective clothing, Impervious gloves.

Respiratory Protection In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Non viscous
Color	Yellow	**Odor**	Pleasant
Appearance	Transparent	**pH**	12
Specific Gravity	1.043	**Evaporation Rate**	0.66 (BuAc = 1)
Percent Volatile (Volume)	91.1	**VOC Content (%)**	0.2
VOC Content (g/L)	2.0	**Vapor Pressure**	16.6 mmHg @ 70°F
Vapor Density	0.6 (Air = 1.0)	**Solubility**	Completely soluble
Boiling Point/Range	224 °F / 107 °C		

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions. Hazardous polymerization does not occur.

Conditions to Avoid Heat, flames, and sparks

Incompatible Products Oxidizing agents, Reducing agents, Acids, Bases, Powdered metals, Contact with metals liberates hydrogen gas.

Hazardous Decomposition Products Carbon oxides, Nitrogen oxides (NOx), Sodium oxides, Ammonia, Amines, Hydrogen chloride gas.

Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Alcohols, C 12-14 secondary, ethoxylated	no data available	no data available	no data available	no data available	no data available

Sodium carbonate	= 4090 mg/kg (Rat)	no data available	no data available	no data available	no data available
Alkyl dimethyl ethylbenzyl ammonium chloride (C12-14)	no data available	no data available	no data available	no data available	no data available
Alkyl dimethyl benzyl ammonium chloride (C12-18)	no data available	no data available	no data available	no data available	no data available
Tetrasodium ethylenediaminetetraacetate	= 10 g/kg (Rat)	no data available	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Alcohols, C 12-14 secondary, ethoxylated	no data available	no data available	no data available	no data available	respiratory system
Sodium carbonate	no data available	no data available	no data available	no data available	no data available
Alkyl dimethyl ethylbenzyl ammonium chloride (C12-14)	no data available	no data available	no data available	no data available	no data available
Alkyl dimethyl benzyl ammonium chloride (C12-18)	no data available	no data available	no data available	no data available	no data available
Tetrasodium ethylenediaminetetraacetate	no data available	no data available	no data available	no data available	no data available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Other
Alcohols, C 12-14 secondary, ethoxylated	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium carbonate	not applicable	not applicable	not applicable	not applicable	not applicable
Alkyl dimethyl ethylbenzyl ammonium chloride (C12-14)	not applicable	not applicable	not applicable	not applicable	not applicable
Alkyl dimethyl benzyl ammonium chloride (C12-18)	not applicable	not applicable	not applicable	not applicable	not applicable
Tetrasodium ethylenediaminetetraacetate	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information Toxic to aquatic organisms

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Alcohols, C 12-14 secondary, ethoxylated	no data available	LC50 = 3.2 mg/L Pimephales promelas 96 h	no data available	EC50= 3.2 mg/L 48 h	N/A
Sodium carbonate	EC50 = 242 mg/L Nitzschia 120 h	LC50 310 - 1220 mg/L Pimephales promelas 96 h LC50 = 300 mg/L Lepomis macrochirus 96 h	no data available	EC50= 265 mg/L 48 h	N/A
Alkyl dimethyl ethylbenzyl ammonium chloride (C12-14)	no data available	no data available	no data available	no data available	N/A
Alkyl dimethyl benzyl ammonium chloride (C12-18)	no data available	no data available	no data available	no data available	N/A
Tetrasodium ethylenediaminetetraacetate	EC50 = 1.01 mg/L Desmodesmus subspicatus 72 h	LC50 = 41 mg/L Lepomis macrochirus 96 h LC50 = 59.8 mg/L Pimephales promelas 96 h	no data available	EC50= 610 mg/L 24 h	N/A

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of contents/container in accordance with local regulation. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency.

Container Disposal Do not re-use empty containers. Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name Corrosive liquids, n.o.s.
Hazard Class 8
UN-No UN1760
Packing Group III
Description Corrosive liquids, n.o.s.(Quaternary Ammonium Compound),8,UN1760,PG III

TDG

Proper shipping name Corrosive liquid, n.o.s.
Hazard Class 8
UN-No UN1760
Packing Group III

Description CORROSIVE LIQUID, N.O.S., (Quaternary Ammonium Compound),8,UN1760,PG III

ICAO

UN-No	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.*
Hazard Class	8
Packing Group	III
Shipping Description	Corrosive liquid, n.o.s., (Quaternary Ammonium Compound),8,UN1760,PG III

IATA

UN-No	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.*
Hazard Class	8
Packing Group	III
ERG Code	8L
Shipping Description	UN1760,Corrosive liquid, n.o.s., (Quaternary Ammonium Compound),8,PG III

IMDG/IMO

Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
UN-No	UN1760
Packing Group	III
EmS No.	F-A, S-B
Shipping Description	UN1760, Corrosive liquid, n.o.s., (Quaternary Ammonium Compound),8,PG III

15. REGULATORY INFORMATION

Inventories

TSCA	Complies
DSL	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	No	No	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Alcohols, C 12-14 secondary, ethoxylated	Not applicable	Not applicable
Sodium carbonate	Not applicable	Not applicable
Alkyl dimethyl ethylbenzyl ammonium chloride (C12-14)	Not applicable	Not applicable
Alkyl dimethyl benzyl ammonium chloride (C12-18)	Not applicable	Not applicable
Tetrasodium ethylenediaminetetraacetate	Not applicable	Not applicable

Canada

This product is exempt from WHMIS due to PCP registration

WHMIS Hazard Class

Exempt

16. OTHER INFORMATION

Prepared By	Rachael Mohochi
Supercedes Date	05/10/2010
Issuing Date	03/21/2012
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

CHECK-MARK DIV. OF DM RESOURCES, INC. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

FACTS Faxed FAST!℠

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 14

Grrip

HERCULES® MATERIAL SAFETY INFORMATION SERVICE℠

Date Prepared: 6/18/1986 **Last Reviewed:** 2/2/2005

Meets OSHA 29 CFR 1910.1200

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV (TWA)	Other Limits	Upper Bound Limit if SARA Reportable
Isopropanol (67-63-0)	400ppm	200ppm	N/A	- -

HMIS Hazard Rating: Health: 1 Flammability: 2 Reactivity: 0 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressur (mm Hg):
180 (For Isopropanol)	1.29	2.07	At 20° C (For Isopropanol) 33

Melting Point (° F)	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:
N/A	2.88	Insoluble

Appearance And Color: Dark brownish black paste **Odor:** Alcohol odor

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits	LEL:	UEL:
(For Isopropanol) 53° F T.C.C.	n/a	2%	12%

Extinguishing Media: Use dry chemical or alcohol type foam or water spray or carbon dioxide.

Special Firefighting Procedures:

Caution: Combustible mixture. Use self-contained breathing apparatus when handling fires in confined spaces. Use water spray to cool fire exposed surfaces.

Unusual Fire And Explosion Hazards:

Vapors from the product, being heavier than air, may travel to pilot lights and other sources of ignition. Extinguish all such sources of ignition.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Heat, sparks and open flame

Incompatability (Materials To Avoid): Avoid concentrated nitric and sulfuric acid, strong oxidizers, aldehydes and halogens.

Hazardous Decomposition: Burning may produce carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur

Section 6 - Health Hazard Data

Routes of Entry **Inhalation** YES/Primary **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards

Ingestion of large quantity may cause drowsiness and loss of consciousness

Carcinogenicity **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

INGESTION: Slightly toxic. Ingestion of a large quantity may cause drowsiness and loss of consciousness. Stomach cramps, pain, nausea, vomiting and diarrhea may also occur. INHALATION: Concentration may cause mild irritation of eyes, nose and throat. Concentration above the TLV may result in headache and drowsiness. SKIN CONTACT: No evidence of adverse effects from available information on skin absorption, but prolonged contact may cause drying and cracking of skin. EYE CONTACT: May cause slight to moderate irritation with possible corneal injury.

Medical Conditions Generally Aggravated By Exposure:

N/A

Emergency And First Aid Procedures:

INGESTION: DO NOT induce vomiting. If conscious, dilute by giving large quantities of water or milk. Call a physician immediately. INHALATION: Remove to fresh air. If not breathing, give artificial respiration preferably mouth to mouth. If breathing is difficult, give oxygen. Call a physician. SKIN CONTACT: Wash the affected area with soap & water. Remove contaminated clothing. EYE CONTACT: Immediately flush eyes with plenty of water for 15 minutes. Get medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

Use absorbent material to pick up small spills. Large spills: Extinguish any ignition source & pick up with absorbent material.

Waste Disposal Method:

Small spills: Non-hazardous landfill. Large spills: Conform with federal, state and local regulations.

Precautions To Be Taken In Handling And Storing:

Keep away from heat, sparks and flame. Avoid contact with eyes. Keep container closed. Use with adequate ventilation.

Other Precautions:

None

Section 8 - Control Measures:

Respiratory Protection:

None normally required. When handling large quantities use self-contained breathing apparatus if concentration of vapor exceeds 400 ppm.

Ventilation: **Local Exhaust** N/A
Mechanical Acceptable

Special N/A
Other: N/A

Gloves: Butyl rubber gloves

Eye Protection: Chemical splash goggles.

Other Protective Clothing: None

Work/Hygienic Practices: Wash thoroughly after handling.

HERCULES® MATERIAL SAFETY INFORMATION SERVICE

FACTS faxed FAST!

For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

Material Safety Data Sheet

BAYER ADVANCED 24 HOUR GRUB KILLER PLUS I READY-TO-SPREAD GRANULES

MSDS Number: 102000016526
MSDS Version 1.0
Revision Date: 07/02/2008

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name BAYER ADVANCED 24 HOUR GRUB KILLER PLUS I READY-TO-SPREAD GRANULES
MSDS Number 102000016526
EPA Registration No. 72155-83

Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-800-331-2867

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Average % by Weight
Trichlorfon	52-68-6	9.30

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview Caution! Harmful if swallowed. Do not breathe dust. Avoid contact with skin, eyes and clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Physical State dry, free flowing granules

Odor sweet

Appearance tan

Routes of Exposure Eye contact, Ingestion, Inhalation, Skin contact

Immediate Effects

Eye May cause eye irritation. Avoid contact with eyes.

Skin Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin and clothing.

Ingestion Harmful if swallowed. Do not take internally.

Inhalation Do not breathe dust.

Chronic or Delayed Long-Term	This product or its components may have target organ effects. This product or its components may have long term (chronic) health effects.
Potential Environmental Effect	Toxic to fish, birds, and other wildlife.

SECTION 4. FIRST AID MEASURES

General	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Eye	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
Skin	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
Notes to Physician	
Hazards	This product is a cholinesterase inhibiting organophosphorous pesticide.
Treatment	ANTIDOTE: Atropine sulphate. 2-PAM is also antidotal and may be administered in conjunction with atropine. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5. FIRE FIGHTING MEASURES

Flash point	not applicable
Fire and Explosion Hazards	Accumulation of fine dust may entail the risk of a dust explosion in the presence of air. In the event of fire the following can be released: Nitrogen oxides (NOx) Carbon monoxide (CO)

Suitable Extinguishing Media	Water spray, Foam, Dry chemical, Carbon dioxide (CO2)
Fire Fighting Instructions	Keep out of smoke. Fight fire from upwind position. Cool closed containers/ tanks exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.
Methods for Cleaning Up	Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional Advice	Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

SECTION 7. HANDLING AND STORAGE

Handling Procedures	Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.
Storing Procedures	Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.
Work/Hygienic Procedures	Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection	There are no known hazards associated with this product when used according to the label directions. The following guidelines should be followed. Avoid breathing dust. Avoid contact with skin and eyes. Do not allow children or pets to enter the treated area until granules have been

watered into the soil and the grass or soil is dry.

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Exposure Limits

Trichlorfon	52-68-6	ACGIH	TWA	1 mg/m3
		TX ESL	ST ESL	50 ug/m3
		TX ESL	AN ESL	5 ug/m3

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance tan

Physical State dry, free flowing granules

Odor sweet

pH 4 - 5

Bulk Density 30 - 35 lb/ft³

SECTION 10. STABILITY AND REACTIVITY

Incompatibility
Strong acids
Oxidizing agents
Bases

Hazardous Decomposition Products
Thermal decomposition can lead to release of:
Nitrogen oxides (NOx)
Carbon monoxide

Hazardous Reactions
No hazardous reactions when stored and handled according to prescribed instructions.
Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on this product as formulated. The non-acute information pertains to the technical-grade active ingredient, trichlorfon.

Acute Oral Toxicity female rat: LD50: > 5,000 mg/kg

Acute Dermal Toxicity rat: LD50: > 5,000 mg/kg

Skin Irritation	rabbit: Slight irritation.
Eye Irritation	rabbit: Moderate eye irritation.
Sensitization	guinea pig: Non-sensitizing.
Chronic Toxicity	Trichlorfon caused cholinesterase inhibition, anemia, hypercholesterolemia and/or organ effects (liver, kidney, lung, stomach, intestinal) in chronic studies in rats and monkeys.

Assessment Carcinogenicity

Trichlorfon was not carcinogenic in a lifetime feeding study in rats. In mice, trichlorfon caused an increased incidence of epithelial mammary tumors in females at the excessive high dose. Based on these findings, EPA has classified trichlorfon as "not likely to be carcinogenic to humans at low doses, but is likely to be carcinogenic at high doses."

ACGIH
None.
NTP
None.
IARC
None.
OSHA
None.

Reproductive & Developmental Toxicity	DEVELOPMENTAL TOXICITY: Trichlorfon is not considered a primary developmental toxicant in rats and rabbits. Developmental effects were observed at doses that caused maternal toxicity.
Neurotoxicity	Trichlorfon caused neurobehavioral effects ascribed to cholinergic toxicity in acute and subchronic studies in rats. In addition, minimal micropathologic findings were observed in the neural tissues of high-dosed rats following subchronic exposure. In a one-generation developmental neurotoxicity study, neurobehavioral effects were observed in the offspring without any correlating micropathologic findings.
Mutagenicity	Trichlorfon has produced some positive results in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions	Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance	It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Never place unused product down any indoor or outdoor drain.
Container Disposal	Do not re-use empty containers. Place empty container in trash. Follow advice on product label and/or leaflet.

SECTION 14. TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION:
Not regulated for any mode of transport

FREIGHT CLASSIFICATION:
Insecticides or Fungicides, N.O.I.; other than poison

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 72155-83

US Federal Regulations

TSCA list

None.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

Trichlorfon	52-68-6	1.0%

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

Trichlorfon	52-68-6	CA, CT, IL, NJ, PA

Canadian Regulations

Canadian Domestic Substance List

Trichlorfon	52-68-6

Environmental

CERCLA

Trichlorfon	52-68-6	100 lbs

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 1 Reactivity - 0 Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: New Material Safety Data Sheet.

Revision Date: 07/02/2008

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.

Oldcastle®
Stone Products

MATERIAL SAFETY DATA SHEET (MSDS) FOR LIMESTONE

(Complies with OSHA's Hazard Communication Standard, 29 CFR 1910.1200)

Section 1 - IDENTIFICATION

Supplier/Manufacturer

Oldcastle® Stone Products
550 S. Biesecker Road
Thomasville, PA 17364

Emergency Contact Information

(717) 792-2631 (Laboratory - Ext. 235)
Bob Segal

Product name and synonyms

Aggregate, Aglime, Barn Calcite, Coverstone, Flexible Base,Step 1, Step 2, OC 4020, OC 1640 Fluxing Agent, Mineral Filler, Manufactured Sand, Screenings, CastleBlend, OC 1020, OC Fine Crushed Stone, Dense Graded Aggregate, Water Neutralizer, Crestite Water Conditioning Crystals, YardRight, Dune Grit II, Guide Line Field Marker, Turf Liner, MD-1 THRU MD-325

Chemical family	Formula	
	Limestone	Dolomite
Limestone/Dolomite (CAS #1317-65-3)	$CaCO_3$ 95.0%– 87.0%	$CaCO_3$ – 54.1%
	$MgCO_3$ – 11.0%	$MgCO_3$ – 43.9%

Section 2 - COMPONENTS

Hazardous Ingredients

Respirable quartz (CAS# 14808-60-7) – greater than 0.1% by weight, Less than 1.0%
ACGIH TLV-TWA (2000) = 0.05 mg respirable quartz dust/m^3
OSHA PEL (8-hour TWA) = (10 mg respirable dust/$m^{3)}$/(percent silica + 2)
NIOSH REL (8-hour TWA) = 0.05 mg respirable dust/m^3

Section 3 - HAZARD IDENTIFICATION

Potential Health Effects

Relevant Routes of Exposure:
Eye contact, skin contact, inhalation, and ingestion.

Effects Resulting from Eye Contact:
Exposure to airborne dust may cause immediate or delayed irritation or inflammation. Eye contact by large amounts of dry powder or splashes of wet limestone dust may cause effects ranging from moderate eye irritation to corneal abrasions. Such exposures may require immediate first aid (see Section 4) and medical attention to prevent damage to the eye.

Effects Resulting from Skin Contact:
Direct contact may cause irritation by mechanical abrasion.

Effects Resulting from Inhalation:
Limestone may contain trace amounts of free crystalline silica. Prolonged exposure to respirable free silica can aggravate other lung conditions and cause silicosis, a disabling and potentially fatal lung disease.

Exposure to limestone dust may cause irritation to the moist mucous membranes of the nose, throat, and upper respiratory system. It may also leave unpleasant deposits in the nose.

Effects Resulting from Ingestion:
Although small quantities of dust are not known to be harmful, ill effects are possible if larger quantities are consumed.

Carcinogenic potential:
Limestone is **not** listed as a carcinogen by NTP, OSHA, or IARC. It may however, contain trace amounts of substances listed as carcinogens by these organizations.

Crystalline silica, which is a component of limestone, is now classified by IARC as known human carcinogen (Group I). NTP has characterized respirable silica as "reasonably anticipated to be [a] carcinogen".

Medical conditions which may be aggravated by inhalation or dermal exposure:
Pre-existing upper respiratory and lung diseases.

Section 4 - FIRST AID

Eyes
Immediately flush eyes thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician if irritation persists or later develops.

Skin
Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation persists or later develops.

Inhalation of Airborne Dust
Remove to fresh air. Seek medical help if coughing and other symptoms do not subside.

Ingestion
Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

Section 5 - FIRE AND EXPLOSION DATA

Flash point .....None	Lower Explosive Limit.....…...None
Upper Explosive Limit.....None	Auto ignition temperature.....….Not Combustible
Extinguishing media.....Not Combustible	Special fire fighting Procedures....….....None
Hazardous combustion products..None	Unusual fire and explosion hazards…..None

Section 6 - ACCIDENTAL RELEASE MEASURES

Collect dry material using a scoop. Avoid actions that cause dust to become airborne. Avoid inhalation of dust and contact with skin.

None of the components of this product are subject to the reporting requirements of Title III of SARA 1986, and 40 CFR 372.

Section 7 - HANDLING AND STORAGE

Follow the personal protection and controls set forth in Section 8 of this MSDS when handling this product. Respirable crystalline silica-containing dust may be generated during processing, handling and storage.

Section 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Skin Protection
Wash dust-exposed skin with soap and water before eating, drinking, smoking, and using the toilet facilities. Wash work clothes after each use.

Respiratory Protection
Avoid actions that cause dust to become airborne. Use local or general exhaust ventilation to control exposures below applicable exposure limits.

Use NIOSH/MSHA approved (under 30 CFR 11) or NIOSH approved (under 42 CFR 84) respirators in poorly ventilated areas, if an applicable exposure limit is exceeded, or when dust causes discomfort or irritation. (Advisory: Respirators and filters purchased after June 10, 1998 must be certified under 42 CFR 84.)

Ventilation
Use local exhaust or general dilution ventilation to control exposure within applicable limits.

Eye Protection

Safety glasses with side shields should be worn as minimum protection. In extremely dusty environments and unpredictable environments wear unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when working with products which may generate airborne dust.

Section 9 - PHYSICAL AND CHEMICAL, PROPERTIES

Physical state.....Solid
Solubility in water...Negligible
Vapor density.....Not applicable
Melting point.....Not applicable
Evaporation rate.....Not applicable

Odor.....No distinct odor
Vapor pressure.....Not applicable
Boiling point.....Not applicable (i.e., > 1000 C)
Specific gravity (H20 = 1.0).....2.55-2.85

Section 10 - STABILITY AND REACTIVITY

Stability

Stable.

Conditions to avoid

Avoid contact with incompatible materials (see below).

Incompatibility

Materials to avoid include; powerful oxidizing agents such as fluoride, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen defluoride. Contact of these materials may cause fire and/or explosions. Silica dissolves in hydrofluoric acid producing a corrosive gas – silicon tetrafluoride.

Hazardous decomposition

Will not spontaneously occur. Silica-containing respirable dust particles may be generated by handling.

Hazardous Polymerization

Will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

For a description of available, more detailed toxicological information contact the supplier or manufacturer.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

No recognized unusual toxicity to plants or animals

Relevant physical and chemical properties

(See Sections 9 and 10.)

Section 13 - DISPOSAL

Pickup and reuse clean materials. Dispose of waste materials in accordance with applicable federal, state, and local laws and regulations.

Where applicable, dispose of bags in an approved landfill or incinerator.

Section 14 - TRANSPORTATION DATA

Hazardous materials description/proper shipping name

Not hazardous under U.S. Department of Transportation (DOT) regulations.

Hazard class	Identification number
Not applicable.	Not applicable

Required label text
Not applicable.

Hazardous substances/reportable quantities (RQ)
Not applicable.

Section 15 - OTHER REGULATORY INFORMATION

Status under USDOL-OSHA Hazard Communication Rule, 29 CFR 1910.1200
Limestone is considered a "hazardous chemical" under this regulation, and should be part of any hazard communication program.

Status under CERCLA/SUPERFUND 40 CFR 117 and 302
Not listed.

Hazard Category under SARA(Title III), Sections 311 and 312
Limestone qualifies as a "hazardous substance" with delayed health effects.

Status under SARA (Title III), Section 313
Not subject to reporting requirements under Section 313.

Status under TSCA (as of May 1997)
Some substances in limestone are on the TSCA inventory list.

Status under the Federal Hazardous Substances Act
Limestone is a "hazardous substance" subject to statutes promulgated under the subject act.

Status under California Proposition 65
This product contains up to 0.05 percent of chemicals (trace elements) known to the State of California to cause cancer, birth defects or other reproductive harm. California law requires the manufacturer to give the above warning in the absence of definitive testing to prove that the defined risks do not exist.

Section 16 - OTHER INFORMATION

Prepared by
Bob Segal
Plant Manager
Oldcastle® Stone Products
550 S. Biesecker Road
Thomasville, PA. 17364
(717) 792 - 2631

Approval date or Revision date
Approved: February, 1999
Revised: Nov. 2005

Other important information

This product should only be used by knowledgeable persons. While the information provided in this material safety data sheet is believed to provide a useful summary of the hazards this product as it is commonly used, the sheet cannot anticipate and provide the all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product.

SELLER MAKES NO WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY Oldcastle® Stone Products except that the product shall conform to contracted specifications. The information provided herein was believed by Oldcastle® Stone Products to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of product and to determine the suitability of the product for its intended use. Buyer's exclusive remedy shall be for damages and no claim of any kind, whether as to product delivered or for non-delivery of product, and whether based on contract, breach of warranty, negligence, or otherwise shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.



GUM ARABIC

Revised: 03/06/2010
Replaces: 11/23/2009
Printed: 03/06/2010

Carolina Biological Supply Company
2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Gum Arabic
Product Code(s): 86-6108, 86-6110
Size: 100 g, 500 g
Chemical Name: Acacia Powder
CAS Number: See section 2
Formula: Composition varies
Synonyms: Gum Arabic
Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F) **Chemtrec** 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 - Composition / Information on Ingredients

Principal Hazardous Components: Gum Arabic (9000-01-5) 100%
TLV units: N/A
PEL units: N/A

Section 3 - Hazard Identification

Emergency Overview: Irritating to eyes, respiratory system and skin.
Potential Health Effects:
Eyes: May cause irritation.
Skin: May cause irritation to skin.
Ingestion: May cause gastrointestinal discomfort.
Inhalation: May cause irritation to respiratory tract.

Section 4 - First Aid Measures

Emergency and First Aid Procedures:
Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of ... (Water, unless specified as a water reactive material).
Ingestion - If swallowed, rinse mouth with water (only if the person is conscious). If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): N/A
NFPA Rating:
Health: 0
Fire: 0
Reactivity: 0
Extinguisher Media: Use dry chemical, CO2 or appropriate foam.
Flammable Limits in Air % by Volume: N/A
Autoignition Temperature: N/A
Special Firefighting Procedures: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: N/A

Section 6 - Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of ... (Water, unless specified as a water reactive material).
Avoid contact with skin and eyes.
Do not breathe dust.
Keep container tightly closed in a cool, well-ventilated place.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.
Ventilation:
Local Exhaust: Yes
Mechanical(General): Yes
Special: No
Other: No
Protective Gloves: Natural rubber, Neoprene, PVC or equivalent.
Eye Protection: Splash proof chemical safety goggles should be worn.
Other Protective Clothing or Equipment: Lab coat, apron, eye wash, safety shower.

Section 9 - Physical Data

Molecular Weight: N/A
Boiling Point: N/A
Vapor Density(Air=1): N/A
Percent Volatile by Volume: N/A
Solubility in Water: Soluble
Melting Point: N/A
Vapor Pressure: N/A
Specific Gravity (H2O=1): N/A
Evaporation Rate (BuAc=1): N/A
Appearance and Odor: White, odorless crystals.

Section 10 - Reactivity Data

Stability: Stable
Conditions to Avoid: Heat and sources of ignition.
Incompatibility (Materials to Avoid):
Hazardous Decomposition Products: COx,
Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: Oral Rat LD50>16g/kg
Effects of Overexposure:
Acute: See section 3
Chronic: N/A
Conditions Aggravated by Overexposure: Respiratory disorders, Skin disorders,
Target Organs: Respiratory system,
Primary Route(s) of Entry: Inhalation and ingestion.

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 13 - Disposal Information

Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

Section 14 - Transport Information

DOT Proper Shipping Name: N/A

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory
Hazard Category for SARA Section 311/312 Reporting: Acute

Name List:
Arabic Gum - No

Chemical Category:
Arabic Gum - No

CERCLA Section 103 RQ(lb.): Arabic Gum - No
RCRA Section 261.33: Arabic Gum - No

Section 16 - Additional Information

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS Number	Chemical Services Abstract Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency of Research on Cancer
N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million

RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product number 241
Product name GUM AWAY CHEWING GUM REMOVER
Effective date 10-May-2007
Manufacturer information CSI PRODUCTS, INC.

ADDISON, IL 60101 United States
Manufacturer phone General Assistance 630-543-7600
Emergency telephone US 866-836-8855
Emergency telephone outside US 952-852-4646

2. Hazards Identification

Emergency overview EXTREMELY FLAMMABLE
CONTENTS UNDER PRESSURE.
Aerosol. Pressurized container may explode when exposed to heat or flame.

Harmful in contact with eyes. Can cause adverse reproductive effects. Prolonged exposure may cause chronic effects.

OSHA regulatory status This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Eyes Contact may irritate or burn eyes. Eye contact may result in corneal injury.

Skin Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

Inhalation Intentional misuse by concentrating and inhaling the product can be harmful or fatal. Prolonged inhalation may be harmful.

Ingestion Exposure by ingestion of an aerosol is unlikely. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause delayed lung damage.

Target organs Blood. Central nervous system. Liver. Respiratory system.

Chronic effects Unconsciousness. Conjunctiva. Sterility. Liver injury may occur. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. May cause delayed lung damage. Can cause adverse reproductive effects. Pregnant women or women of child-bearing age should not be exposed to this product.

Signs and symptoms Discomfort in the chest. Corneal damage. Narcosis. Cyanosis. Liver enlargement. Jaundice. Conjunctivitis. Defatting of the skin. Irritation. Birth defects. Sterility.

3. Composition / Information on Ingredients

Components	CAS #	Percent
n-Butane	106-97-8	60 - 70
Propane	74-98-6	20 - 30
Ethyl Alcohol	64-17-5	8 - 10

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention immediately.

Skin contact Immediately take off all contaminated clothing. Wash off with warm water and soap. Get medical attention if irritation develops or persists.

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Ingestion Rinse mouth. Get medical attention immediately. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to physician Symptoms may be delayed.

General advice Call a physician if symptoms develop or persist.

5. Fire Fighting Measures

Flammable properties Containers may explode when heated. Vapor or gas may spread to distant ignition sources and flash back.

Extinguishing media

Suitable extinguishing media Water fog. Foam. Dry chemical. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Protection of firefighters

Protective equipment and precautions for firefighters In the event of fire and/or explosion do not breathe fumes. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Containers should be cooled with water to prevent vapor pressure build up. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

6. Accidental Release Measures

Personal precautions Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away.

Methods for containment Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable.

Methods for cleaning up Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

7. Handling and Storage

Handling Pressurized container: Do not pierce or burn, even after use. Do not handle or store near an open flame, heat or other sources of ignition. Use only in area provided with appropriate exhaust ventilation. Do not use if spray button is missing or defective. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid prolonged exposure.

Storage Level 3 Aerosol.

Contents under pressure. Do not puncture, incinerate or crush. The pressure in sealed containers can increase under the influence of heat. Keep away from heat, sparks, and flame. Avoid exposure to long periods of sunlight. Store in cool place. Keep in an area equipped with sprinklers. Keep out of the reach of children. Use care in handling/storage. Level 3 Aerosol.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH

Components	CAS #	TWA	STEL	Ceiling
n-Butane	106-97-8	1000 ppm	Not established	Not established
Propane	74-98-6	1000 ppm	Not established	Not established
Ethyl Alcohol	64-17-5	1000 ppm	Not established	Not established

OSHA Components	CAS #	TWA	STEL	Ceiling
Propane	74-98-6	1000 ppm	Not established	Not established
Ethyl Alcohol	64-17-5	1000 ppm	Not established	Not established

Engineering controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye / face protection Wear chemical goggles.

Skin protection Protective gloves.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General hygeine considerations When using do not smoke. Avoid contact with eyes. Avoid contact with skin. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance Compressed liquefied gas.

Color clear colorless

Odor fruity

Physical state Liquid.

Form Aerosol.

Flammability (HOC) 41.9597 kJ/g estimated

Flammability limits in air, upper, % by volume Not available

Flammability limits in air, lower, % by volume Not available

Flash back Yes

Pressure 60 - 70 psig @ 70F

Solubility Partially

Flash point -156 °F (-104.4 °C) estimated

Boiling point 1.4 °F (-17.2 °C) estimated

Specific gravity 0.57 estimated

10. Chemical Stability & Reactivity Information

Chemical stability Risk of ignition. Stable at normal conditions.

Conditions to avoid Heat, flames and sparks.

Incompatible materials Isocyanates.

Hazardous decomposition products May include oxides of nitrogen.

11. Toxicological Information

Acute effects Acute LD50: 18475 mg/kg estimated, Rat, Oral
Acute LC50: 1538 mg/l/4h estimated, Rat, Inhalation

Sensitization Not expected to be hazardous by OSHA criteria.

Local effects Contact may irritate or burn eyes. Liver toxicity. Blood disorder may occur after ingestion. Components of the product may be absorbed into the body through the skin.

Chronic effects Hazardous by OSHA criteria. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged or repeated exposure may cause lung injury. Prolonged exposure may cause chronic effects.

Subchronic effects Blood disorder may occur after prolonged inhalation. Blood disorder may occur after prolonged skin contact.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Neurological effects Hazardous by OSHA criteria.

Mutagenicity Not expected to be hazardous by OSHA criteria.

Reproductive effects Hazardous by OSHA criteria. Possible reproductive hazard. Can cause adverse reproductive effects - such as birth defects, miscarriages, and infertility.

Teratogenicity	Not expected to be hazardous by OSHA criteria.
Epidemiology	Hazardous by OSHA criteria.
Further information	Symptoms may be delayed.

12. Ecological Information

13. Disposal Considerations

Waste codes	D001: Waste Flammable material with a flash point <140 F
Disposal instructions	Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Incinerate the material under controlled conditions in an approved incinerator. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose in accordance with all applicable regulations.

14. Transport Information

Department of Transportation (DOT) Requirements

Basic shipping requirements:

Proper shipping name	Consumer commodity
Hazard class	ORM-D
Subsidiary hazard class	None

Additional information:

Packaging exceptions	156, 306
Packaging non bulk	156, 306
Packaging bulk	None

15. Regulatory Information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

OSHA Process Safety Standard: This material is not known to be hazardous by the OSHA Highly Hazardous Process Safety Standard, 29 CFR 1910.119.

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical	Yes

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

U.S. - Pennsylvania - RTK (Right to Know) List

Ethyl Alcohol	64-17-5	Present
n-Butane	106-97-8	Present
Propane	74-98-6	Present

16. Other Information

HMIS® ratings
Health: 1*
Flammability: 4
Physical hazard: 0

Prepared by
Regulatory Compliance

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Issue date
10-May-2007

MSDS - Material Safety Data Sheet

Product Name: BELT DRESSING

MSDS No.: M206

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY

Address: P.O. BOX 159, 600 RADIATOR ROAD

City, ST Zip: INDIAN TRAIL, NC 28079

Emergency Contact: Rocky Mountain Poision Control Center

Emergency Telephone Number: 303-623-5716

Contact: Robert Geer

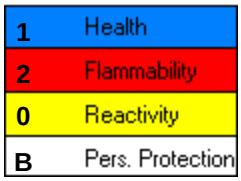
Information Telephone Number: 704-688-3430

Last Update: 11/19/2003

Chemical State: [X] Liquid [ ] Gas [ ] Solid

Chemical Type: [ ] Pure [X] Mixture





II. Ingredients:

[ ] **Trade Secret**

CAS No.	Chemical Name	% Range	EHS	NTP	IARC	SUB Z	SARA 313	OSHA PEL	ACGIH TLV	Other Limits
8052-41-3	Aliphatic Hydrocarbon - Non Exempt.	60.0 - 100.0						100 ppm	100 ppm	NJ, Pa. R
124389	Carbon dioxide	1.0 - 5.0						N/AV	5000 ppm	

III. Hazardous Identification:

Hazard Category:

[X] Acute [ ] Chronic [X] Fire [X] Pressure [ ] Reactive

Hazardous Identification Information:

Danger: Flammable. Harmful or fatal if swallowed. Eye and skin irritant. Contents under pressure.

Level 3 Aerosol

IV. First Aid Measures:

Route(s) of Entry:

Absorption, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

See signs and symptoms below

Signs and Symptoms:

Eye Contact: Irritant. Prolonged contact may cause conjunctivitis.
Skin Contact: Irritant. Defatting of tissue, dermatitis may occur.
Inhalation: Irritant to mucous membranes. Repeated exposure may cause narcosis, dizziness, respiratory or lung irritation.
Ingestion: HARMFUL OR FATAL IF SWALLOWED.

Medical Conditions Generally Aggravated by Exposure:

None Known

MSDS - Material Safety Data Sheet
Product Name: BELT DRESSING

MSDS No.: M206

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.
Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.
Inhalation: Remove to fresh air. If breathing becomes difficult get prompt medical attention.
Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately.

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

V. Fire Fighting Measures:

Flash Point: 105F **Lower Explosive Limit:** 2.1% **Upper Explosive Limit:** 13.3%

F.P. Method: TCC

Fire Extinguishing Media: Water Fog, Foam, Carbon Dioxide, Dry Chemical

Special Fire Fighting Procedures:

Wear self-contained positive pressure breathing apparatus and protective clothes. Cool containers with a water fog. Do not use forced water stream as this could cause the fire to spread. Use equipment or shielding to protect personnel against venting, rupturing, or bursting containers.

Unusual Fire and Explosion:

Contents under pressure. At elevated temperatures, container may vent, rupture, or burst violently.

VI. Accidental Release Measures:

Steps to be Taken in Case Material is Released or Spilled:

Eliminate all ignition sources. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc). Place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occured.

VII. Handling and Storage:

Precautions to be Taken:

Use with adequate ventilation and proper protective equipment.
Do not use or store near fire, sparks, or open flame. Do not puncture or incinerate container. Exposure to temperatures above 120° may cause container to vent, rupture, or burst.

Other Precautions:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye.
KEEP AWAY FROM CHILDREN AND ANIMALS! Danger: Flammable.

MSDS - Material Safety Data Sheet
Product Name: BELT DRESSING

MSDS No.: M206

VIII. Exposure Controls/Personal Protection:

Ventilation Requirements:

Use with adequate ventilation. If TLV is exceeded, wear NIOSH approved respirator.

Personal Protective Equipment:

See Section 2 for applicable exposure limits. For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: 315 F

Melting Point: N/A

Evaporation Rate (Butyl Acetate = 1): 0.12

Vapor Pressure (mm Hg.): 2.0

Specific Gravity (H20 = 1): 0.80700

Vapor Density (AIR = 1): 4.9

Solubility In Water: Insoluble

Appearance and Odor: Clear dark yellow with mild solvent odor

Other Information: N/D

X. Stability and Reactivity:

Stability:

Product is stable

Incompatibility (Materials to Avoid):

Avoid contact with strong oxidizers

Decomposition/By Products:

Normal products of combustion, smoke, carbon dioxide, carbon monoxide.

Hazardous Polymerization:

Will not occur

XI. Toxicological Information:

N/D

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

XIV. Transport Information:

DOT Hazard Class: ORM-D
Shipping Name: Consumer Commodity

MSDS - Material Safety Data Sheet

Product Name: BELT DRESSING

MSDS No.: M206

XV. Regulatory Information:

See Section 2 for SARA Reportable Chemicals.

USA TSCA: All components of this material are either exempt or listed on the US TSCA Inventory.

Warning: This product contains a chemical(s) known to the State of California to cause cancer or birth defects or other reproductive harm.

XVI. Other Information:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered soley for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is repsonsible for full compliance.

MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product identifier : **CITRUS ENGINE BRITE**

Product Use : Cleaner / Degreaser
Chemical Family : Mixture.
Manufacturer part no. : CEB1C

Supplier's name and address:

Radiator Specialty Co., of Canada
1711 Aimco Blvd.
Mississauga, ON, Canada
L4W 1H7

Manufacturer's name and address:
Refer to Supplier

Information Telephone # : (905) 625-9117 (Monday - Friday, 8AM - 4PM)
24 Hr. Emergency Tel # : 613-996-6666 (CANUTEC)

SECTION 2 - HAZARDS IDENTIFICATION

Classification : WHMIS information: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Canadian Controlled Products Regulations (CPR). WHMIS classification:
Class A (Pressurized containers);
Class B5 (Flammable Aerosols);
Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material);
Class D2B (Materials Causing Other Toxic Effects, Toxic Material).

Labelling: Phrases recommended to appear on a supplier label, can be found in Section 15. WHMIS symbols required on a supplier label:



Emergency Overview : Liquid aerosol. Clear light yellow. Citrus odour.
DANGER! Flammable aerosol. Contents under pressure. Containers may explode if heated. Harmful if inhaled or swallowed. May cause nausea, vomiting, headache and other central nervous system effects. May be an aspiration hazard. May cause respiratory irritation. May cause skin irritation. May cause eye irritation. May cause allergic skin reaction. Contains material which may cause cancer, based on animal data.

Materials such as rags used with this product may begin to burn by themselves.

Contains material that may be harmful in the environment.

POTENTIAL HEALTH EFFECTS:

Signs and symptoms of short-term (acute) exposure

Inhalation : May cause irritation of the nose, throat, mucous membranes, and respiratory tract. Inhalation of high concentrations may cause dizziness, disorientation, incoordination, narcosis, nausea or narcotic effects.

Skin : May cause moderate skin irritation. If product is sprayed directly on skin, symptoms of frostbite may be experienced including numbness, prickling and itching. May be absorbed and cause symptoms similar to those for inhalation.

Eyes : May cause mild to moderate irritation. Spraying the product directly into the eyes may cause freezing, and could cause eye damage.

Ingestion : May cause irritation of mouth, throat, and stomach. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Product may present an aspiration hazard, if ingested in large amounts, causing life-threatening lung injury.

Effects of long-term (chronic) exposure
: Prolonged skin contact may defat the skin and produce dermatitis. Repeated or prolonged exposure may result in kidney effects.

Carcinogenic status : Possible cancer hazard. See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards : Possible sensitizer. See TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects

: Contains material that may be harmful in the environment. See Section 12 for more environmental information.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	Wt.%
Distillates (petroleum), hydrotreated light	64742-47-8	15.00 - 40.00
Soybean oil, methyl ester	67784-80-9	15.00 - 40.00
Soybean oil	8001-22-7	15.00 - 40.00
d-Limonene	5989-27-5	5.00 - 10.00
Carbon dioxide	124-38-9	1.00 - 5.00
Polyoxyethylene Sorbitol Hexaoleate	57171-56-9	1.00 - 5.00

SECTION 4 - FIRST AID MEASURES

Inhalation : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention.

Skin contact : Remove/Take off immediately all contaminated clothing. Wash off immediately with soap and plenty of water. Get medical attention.

Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists, seek prompt medical attention.

Ingestion : Seek immediate medical attention/advice. Do not induce vomiting. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration. Never give anything by mouth to an unconscious person.

Notes For Physician : Immediate medical attention is required. May be an aspiration hazard. Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

Fire hazards/conditions of flammability

: Flammable aerosol. Closed containers are contained under pressure and may explode if exposed to excess heat for a prolonged period of time. Vapours may be heavier than air and may collect in confined and low-lying areas. Materials such as rags used with this product may begin to burn by themselves.

Oxidizing properties : None known.

Explosion data: Sensitivity to mechanical impact / static discharge

: May be sensitive to static discharge. Aerosols are sensitive to mechanical impact. Contents under pressure.

Suitable extinguishing media : Dry chemical, foam, carbon dioxide and water fog. Do not use water jet, as this may spread burning material.

Special fire-fighting procedures/equipment

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Shield personnel to protect from venting or rupturing containers. Water spray may be useful in cooling equipment exposed to heat and flame.

Hazardous combustion products

: Carbon oxides; Nitrogen oxides (NOx); Aldehydes; Other unidentified organic compounds.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions : All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.

Spill response/cleanup : Ventilate area of release. Remove all sources of ignition. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Notify the appropriate authorities as required. Use only non-sparking tools and equipment in the clean-up process.

Prohibited materials : Do not use combustible absorbents, such as sawdust.

SECTION 7 - HANDLING AND STORAGE

Safe Handling procedures : Use in a well-ventilated area. Wear suitable protective equipment during handling. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks, and open flames. Avoid contact with incompatible materials. Do not puncture or incinerate. Wash thoroughly after handling. Always replace cap after use.

Materials such as rags used with this product may begin to burn by themselves. After use, put rags in water or lay flat to dry, then discard.

Storage requirements : Store in a cool, dry, well-ventilated area. Keep away from direct sunlight. Inspect periodically for damage or leaks. No smoking in the area.

Incompatible materials : Strong oxidizing agents; Strong acids

Special packaging materials : Always keep in containers made of the same materials as the supply container.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits

Ingredients	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Distillates (petroleum), hydrotreated light	200 mg/m³ (skin) (as 'Kerosene')	N/Av	N/Av	N/Av
Soybean oil, methyl ester	N/Av	N/Av	N/Av	N/Av
Soybean oil	N/Av	N/Av	N/Av	N/Av
d-Limonene	30 ppm (AIHA WEEL)	N/Av	N/Av	N/Av
Carbon dioxide	5000 ppm	30,000 ppm	5000 ppm	N/Av
Polyoxyethylene Sorbitol Hexaoleate	N/Av	N/Av	N/Av	N/Av

Ventilation and engineering measures : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

Respiratory protection : If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Advice should be sought from respiratory protection specialists.

Skin protection : Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers. Depending on conditions of use, an impervious apron should be worn.

Eye / face protection : Chemical splash goggles are recommended.

Other protective equipment : An eyewash station and safety shower should be made available in the immediate working area.

General hygiene considerations : Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, smoke or use cosmetics while working with this product. Remove and wash contaminated clothing before re-use. Wash with soap and water after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state : Liquid aerosol.

Appearance : light yellow; Clear

Odour : Citrus odour.

Odour threshold : N/Av

pH : N/Av

Boiling point : 154.4°C

Specific gravity : 0.89

Melting/Freezing point : N/Av

Coefficient of water/oil distribution : N/Av

Vapour pressure (mmHg @ 20° C / 68° F) : N/Av

Solubility in water : Emulsifies

Vapour density (Air = 1) : N/Av

Evaporation rate (n-Butyl acetate = 1) : N/Av

Volatile organic Compounds (VOC's) : N/Av
Volatiles (% by weight) : < 10%
Flash point : 78.3°C
Flash point Method : Tag closed cup
Auto-ignition temperature : N/Av
Lower flammable limit (% by vol.) : N/Av
Upper flammable limit (% by vol.) : N/Av
Flame Projection Length : 46 cm
Flashback observed : NO
Absolute pressure of container : N/Av
Viscosity : 22 cSt @ 40°C (concentrate)
General Information : No additional information.

Section 10: STABILITY AND REACTIVITY

Stability and reactivity : Stable under the recommended storage and handling conditions prescribed.
Hazardous polymerization : Hazardous polymerization does not occur.
Conditions to avoid : Avoid heat and open flame. Extremes of temperature and direct sunlight. Ensure adequate ventilation, especially in confined areas.
Materials To Avoid And Incompatibility : Strong oxidizing agents; Strong acids
Hazardous decomposition products : None known, refer to hazardous combustion products in Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

Target organs : Eyes, skin, respiratory system, digestive system, central nervous system.
Routes of exposure : *Inhalation:* YES *Skin Absorption:* YES *Skin & Eyes:* YES *Ingestion:* YES
Irritancy : Moderate skin irritant. Mild to moderate eye irritant.
Toxicological data : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

Ingredients	LC_{50}(4hr) inh, rat	LD_{50} (Oral, rat)	LD_{50} (Rabbit, dermal)
Distillates (petroleum), hydrotreated light	> 5.2 mg/L (mist)	> 5000 mg/kg (mouse)	> 2000 mg/kg
Soybean oil, methyl ester	N/Av	> 50 mL/kg	N/Av
Soybean oil	N/Av	N/Av	N/Av
d-Limonene	N/Av	4400 mg/kg	> 5000 mg/kg
Carbon dioxide	N/Av	N/Ap (gas)	N/Ap (gas)
Polyoxyethylene Sorbitol Hexaoleate	N/Av	N/Av	N/Av

Carcinogenic status : Contains the following chemicals listed as confirmed animal carcinogens (A3) by ACGIH: Distillates (petroleum), hydrotreated light. No other components are classified as carcinogenic by IARC, ACGIH, OSHA or NTP.
Reproductive effects : Not expected to cause reproductive effects.
Teratogenicity : Not expected to be a teratogen.
Mutagenicity : Not expected to be mutagenic in humans.
Epidemiology : None known or reported by the manufacturer.
Sensitization to material : May cause an allergic skin reaction (e.g. swelling, rash and eczema). Contains a chemical, or chemicals, which may cause skin sensitization. This product contains: d-Limonene. No data available to indicate product or components may be respiratory sensitizers.
Synergistic materials : None known or reported by the manufacturer.
Other important hazards : None known or reported by the manufacturer.
Conditions aggravated by overexposure : Pre-existing skin, eye and respiratory disorders.

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SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity : Toxic to aquatic life with long lasting effects.
The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. The product contains the following substances which are hazardous for the environment: d-Limonene; Distillates (petroleum), hydrotreated light.

See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

Ingredients	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Distillates (petroleum), hydrotreated light	64742-47-8	45 mg/L (Fathead minnow)	N/Av	None.
Soybean oil, methyl ester	67784-80-9	> 100 mg/L	N/Av	None.
Soybean oil	8001-22-7	N/Av	N/Av	None.
d-Limonene	5989-27-5	0.72 mg/L (Fathead minnow)	N/Av	1
Carbon dioxide	124-38-9	N/Ap	N/Ap	N/Ap
Polyoxyethylene Sorbitol Hexaoleate	57171-56-9	N/Av	N/Av	None.

Ingredients	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Distillates (petroleum), hydrotreated light	64742-47-8	N/Av	N/Av	None.
Soybean oil, methyl ester	67784-80-9	N/Av	N/Av	None.
Soybean oil	8001-22-7	N/Av	N/Av	None.
d-Limonene	5989-27-5	0.577 mg/L (Daphnia magna)	N/Av	1
Carbon dioxide	124-38-9	N/Ap	N/Ap	N/Ap
Polyoxyethylene Sorbitol Hexaoleate	57171-56-9	N/Av	N/Av	None.

Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Distillates (petroleum), hydrotreated light	64742-47-8	N/Av	N/Av	None.
Soybean oil, methyl ester	67784-80-9	N/Av	N/Av	None.
Soybean oil	8001-22-7	N/Av	N/Av	None.
d-Limonene	5989-27-5	N/Av	N/Av	None.
Carbon dioxide	124-38-9	N/Ap	N/Ap	N/Ap
Polyoxyethylene Sorbitol Hexaoleate	57171-56-9	N/Av	N/Av	None.

Mobility : No data is available on the product itself.

Persistence : No data is available on the product itself. Contains: d-Limonene; Distillates (petroleum), hydrotreated light.
d-Limonene is considered to be rapidly biodegradable.
Distillates (petroleum), hydrotreated light is not considered readily biodegradable.

Bioaccumulation potential : No data is available on the product itself. Contains: d-Limonene; Distillates (petroleum), hydrotreated light.
The log Kow value for d-Limonene is 4.57 and the bioconcentration factor (BCF) is 660, suggesting d-Limonene may bioaccumulate (HSDB).
The log Kow value for Distillates (petroleum), hydrotreated light is 2.1 - 5 and the bioconcentration factor (BCF) is 61 - 159, suggesting Distillates (petroleum), hydrotreated light may bioaccumulate (IUCLID).

Other Adverse Environmental effects

: No data is available on the product itself.

SECTION 13 - DISPOSAL CONSIDERATIONS

Handling for Disposal : Handle waste according to recommendations in Section 7. Do not puncture or incinerate containers.

Methods of Disposal : Dispose of in accordance with federal, provincial and local hazardous waste laws.

SECTION 14: TRANPORT INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	UN1950	AEROSOLS	2.1	none	
TDG Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. Under the TDGR, refer to Section 1.17 for additional exemption information, if shipping under this exemption.				

SECTION 15 - REGULATORY INFORMATION

Labelling:

DANGER! Flammable aerosol. Contents under pressure. Container may explode if heated. Harmful if inhaled or swallowed. May cause nausea, vomiting, headache and other central nervous system effects. May be an aspiration hazard. May cause respiratory irritation. May cause skin irritation. May cause eye irritation. May cause allergic skin reaction. Contains material which may cause cancer, based on animal data. Materials such as rags used with this product may begin to burn by themselves.

PRECAUTIONS: Use in a well-ventilated area. Wear suitable protective equipment during handling. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks, and open flames. Avoid contact with incompatible materials. Do not puncture or incinerate containers. Wash thoroughly after handling. Do not eat or smoke in areas of use or storage. Store in a cool, dry, well-ventilated area away from sources of heat, ignition and sunlight. After use, put rags in water or lay flat to dry, then discard.

FIRST AID: If inhaled, move to fresh air. If breathing stopped, begin artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention. For skin contact, wash with soap and water while removing contaminated clothing. Get medical attention. For eye contact, flush with running water for at least 15 minutes. If irritation persists, seek prompt medical attention. If ingested, do not induce vomiting. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration. Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice.

Refer To Material Safety Data Sheet for further information.

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.
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SECTION 16 - OTHER INFORMATION

Legend :

ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association
CAS: Chemical Abstract Services
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
Inh: Inhalation
IUCLID: International Uniform ChemicaL Information Database
LC: Lethal Concentration
LD: Lethal Dose
MSHA: Mine Safety and Health Administration
N/Ap: Not Applicable
N/Av: Not Available
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
RTECS: Registry of Toxic Effects of Chemical Substances
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WEEL: Workplace Environmental Exposure Level
WHMIS: Workplace Hazardous Materials Identification System
.

References :

1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2014.

2. International Agency for Research on Cancer Monographs, searched 2014.

3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2014 (Chempendium, HSDB and RTECs).

4. Material Safety Data Sheets from manufacturer.

Prepared for:
Radiator Specialty Co. of Canada
1711 Aimco Blvd.
Mississauga, ON, Canada, L4W 1H7
Telephone: 905-625-9117 (Mon. - Fri., 8 AM - 4 PM)
Please direct all enquiries to Radiator Specialty.

Prepared by:
ICC The Compliance Center Inc.
http://www.thecompliancecenter.com

DISCLAIMER OF LIABILITY

This Material Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by Radiator Specialty Co. of Canada and CCOHS' Web Information Service. The information in the Material Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Radiator Specialty Co. of Canada expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this MSDS does not apply to use with any other product or in any other process.

This Material Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Radiator Specialty Co. of Canada.

MSDS Preparation Date (mm/dd/yyyy)

: 07/23/2007

MSDS Revision Date (mm/dd/yyyy)

: 04/24/2014

Revision No. : 4

Revision Information : (M)SDS sections updated:
2. HAZARDS IDENTIFICATION (Eye irritation);
15. REGULATORY INFORMATION.

END OF DOCUMENT

MSDS - Material Safety Data Sheet

Product Name: FOAMY ENGINE BRITE ENGINE CLEANER (UPC: 078698652016) (AAP SKU: 7040326)

MSDS No.: FEB1

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY
Address: 600 RADIATOR ROAD
City, ST Zip: INDIAN TRAIL, NC 28079
Country:

Contact: Robert Geer
Information Telephone Number: 704-684--181 1
Emergency Contact: Rocky Mountain Poision Control Center
Emergency Telephone Number: 303-623-5716
Emergency Restrictions:

Product Name: FOAMY ENGINE BRITE ENGINE CLEANER (UPC: 078698652016) (AAP SKU: 7040326)
MSDS No.: FEB1

Issue Date: 08/28/2008
Supersedes Date: 10/27/2006

II. Hazards Identification:

EMERGENCY OVERVIEW

Danger: Harmful or Fatal if Swallowed, Eye and Skin Irritant. Contents Under Pressure.

Level 1 Aerosol

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Route(s) of Entry:

Absorption, Eye, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

See signs and symptoms below

Signs and Symptoms:

Eye Contact: Direct spray of vapors may be irritating or harmful to eyes.
Skin Contact: Product may cause irritation due to defatting of skin.
Inhalation: High concentration of vapors may irritate nose and throat and cause headaches and nausea.
Ingestion: Can cause irritation, gastric disturbances, and nausea..

Medical Conditions Generally Aggravated by Exposure:

None Known

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

Potential Environmental Effects

Not Available

III. Composition/Information on Ingredients:

Chemical Name	CAS No.	% Range	Trade Secret
2-Butoxyethanol	111-76-2	2-10	
Aromatic Petroleum Naphtha	64742-95-6	2-10	
Isobutane	75-28-5	2-10	
Petroleum Base Oil	8008-20-6	2-10	
Propane	74-98-6	2-10	

MSDS - Material Safety Data Sheet

Product Name: FOAMY ENGINE BRITE ENGINE CLEANER (UPC: 078698652016) (AAP SKU: 7040326)

MSDS No.: FEB1

IV. First Aid Measures:

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with water for 15 minutes while lifting upper and lower eyelid. Get prompt medical attention. .
Skin Contact: Wash with soap and water. If irritation persists, get prompt medical attention.
Inhalation: Move to fresh air. If breathing becomes difficult get prompt medical attention.
Ingestion: Drink water or milk. Call Poison Control Center, physician, or hospital emergency room immediately.

Note to Physicians:

N/D

V. Fire Fighting Measures:

Suitable Extinguishing Media:

Water Fog, Foam, Carbon Dioxide, Dry Chemical

Unsuitable Extinguishing Media:

Do not use forced water stream as this could cause the fire to spread.

Products of Combustion:

Normal products of combustion, carbon monoxide, carbon dioxide and Nitrogen oxides.

Protection of Firefighters:

Wear self-contained positive pressure breathing apparatus and protective clothes. At elevated temperatures containers may vent, rupture or burst, even violently

VI. Accidental Release Measures:

Personal Precautions:

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental Precautions:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred. Run off to sewer may create fire or explosion hazard.

Methods for Containment:

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

Methods for Cleanup:

Using a non-metalic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material.

Other Information:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occured.

VII. Handling and Storage:

Handling Precautions:

Use with adequate ventilation and proper protective equipment.
Store in cool, well ventilated area below 120°F away from heat sources. Do not use near fire, sparks, or open flame. Exposure to sunlight and temperatures above 120° may cause container to vent, rupture, or burst. Do not puncture or incinerate container.

Storage Precautions:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

VIII. Exposure Controls/Personal Protection:

MSDS - Material Safety Data Sheet
Product Name: FOAMY ENGINE BRITE ENGINE CLEANER (UPC: 078698652016) (AAP SKU: 7040326)

MSDS No.: FEB1

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
2-Butoxyethanol	25 ppm	25 ppm	Not Available
Petroleum Base Oil	100 ppm	100 ppm	Not Available
Aromatic Petroleum Naphtha	N/E	N/E	25 ppm
Isobutane	1000 ppm	1000 ppm	Not Available
Propane	N/E	1000 ppm	Not Available

Engineering Controls:

See above Section for applicable exposure limits. Use with adequate ventilation. If TLV is exceeded, wear NIOSH approved respirator.

Personal Protective Equipment:

For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: N/D
Melting Point: N/A
Boiling Range: Not Available
Freezing Point: Not Available
Solubility In Water: Soluble
Evaporation Rate (Butyl Acetate = 1): <1
Flash Point: 15°F
Flash Point Method: TCC
Odor Threshold: Not Available
Appearance and Odor: Hazy Cream with sweet aromatic odor
Vapor Density (AIR = 1): 1.1
Vapor Pressure (mm Hg.): N/D
pH Range: 9.0 - 10.0
Partition Coefficient: Not Available
Decomposition Temp: Not Available
Auto-Ignition Temp: Not Available
Lower Explosive Limit: N/D
Upper Explosive Limit: N/D
Specific Gravity (H20 = 1): 0.98
Other Information: VOC Content: 18.77%

X. Stability and Reactivity:

Stability:

Stable

Conditions to Avoid:

See Incompatible materials below

Incompatible Materials:

Oxidizing agents and acids. Keep away from high temperatures or open flames.

Hazardous Decomposition Products:

Normal products of combustion, carbon monoxide, carbon dioxide and Nitrogen oxides.

Possibility of Hazardous Reactions:

Will not occur

XI. Toxicological Information:

N/D

MSDS - Material Safety Data Sheet

Product Name: FOAMY ENGINE BRITE ENGINE CLEANER (UPC: 078698652016) (AAP SKU: 7040326)

MSDS No.: FEB1

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

XIV. Transport Information:

Shipping Name: Not Available

DOT Hazard Class: Not Available

DOT Subsidiary Hazard Class: Not Available

UN/NA#: Not Available

Packing Group: Not Available

Transportation Information:

DOT Hazard Class: ORM-D
Shipping Name: Consumer Commodity

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US)
UN number: UN1950
Shipping Name: Aerosols
Class: 2.1

International:
ICAO/IATA
UN number: UN1950
Shipping Name: Aerosols
Class: 2.1

IMDG
UN number: UN1950
Shipping Name: Aerosols
Class: 2.1
EmS: F-D, S-U

XV. Regulatory Information:

SARA Reportable Chemicals.
Aromatic Petroleum Naphtha 64742-94-5
2 Butoxyethanol 111-76-2

USA TSCA: All components of this material are listed on the US TSCA Inventory.

State RTK Chemicals:
2 Butoxyethanol 111-76-2

MSDS - Material Safety Data Sheet

Product Name: FOAMY ENGINE BRITE ENGINE CLEANER (UPC: 078698652016) (AAP SKU: 7040326)

MSDS No.: FEB1

XVI. Other Information:

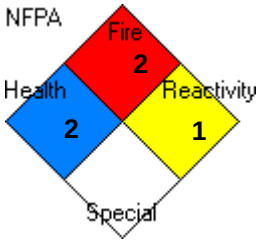
Chemical State: [X] Liquid [ ] Gas [ ] Solid

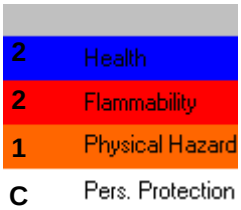
Chemical Type: [ ] Pure [X] Mixture

Hazard Category:

[X] Acute [ ] Chronic [X] Fire

[X] Pressure [ ] Reactive





Additional Manufacturer Warnings:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established
N/D: Not Determined
N/A: Not Applicable
N/AV: Not Available

Additional Product Information:

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

MSDS - Material Safety Data Sheet

Product Name: LIQUID WRENCH PENETRATING OIL (UPC: 078698120157)

MSDS No.: L112

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY

Address: 600 RADIATOR ROAD

City, ST Zip: INDIAN TRAIL, NC 28079

Emergency Contact: Rocky Mountain Poision Control Center

Emergency Telephone Number: 303-623-5716

Contact: Robert Geer

Information Telephone Number: 704-688-3430

Last Update: 10/27/2006

Chemical State: [X] Liquid [ ] Gas [ ] Solid

Chemical Type: [ ] Pure [X] Mixture



2	Health
2	Flammability
0	Reactivity
C	Pers. Protection

II. Ingredients:

[ ] **Trade Secret**

CAS No.	Chemical Name	% Range	EHS	NTP	IARC	SUB Z	SARA 313	OSHA PEL	ACGIH TLV	Other Limits
124-38-9	Carbon dioxide	1.0 - 5.0						N/AV	5000 ppm	
Proprietary	Fragance	0.1 - 1.0						N/D	N/D	
8008-20-6	Kerosene	40.0 - 70.0						N/AV	100 ppm	
64742-52-5	Naphthenic Petroleum Distillate	15.0 - 40.0						5 mg/m3	5 mg/m3	
64741-88-4	Solvent-Refined Heavy Paraffinic	0.1 - 1.0						5 mg/m3	5 mg/m3	

III. Hazardous Identification:

Hazard Category:

[X] Acute [ ] Chronic [X] Fire [X] Pressure [ ] Reactive

Hazardous Identification Information:

Danger: Flammable. Harmful or fatal if swallowed. Eye and skin irritant. Contents under pressure.

Level 3 Aerosol

IV. First Aid Measures:

Route(s) of Entry:

Absorption, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

N/D

Signs and Symptoms:

Eye Contact: Irritant. Prolonged contact may cause conjunctivitis.
Skin Contact: Irritant. Defatting of tissue, dermatitis may occur.
Inhalation: Irritant to mucous membranes. Repeated exposure may cause narcosis, dizziness, respiratory or lung irritation.
Ingestion: HARMFUL OR FATAL IF SWALLOWED. May cause burns to mouth, throat & stomach.

MSDS - Material Safety Data Sheet

Product Name: LIQUID WRENCH PENETRATING OIL (UPC: 078698120157)

MSDS No.: L112

Medical Conditions Generally Aggravated by Exposure:

N/D

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.
Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.
Inhalation: Remove to fresh air. If breathing becomes difficult give oxygen and get prompt medical attention. If breathing stops, give artificial respiration and get prompt medical attention.
Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately. Aspiration of vomitus into the lungs can cause pneumonitis, which can be fatal.

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

V. Fire Fighting Measures:

Flash Point: 132F **Lower Explosive Limit:** 0.7% **Upper Explosive Limit:** 5%

F.P. Method: TCC

Fire Extinguishing Media: Water Fog, Foam, Carbon Dioxide, Dry Chemical

Special Fire Fighting Procedures:

Wear self-contained positive pressure breathing apparatus and protective clothes. Cool containers with a water fog. Do not use forced water stream as this could cause the fire to spread. Use equipment or shielding to protect personnel against venting, rupturing, or bursting containers.

Unusual Fire and Explosion:

Contents under pressure. At elevated temperatures, container may vent, rupture, or burst violently.

VI. Accidental Release Measures:

Steps to be Taken in Case Material is Released or Spilled:

Eliminate all ignition sources. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc). Place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occured.

VII. Handling and Storage:

Precautions to be Taken:

Use with adequate ventilation and proper protective equipment.
Do not use or store near fire, sparks, or open flame. Do not puncture or incinerate container. Exposure to sunlight and temperatures above 120° may cause container to vent, rupture, or burst.

Other Precautions:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS! Danger: Flammable.

MSDS - Material Safety Data Sheet

Product Name: LIQUID WRENCH PENETRATING OIL (UPC: 078698120157)

MSDS No.: L112

VIII. Exposure Controls/Personal Protection:

Ventilation Requirements:

Use with adequate ventilation. If TLV is exceeded, wear NIOSH approved respirator.

Personal Protective Equipment:

See Section 2 for applicable exposure limits. For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: 320 F

Melting Point: N/A

Evaporation Rate (Butyl Acetate = 1): N/A

Vapor Pressure (mm Hg.): N/A

Specific Gravity (H20 = 1): 0.85000

Vapor Density (AIR = 1): N/A

Solubility In Water: Insoluble

Appearance and Odor: Dark Liquid with petroleum odor

Other Information: VOC Content: 36.938

X. Stability and Reactivity:

Stability:

Product is stable

Incompatibility (Materials to Avoid):

Avoid contact with strong oxidizers

Decomposition/By Products:

Normal products of combustion, smoke, carbon dioxide, carbon monoxide, and sulfur trioxides.

Hazardous Polymerization:

Will not occur

XI. Toxicological Information:

N/D

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

XIV. Transport Information:

MSDS - Material Safety Data Sheet

Product Name: LIQUID WRENCH PENETRATING OIL (UPC: 078698120157)

MSDS No.: L112

DOT Hazard Class: ORM-D
Shipping Name: Consumer Commodity

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US)
Shipping Name: Aerosols
Class: 2.1
UN number: UN1950

International:

ICAO/IATA
Shipping Name: Aerosols
Class: 2.1
UN number: UN1950

IMDG
Shipping Name: Aerosols
Class: 2.1
UN number: UN1950

XV. Regulatory Information:

See Section 2 for SARA Reportable Chemicals.

USA TSCA: All components of this material are listed on the US TSCA Inventory.

Warning: This product contains a chemical(s) known to the State of California to cause cancer or birth defects or other reproductive harm.

XVI. Other Information:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established
N/D: Not Determined
N/A: Not Applicable
N/AV: Not Available

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered soley for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is repsonsible for full compliance.

MSDS - Material Safety Data Sheet
Product Name: LIQUID WRENCH SUPER PENETRANT (Liquid)

MSDS No.: L116

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY
Address: 600 RADIATOR ROAD
City, ST Zip: INDIAN TRAIL, NC 28079
Country:

Contact: Robert Geer
Information Telephone Number: 704-684-1811
Emergency Contact: Rocky Mountain Poision Control Center
Emergency Telephone Number: 303-623-5716
Emergency Restrictions:

Product Name: LIQUID WRENCH SUPER PENETRANT (Liquid)
MSDS No.: L116

Issue Date: 02/19/2008
Supersedes Date: 04/13/2007

II. Hazards Identification:

EMERGENCY OVERVIEW

Danger: Harmful or fatal if swallowed. Eye and skin irritant.

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Route(s) of Entry:

Absorption, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

See Signs and Symptoms below.

Signs and Symptoms:

Eye Contact: Irritant. Prolonged contact may cause conjunctivitis.
Skin Contact: Irritant. Defatting of tissue, dermatitis may occur.
Inhalation: Irritant to mucous membranes. Repeated exposure may cause narcosis, dizziness, respiratory or lung irritation.
Ingestion: HARMFUL OR FATAL IF SWALLOWED.

Medical Conditions Generally Aggravated by Exposure:

Unknown

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

Potential Environmental Effects

Not Available

III. Composition/Information on Ingredients:

Chemical Name	CAS No.	% Range	Trade Secret
2-Butoxyethanol	111-76-2	3.0 - 7.0	
Naphthenic Petroleum Distillate	64742-52-5	7.0 - 13.0	
Natural Methyl Ester	67762-38-3	40.0 - 60.0	
Refined Soybean Oil	8001-22-7	15.0 - 40.0	

IV. First Aid Measures:

Emergency and First Aid Procedures:

MSDS - Material Safety Data Sheet
Product Name: LIQUID WRENCH SUPER PENETRANT (Liquid)

MSDS No.: L116

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.
Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.
Inhalation: Remove to fresh air. If breathing becomes difficult give oxygen and get prompt medical attention. If breathing stops, give artificial respiration and get prompt medical attention.
Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately. Aspiration of vomitus into the lungs can cause pneumonitis, which can be fatal.

Note to Physicians:

N/E

V. Fire Fighting Measures:

Suitable Extinguishing Media:

Water Fog, Foam, Carbon Dioxide, Dry Chemical

Unsuitable Extinguishing Media:

Do not use forced water stream as this could cause the fire to spread.

Products of Combustion:

Normal products of combustion, smoke, carbon dioxide, carbon monoxide, and sulfur trioxides.

Protection of Firefighters:

Wear self-contained positive pressure breathing apparatus and protective clothes. Use shield to protect from rupturing and venting containers. At elevated temperatures containers may vent, rupture or burst, even violently

VI. Accidental Release Measures:

Personal Precautions:

Eliminate all ignition sources. Persons not wearing protective equipment should be excluded from area of spill until clean up has been completed.

Environmental Precautions:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred. Run off to sewer may create fire or explosion hazard.

Methods for Containment:

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

Methods for Cleanup:

Using a non-metalic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material.

Other Information:

All equipment used with handling the concentrate must be grounded. If run-off occurs, notify proper authorities as required that a spill has occurred.

VII. Handling and Storage:

Handling Precautions:

Handling: Use with adequate ventilation and proper protective equipment.
Store in a cool, dry area, away from oxidizers. Keep away from open flames, sparks, or other iginition sources.

Storage Precautions:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS! CAUTION: Combustible. Keep container closed tightly when not in use.

VIII. Exposure Controls/Personal Protection:

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Natural Methyl Ester	N/E	N/E	Not Available
Refined Soybean Oil	Not Established	Not Established	10 mg/m3 (mist)
2-Butoxyethanol	25 ppm	25 ppm	Not Available
Naphthenic Petroleum Distillate	5 mg/m3	5 mg/m3	Not Available

MSDS - Material Safety Data Sheet
Product Name: LIQUID WRENCH SUPER PENETRANT (Liquid)

MSDS No.: L116

Engineering Controls:

Use with adequate ventilation. If TLV is exceeded, wear NIOSH approved respirator.

Personal Protective Equipment:

See Section 2 for applicable exposure limits. For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: 320 F

Boiling Range: Not Available

Solubility In Water: Insoluble

Flash Point: > 200°F

Odor Threshold: Not Available

Vapor Density (AIR = 1): N/A

pH Range: Not Available

Decomposition Temp: Not Available

Lower Explosive Limit: N/E

Specific Gravity (H20 = 1): 0.90

Other Information: VOC Content: 13.28.%

Melting Point: N/A

Freezing Point: Not Available

Evaporation Rate (Butyl Acetate = 1): N/A

Flash Point Method: TCC

Appearance and Odor: Dark Liquid with petroleum odor

Vapor Pressure (mm Hg.): N/A

Partition Coefficient: Not Available

Auto-Ignition Temp: Not Available

Upper Explosive Limit: N/E

X. Stability and Reactivity:

Stability:

Product is stable

Conditions to Avoid:

See Incompatible Materials below

Incompatible Materials:

Avoid contact with strong oxidizers

Hazardous Decomposition Products:

Normal products of combustion, smoke, carbon dioxide, carbon monoxide, and sulfur trioxides.

Possibility of Hazardous Reactions:

Will not occur

XI. Toxicological Information:

Not Established

XII. Ecological Information:

Not Established

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in a recycling centers when empty. Before offering for recycling, empty the can or bottle by using the product according to the label. If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations

XIV. Transport Information:

Shipping Name: Not Available

MSDS - Material Safety Data Sheet
Product Name: LIQUID WRENCH SUPER PENETRANT (Liquid)

MSDS No.: L116

DOT Hazard Class: Not Available

DOT Subsidiary Hazard Class: Not Available

UN/NA#: Not Available

Packing Group: Not Available

Transportation Information:

DOT Shipping Name: Not DOT regulated.
DOT Hazard Class: None

The above DOT description is provided to assist in the proper shipping classification of this product by ground and may not be suitable for all shipping purposes.

For international shipping: ICAO, AND IMDG

Not Regulated

XV. Regulatory Information:

See Section 2 for SARA Reportable Chemicals.

USA TSCA: All components of this material are listed on the US TSCA Inventory.

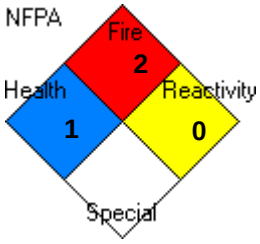
XVI. Other Information:

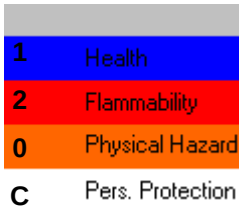
Chemical State: [X] Liquid [ ] Gas [ ] Solid

Chemical Type: [ ] Pure [X] Mixture

Hazard Category:

[X] Acute [ ] Chronic [X] Fire [ ] Pressure [ ] Reactive





Additional Manufacturer Warnings:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established
N/D: Not Determined
N/A: Not Applicable
N/AV: Not Available

Additional Product Information:

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

MSDS - Material Safety Data Sheet
Product Name: POWER STEERING FLUID WITH STOP LEAK

MSDS No.: M2732

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY
Address: 600 RADIATOR ROAD
City, ST Zip: INDIAN TRAIL, NC 28079
Country:

Contact: Robert Geer
Information Telephone Number: 704-684--181 1
Emergency Contact: Rocky Mountain Poision Control Center
Emergency Telephone Number: 303-623-5716
Emergency Restrictions:

Product Name: POWER STEERING FLUID WITH STOP LEAK
MSDS No.: M2732

Issue Date: 10/12/2009
Supersedes Date: 03/10/2009

II. Hazards Identification:

EMERGENCY OVERVIEW

Danger: Harmful or Fatal if Swallowed. Eye and Skin Irritant

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Route(s) of Entry:

Absorption, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

See signs and symptoms below

Signs and Symptoms:

Eye Contace: May cause slight iffitation
Skin Contact: May cause slight irritation
Inhalation: If oil mist is inhaled for prolonged periods, may cause irritation.
Ingestion: Can be Harmful or fatal if swallowed.

Medical Conditions Generally Aggravated by Exposure:

None known

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

Potential Environmental Effects

Not Available

III. Composition/Information on Ingredients:

Chemical Name	CAS No.	% Range	Trade Secret
1,2,4-Trimethylbenzene	95-63-6	0.1 - 1.0	
Aromatic Petroleum Distillate	64742-95-6	1.0 - 5.0	
Chlorinated Paraffin	61788-76-9	0.1 - 1.0	
Mesitylene	108-67-8	0.1 - 1.0	
Naphthenic Petroleum Distillate	64742-52-5	60.0 - 100.0	
Petroleum Oil	64742-65-0	7.0 - 13.0	
Zinc Compound	19210-06-1	0.1 - 1.0	

MSDS - Material Safety Data Sheet
Product Name: POWER STEERING FLUID WITH STOP LEAK

MSDS No.: M2732

IV. First Aid Measures:

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids and get prompt medical attention.
Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.
Inhalation: Remove to fresh air. If breathing becomes difficult get prompt medical attention.
Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately.

Note to Physicians:

N/E

V. Fire Fighting Measures:

Suitable Extinguishing Media:

Water Fog, Foam, Carbon Dioxide, Dry Chemical

Unsuitable Extinguishing Media:

Do not use forced water stream as this could cause the fire to spread.

Products of Combustion:

Carbon dioxide, carbon monoxide, and various hydrocarbons

Protection of Firefighters:

Wear self-contained positive pressure breathing apparatus and protective clothes. Use shield to protect from rupturing and venting containers. At elevated temperatures containers may vent, rupture or burst, even violently

VI. Accidental Release Measures:

Personal Precautions:

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental Precautions:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred. Run off to sewer may create fire or explosion hazard.

Methods for Containment:

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

Methods for Cleanup:

Using a non-metalic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material.

Other Information:

If run-off occurs, notify proper authorities as required that a spill has occurred.

VII. Handling and Storage:

Handling Precautions:

Handling: Use with adequate ventilation and proper protective equipment.
Do not use or store near fire, sparks, or flame. Exposure to temperatures above 120° may cause container to vent, rupture, or burst.

Storage Precautions:

Keep container closed tightly when not in use.
Store in a cool place away from oxidizing agents.

VIII. Exposure Controls/Personal Protection:

MSDS - Material Safety Data Sheet
Product Name: POWER STEERING FLUID WITH STOP LEAK

MSDS No.: M2732

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Naphthenic Petroleum Distillate	5 mg/m3	5 mg/m3	Not Available
Petroleum Oil	5 mg/m3	5 mg/m3	Not Available
Zinc Compound	N/E	N/E	Not Available
Aromatic Petroleum Distillate	N/E	25 ppm	Not Available
Chlorinated Paraffin	N/E	N/E	Not Available
1,2,4-Trimethylbenzene	N/E	25 ppm	Not Available
Mesitylene	N/A	N/A	Not Available

Engineering Controls:

See above Section for applicable exposure limits. Maintain adequate ventilation.
Avoid breathing mist. In restricted areas, use approved chemical filters designed to remove mist. In confined areas, use approved air line type respirator or hood. A self-contained breathing apparatus is required for vapor or mist concentrations above TLV limit

Personal Protective Equipment:

For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: 465 F
Boiling Range: Not Available
Solubility In Water: Insoluble
Flash Point: > 150° F
Odor Threshold: Not Available
Vapor Density (AIR = 1): 4.3
pH Range: Not Available
Decomposition Temp: Not Available
Lower Explosive Limit: N/D
Specific Gravity (H20 = 1): 0.86
Other Information: N/D

Melting Point: N/A
Freezing Point: Not Available
Evaporation Rate (Butyl Acetate = 1): Slow
Flash Point Method: TCC
Appearance and Odor: Clear amber oil with petroleum odor
Vapor Pressure (mm Hg.): 0.008
Partition Coefficient: Not Available
Auto-Ignition Temp: Not Available
Upper Explosive Limit: N/D

X. Stability and Reactivity:

Stability:

Stable

Conditions to Avoid:

Avoid heat, sparks, and flames. Avoid incompatible materials.

Incompatible Materials:

Avoid contact with strong ozidizing agents

Hazardous Decomposition Products:

Normal products of combustion, smoke, carbon dioxide, carbon monoxide, phosphorus, nitrogen and sulfur oxides.

Possibility of Hazardous Reactions:

Will not occur

XI. Toxicological Information:

N/D

MSDS - Material Safety Data Sheet
Product Name: POWER STEERING FLUID WITH STOP LEAK

MSDS No.: M2732

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in a recycling centers when empty. Before offering for recycling, empty the can or bottle by using the product according to the label. If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations

XIV. Transport Information:

Shipping Name: Not DOT Regulated

DOT Hazard Class: Not Regula

DOT Subsidiary Hazard Class: Not Available

UN/NA#: Not Available

Packing Group: Not Available

Transportation Information:

DOT Shipping Name: Not DOT regulated.
DOT Hazard Class: None

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for all shipping purposes.

(US):
ICAO/IATA
UN number: UN1268
Shipping name: Petroleum Products, n.o.s. (Naphthenic Oil)
Marine Pollutant (Chlorinated paraffin)
Class: 3
PG: III

International:

ICAO/IATA:
UN number: UN1268
Shipping Name: Petroleum Products, n.o.s. (Naphthenic Oil)
Marine Pollutant (Chlorinated paraffin)
Class 3
PG: III

IMDG:
UN Number: UN1268
Shipping name: Petroleum Products, n.o.s. (Naphthence oil)
Marine Pollutant (Chlorinated paraffin)
Class: 3
PG: III
EmS: F-E, S-E

XV. Regulatory Information:

SARA 313 Reportable Chemicals.
Aromatic Petroleum Distillate (64742-95-6)
Chlorinated Paraffin (61788-76-9)
Zinc Compound (19210-06-1)
1,2,4-Trimethylbenzene (95-63-6)

USA TSCA: All components of this material are listed on the US TSCA Inventory.

Warning: This product contains a chemical known to the State of California to cause cancer or birth defects or other reproductive harm.

State RTK Chemicals:
Chlorinated Paraffin (61788-76-9)

MSDS - Material Safety Data Sheet
Product Name: POWER STEERING FLUID WITH STOP LEAK

MSDS No.: M2732

XVI. Other Information:

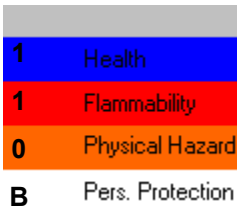
Chemical State: ☐ Liquid ☐ Gas ☐ Solid

Chemical Type: ☐ Pure ☒ Mixture

Hazard Category:

☒ Acute ☐ Chronic ☒ Fire ☐ Pressure ☐ Reactive





Additional Manufacturer Warnings:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established
N/D: Not Determined
N/A: Not Applicable
N/AV: Not Available

Additional Product Information:

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

MSDS - Material Safety Data Sheet
Product Name: SUPER CONCENTRATED DEGREASER

MSDS No.: SC3

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY
Address: 600 RADIATOR ROAD
City, ST Zip: INDIAN TRAIL, NC 28079
Country: USA

Contact: Robert Geer
Information Telephone Number: 704-684--181 1
Emergency Contact: RMPDC (877-740-5015)
Emergency Telephone Number: 303-623-5716
Emergency Restrictions:

Product Name: SUPER CONCENTRATED DEGREASER
MSDS No.: SC3

Issue Date: 02/04/2013
Supersedes Date: 01/02/2009

II. Hazards Identification:

EMERGENCY OVERVIEW

Harmful or Fatal if Swallowed. Eye and Skin Irritant.

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Route(s) of Entry:

Absorption, Eye, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

See signs and symptoms below

Signs and Symptoms:

Eye Contact: Irritant. Prolonged contact may cause conjunctivitis.
Skin Contact: Irritant. Defatting of tissue, dermatitis may occur.
Inhalation: Irritant to mucous membranes. Repeated exposure may cause narcosis..
Ingestion: HARMFUL OR FATAL IF SWALLOWED.

Medical Conditions Generally Aggravated by Exposure:

None known

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

Potential Environmental Effects

Not Available

III. Composition/Information on Ingredients:

Chemical Name	CAS No.	% Range	Trade Secret
Hydrocarbon Fluid	64742-47-8	60.0 - 100.0	
Isopropylamine Dodecylbenzene Sulfonate	26264-05-1	1.0 - 5.0	
Polyoxyethylene Hexaoleate	57171-56-9	5.0 - 10.0	
Tripropylene Glycol Monomethyl Ether	25498-49-1	1.0 - 5.0	

IV. First Aid Measures:

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.
Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.
Inhalation: Remove to fresh air. If breathing becomes difficult get prompt medical attention.
Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately. Aspiration of vomitus into the lungs can cause pneumonitis, which can be fatal.

MSDS - Material Safety Data Sheet
Product Name: SUPER CONCENTRATED DEGREASER

MSDS No.: SC3

Note to Physicians:

N/E

V. Fire Fighting Measures:

Suitable Extinguishing Media:

Water Fog, Foam, Carbon Dioxide, Dry Chemical

Unsuitable Extinguishing Media:

None

Products of Combustion:

High temperatures and ignition sources produce products of combustion: carbon monoxide, carbon dioxide, aldehydes and ketones when heated.

Protection of Firefighters:

Wear self-contained positive pressure breathing apparatus and protective clothes.

VI. Accidental Release Measures:

Personal Precautions:

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental Precautions:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred.

Methods for Containment:

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

Methods for Cleanup:

Using a scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid to recover material.

Other Information:

If run-off occurs, notify proper authorities as required that a spill has occurred.

VII. Handling and Storage:

Handling Precautions:

Handling: Use with adequate ventilation and proper protective equipment.
Do not use near fire, sparks, or flame. Store in cool, well ventilated area below 120°F away from heat sources and oxidizers.

Storage Precautions:

Avoid contact with eyes. Avoid prolonged or repeated breathing of vapors. If exposure may or does exceed occupational exposure limits, use a NIOSH approved respirator to prevent over-exposure.

VIII. Exposure Controls/Personal Protection:

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Tripropylene Glycol Monomethyl Ether	N/E	N/E	Not Available
Polyoxyethylene Hexaoleate	N/E	N/E	Not Available
Hydrocarbon Fluid	5 mg/m3	5 mg/m3	Not Available
Isopropylamine Dodecylbenzene Sulfonate	N/E	N/E	Not Available

Engineering Controls:

See above Section for applicable exposure limits. Use with adequate ventilation. If TLV is exceeded, wear NIOSH approved respirator.

Personal Protective Equipment:

For prolonged exposure wear protective safety glasses, gloves, and apron.

MSDS - Material Safety Data Sheet
Product Name: SUPER CONCENTRATED DEGREASER

MSDS No.: SC3

IX. Physical and Chemical Properties:

Boiling Point: >300°F
Boiling Range: N/D
Solubility In Water: Emulifies
Flash Point: >200°F
Odor Threshold: N/D
Vapor Density (AIR = 1): N/D
pH Range: N/A
Decomposition Temp: N/D
Lower Explosive Limit: N/E
Specific Gravity (H20 = 1): 0.88
Other Information: VOC's: 0 g/mL

Melting Point: N/A
Freezing Point: N/D
Evaporation Rate (Butyl Acetate = 1): N/D
Flash Point Method: TCC
Appearance and Odor: Clear water white liquid with solvent odor
Vapor Pressure (mm Hg.): N/D
Partition Coefficient: N/D
Auto-Ignition Temp: N/E
Upper Explosive Limit: N/E

X. Stability and Reactivity:

Stability:

Stable

Conditions to Avoid:

See Incompatible Material below

Incompatible Materials:

Strong oxidizing agents.

Hazardous Decomposition Products:

High temperatures and ignition sources produce products of combustion: carbon monoxide, carbon dioxide, aldehydes and ketones.

Possibility of Hazardous Reactions:

Will not occur.

XI. Toxicological Information:

N/D

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in a recycling centers when empty. Before offering for recycling, empty the can or bottle by using the product according to the label. If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations

XIV. Transport Information:

Shipping Name: Not Available
DOT Hazard Class: Not Available
UN/NA#: Not Available
Transportation Information:

DOT Subsidiary Hazard Class: Not Available
Packing Group: Not Available

MSDS - Material Safety Data Sheet
Product Name: SUPER CONCENTRATED DEGREASER

MSDS No.: SC3

DOT Shipping Name: Not DOT regulated.
DOT Hazard Class: None

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for all shipping purposes.

ICAO/IATA (US)
Not Regulated

International:

ICAO/IATA
Not Regulated

IMDG
Not Regulated

XV. Regulatory Information:

SARA 313 Reportable Chemicals:
None

USA TSCA: All components of this material are listed on the US TSCA Inventory.

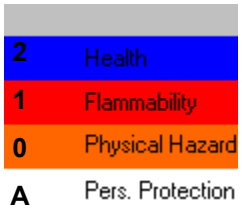
State RTK Chemicals:
None

XVI. Other Information:

Chemical State: [X] Liquid [ ] Gas [ ] Solid
Chemical Type: [ ] Pure [X] Mixture

Hazard Category:
[X] Acute [ ] Chronic [X] Fire
[ ] Pressure [ ] Reactive





Additional Manufacturer Warnings:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established
N/D: Not Determined
N/A: Not Applicable
N/AV: Not Available

Additional Product Information:

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MSDS - Material Safety Data Sheet

Product Name: THRUST QUICK STARTING FLUID

MSDS No.: M3815

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY

Address: 600 RADIATOR ROAD

City, ST Zip: INDIAN TRAIL, NC 28079

Emergency Contact: Rocky Mountain Poision Control Center

Emergency Telephone Number: 303-623-5716

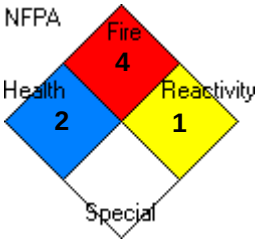
Contact: Robert Geer

Information Telephone Number: 704-688-3430

Last Update: 07/24/2007 **Expiration Date:**

Chemical State: [X] Liquid [ ] Gas [ ] Solid

Chemical Type: [X] Pure [ ] Mixture



2	Health
4	Flammability
0	Reactivity
H	Pers. Protection

II. Ingredients:

[ ] **Trade Secret**

CAS No.	Chemical Name	% Range	EHS	NTP	IARC	SUB Z	SARA 313	OSHA PEL	ACGIH TLV	Other Limits
124-38-9	Carbon dioxide	1.0 - 10.0						N/AV	5000 ppm	
60-29-7	Ethane, 1,1'-oxybis-	15.0 - 40.0						400 ppm	400 ppm	
142-82-5	Heptane	40.0 - 70.0						500 ppm	400 ppm	
64742-52-5	Naphthenic Petroleum Distillate	< 1.0						5 mg/m3	5 mg/m3	
64742-53-6	Naphthenic Petroluem Oil	< 1.0						5 mg/m3	5 mg/m3	

III. Hazardous Identification:

Hazard Category:

[X] Acute [ ] Chronic [X] Fire [X] Pressure [ ] Reactive

Hazardous Identification Information:

DANGER: EXTREMELY FLAMMABLE. HARMFUL OR FATAL IF SWALLOWED. VAPOR TOXIC. EXCESSIVE INHALATION MAY BE FATAL. VAPORS MAY CAUSE FLASH FIRES. EYE IRRITANT. CONTENTS UNDER PRESSURE.

Level 3 Aerosol

IV. First Aid Measures:

Route(s) of Entry:

Inhalation, eye and skin contact.

Health Hazards (Acute and Chronic):

See signs and symptoms below.

Signs and Symptoms:

Eye Contact: Direct spray or vapors will irritate and may harm eyes
Skin Contact: Product may cause irritation due to defatting of skin.
Inhalation: High concentrations of vapors may irritate nose and throat and cause symptoms of intoxication such as dizziness, nausea, headache, or indigestion.
Ingestion: Gastrointestinal irritation, nausea, cramps, diarrhea. May be harmful or fatal if swallowed..

MSDS - Material Safety Data Sheet
Product Name: THRUST QUICK STARTING FLUID

MSDS No.: M3815

Medical Conditions Generally Aggravated by Exposure:

None Known

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.
Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.
Inhalation: Remove to fresh air. If breathing becomes difficult get prompt medical attention.
Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately.

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

V. Fire Fighting Measures:

Flash Point: < 0°F **Lower Explosive Limit:** N/D **Upper Explosive Limit:** N/D

F.P. Method:

Fire Extinguishing Media: Foam, Dry Chemical (B-C), Carbon Dioxide

Special Fire Fighting Procedures:

Wear self- contained, positive pressure breathing apparatus and protective clothing. Use water fog to keep container cool. Protect from venting, rupturing, and bursting containers.

Unusual Fire and Explosion:

At temperatures above 120°F, containers may vent, rupture, or burst, even violently. Contents under pressure. Do not use near fire, sparks, or flame.

VI. Accidental Release Measures:

Steps to be Taken in Case Material is Released or Spilled:

Eliminate all ignition sources. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc). Using a non-metalic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occured.

VII. Handling and Storage:

Precautions to be Taken:

Use with adequate ventilation and proper protective equipment.
Do not use or store near fire, sparks, open flame or heat sources. Do not puncture or incinerate container. Exposure to temperatures above 120° may cause container to vent, rupture, or burst. Store in a cool, dry place, out of direct sunlight.

Other Precautions:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

VIII. Exposure Controls/Personal Protection:

Ventilation Requirements:

See Section 2 for applicable exposure limits. Maintain adequate ventilation.
Avoid breathing vapors. In restricted areas, use approved chemical/mechanical filters designed to remove a combination of particles and vapor. In confined areas, use approved air line type respirator or hood. A self-contained breathing apparatus is required for vapor concentrations above TLV limits.

Personal Protective Equipment:

MSDS - Material Safety Data Sheet
Product Name: THRUST QUICK STARTING FLUID

MSDS No.: M3815

See Section 2 for applicable exposure limits. For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: N/D

Melting Point: N/A

Evaporation Rate (Butyl Acetate = 1): N/D

Vapor Pressure (mm Hg.): N/D

Specific Gravity (H20 = 1): 0.68500

Vapor Density (AIR = 1): N/D.

Solubility In Water: Partial solubility

Appearance and Odor:
Clear liquid with solvent/ether odor

Other Information: % VOC: 93%

X. Stability and Reactivity:

Stability:

Product is stable

Incompatibility (Materials to Avoid):

Avoid contact with oxidizing agents.

Decomposition/By Products:

Carbon Dioxide, Carbon Monoxide.

Hazardous Polymerization:

Will not occur.

XI. Toxicological Information:

N/D

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

XIV. Transport Information:

MSDS - Material Safety Data Sheet
Product Name: THRUST QUICK STARTING FLUID

MSDS No.: M3815

DOT Hazard Class: ORM-D
Shipping Name: Consumer Commodity

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US)
Shipping Name: Aerosols
Class: 2.1
UN number: UN1950

International:

ICAO/IATA
UN number: UN1950
Shipping Name: Aerosols
Class: 2.1

IMDG
UN number: UN1950
Shipping Name: Aerosols
Class: 2
EmS: F-D, S-U

XV. Regulatory Information:

See Section 2 for SARA Reportable Chemicals.

USA TSCA: All components of this material are either exempt or listed on the US TSCA Inventory.

XVI. Other Information:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established
N/D: Not Determined
N/A: Not Applicable
N/AV: Not Available

WEARING CONTACT LENSES WHEN HANDLING THIS MATERIAL IS INADVISABLE! KEEP AWAY FROM CHILDREN AND ANIMALS.

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