

A

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetic Acid, 1.0N

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Acetic Acid, 1.0N

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: KEMAA2075-A

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc.
9 Barnhart Drive
Hanover, PA 17331
1-717-632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazards identification
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Classification of the substance or mixture: Not classified for physical or health hazards under GHS.

Signal word: None

Hazard statements: None

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not eat, drink or smoke when using this product.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients
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Ingredients:

Ingredients:		
CAS 64-19-7	Acetic Acid	6 %
CAS 7732-18-5	Deionized Water	94 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

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After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. Give artificial respiration if necessary. If breathing persists give oxygen.

After skin contact:

Wash affected area with soap and water. Rinse thoroughly. Seek medical attention if irritation, discomfort or vomiting persists. Flush with water for 15 minutes.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Immediately get medical assistance if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician. Notes to Physician: Treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors.

Advice for firefighters:

Protective equipment: None

Additional information (precautions):

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Avoid contact with eyes, skin, and clothing. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Soak with inert material. Use spark-proof tools and explosion-proof equipment. Always obey local regulations. Remove all sources of ignition.

Reference to other sections: None

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SECTION 7: Handling and storage**Precautions for safe handling:**

Prevent formation of aerosols. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid splashes or spray in enclosed areas. Wash hands after handling. Avoid contact with eyes, skin, and clothing.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly closed. Protect from freezing.

SECTION 8: Exposure controls/personal protection**Control parameters:**

64-19-7, Acetic acid, OSHA PEL: 25mg/m³.
64-19-7, Acetic acid, ACGIH TLV: 25mg/m³.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

Protection of skin:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye protection:

Safety glasses with side shields or goggles.

General hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear, colorless liquid	Explosion limit lower: Explosion limit upper:	0 Vol % 0 Vol %
Odor:	Vinegar-like	Vapor pressure at 20°C:	2.3 kPa (@ 20°C) or 23 hPa (17 mm Hg) at 20 °C (68 °F)
Odor threshold:	Not determined	Vapor density:	0.62 (Air = 1)
pH-value:	7 [Neutral] (1% soln/water)	Relative density:	1 (Water = 1)
Melting/Freezing point:	0 °C (32 °F)	Solubilities:	Completely soluble in water.

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Boiling point/Boiling range:	100°C (212°F)	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not applicable	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not applicable	Viscosity:	a. Kinematic: Not determined b. Dynamic: 0.952 mPas at 20 °C (68 °F)
Density at 20°C:	1 g/cm ³ (8.345 lbs/gal) at 20 °C (68 °F)		

SECTION 10: Stability and reactivity

Reactivity: None**Chemical stability:**

No decomposition if used and stored according to specifications.

Possible hazardous reactions: None**Conditions to avoid:**

Store away from oxidizing agents, strong acids or bases.

Incompatible materials:

Strong acids. Strong bases. Metals.

Hazardous decomposition products:Carbon oxides (CO, CO₂). Oxides of carbon and irritation fumes.

SECTION 11: Toxicological information

Acute Toxicity:**Chronic Toxicity:** No additional information.**Skin corrosion/irritation:** No additional information.**Serious eye damage/irritation:** No additional information.**Respiratory or skin sensitization:**

: See Section 2.

Carcinogenicity: No additional information.**Germ cell mutagenicity:** No additional information.**Reproductive Toxicity:**

: Experiments have shown reproductive toxicity effects on laboratory animals for acetic acid.

STOT-single and repeated exposure: No additional information.**Additional toxicological information:** No additional information.

SECTION 12: Ecological information

Ecotoxicity:

: Ecotoxicity, Acetic Acid has high biochemical oxygen demand, and a potential to cause oxygen depletion in aquatic systems.

Persistence and degradability:

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Readily degradable in the environment.

Bioaccumulative potential: No additional information.

Mobility in soil:

Aqueous solution has high mobility in soil.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. Determine whether chemical hazardous or not.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

Not Regulated.

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Not Regulated.

Hazard Class: None

Packing Group: Not Regulated.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Not Regulated.

Hazard Class: None

Packing Group: Not Regulated.

Marine Pollutant (if applicable): No additional information.

Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

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Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-0-0

HMIS: 1-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.

Section 1

Chemical Product and Company Identification



**Aldon
Corporation**

221 Rochester Street
Avon, NY 14414
(585) 226-6177

**CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300**
For laboratory use only.
Not for drug, food or household use.

Product	ACETIC ACID, GLACIAL
Synonyms	Ethanoic Acid / Methanecarboxylic Acid / Glacial Acetic Acid

Section 2

Hazards Identification

Signal word: DANGER

Pictograms: GHS02 / GHS05

Target organs: Respiratory system, Eyes, Skin, Teeth



GHS Classification:

Flammable liquid (Category 3)

Skin corrosion (Category 1A)

Eye damage (Category 1)

GHS Label information: Hazard statement:

H226: Flammable liquid and vapour.

H314: Causes severe skin burns and eye damage.

Precautionary statement:

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233: Keep container tightly closed.

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.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P363: Wash contaminated clothing before reuse.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310: Immediately call a POISON CENTER or doctor.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water spray to extinguish.

P403+P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

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 or reproductive toxicity.

Section 3

Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Acetic acid	64-19-7	99.8%	200-580-7

Section 4

First Aid Measures

INGESTION: 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: HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE CORNEAL BURNS. 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 CAUSE SKIN IRRITATION AND/OR BURNS. 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. This chemical reacts violently with strong oxidizers, generating a fire and explosion hazard. Reacts violently with strong bases, strong acids and many other compounds.

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, 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)
	Acetic acid	TWA: 25 mg/m ³ STEL: 37 mg/m ³	TWA: 25 mg/m ³	TWA: 25 mg/m ³ STEL: 37 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: Strong, acid, vinegar-like odor.
Odor threshold: Data not available.
pH: <2
Melting / Freezing point: 16.7°C (62°F)
Boiling point: 118.1°C (244°F)
Flash point: 39°C (102.2°F) TCC ASTM D 56

Evaporation rate (Butyl acetate = 1): 0.97
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: 4.0% / 19.9%
Vapor pressure (mm Hg): 11.4 @ 20°C
Vapor density (Air = 1): 2.07
Relative density (Specific gravity): 1.049 @ 20/4°C
Solubility(ies): Soluble in water.

Partition coefficient: Data not available
Auto-ignition temperature: 464°C (869°F)
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: CH₃COOH
Molecular weight: 60.05

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: Bases, strong oxidizers, chromic acid, nitric acid, sodium peroxide, carbonates, hydroxides, phosphates. Corrosive to some metals. Potentially violent reaction with acetaldehyde and acetic anhydride. Ignites on contact with potassium-tert-butoxide.

Hazardous decomposition products: Carbon monoxide, hydrogen sulfide and other harmful gases or vapors including oxides and/or other compounds of sulfur and sodium.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 3,310 mg/kg ; Inhalation-rat LC50: 11.4 mg/L/4 hours ; Dermal-rabbit LD50: 1,060 mg/kg

Skin corrosion/irritation: Skin-rabbit - Severe irritant.

Serious eye damage/irritation: Eyes-rabbit - Severe irritant.

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: 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: 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 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: Data not available

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Exposure to vapor may cause irritation of the eyes, nose, and respiratory tract. May cause asthma-like symptoms, including coughing, wheezing, tightness of chest, shortness of breath, and headache.

Ingestion: May cause burns of the mouth, throat, esophagus, and stomach. Signs and symptoms may include pain, nausea, vomiting, diarrhea, dizziness, drowsiness, faintness, weakness, collapse and coma.

Skin: Contact with skin causes pain, redness, burns, and blisters.

Eyes: Contact with eyes may cause redness, pain, corneal burns, and loss of vision.

Signs and symptoms of exposure: See Potential health effects above. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: AF1225000

Section 12 Ecological Information

Toxicity to fish: *Gambusia affinis* (fish, fresh water), LC50 = 251 mg/L/24 hours

Toxicity to daphnia and other aquatic invertebrates: *Daphnia magna* (Crustacea), EC50 = 95 mg/L/24 hours

Toxicity to algae: *Euglena gracilis* (Algae), EC100 = 720 mg/L

Persistence and degradability: Easily biodegradable **Bioaccumulative potential:** Not expected to bioaccumulate

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 (US DOT / CANADA TDG)

UN/NA number: UN2789	Shipping name: Acetic acid, glacial	Reportable Quantity: 5,000 lbs (2270 kg)	Marine pollutant: No
Hazard class: 8, (3)	Packing group: II	2012 ERG Guide # 132	
Exceptions: Limited quantity equal to or less than 1 L			

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	CERCLA (RQ)	RCRA code	DSL	NDSL
Acetic acid, glacial	Listed	5,000 lbs (2270 kg)	D001, D002	Listed	Not listed

Section 16 Other 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.

Section 1 Chemical Product and Company Identification

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5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
St. Catharines, Ontario
L2S 3T4 Canada
Tel: (800) 387-9393

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product	ACETIC ACID, GLACIAL
Synonyms	Ethanoic Acid / Methanecarboxylic Acid / Glacial Acetic Acid

Section 2 Hazards Identification

Signal word: DANGER**Pictograms:** GHS02 / GHS05**Target organs:** Respiratory system, Eyes, Skin, Teeth**GHS Classification:**

Flammable liquid (Category 3)

Skin corrosion (Category 1A)

Eye damage (Category 1)

GHS Label information: Hazard statement:

H226: Flammable liquid and vapour.

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Precautionary statement:

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P264: Wash hands thoroughly after handling.

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P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water spray to extinguish.

P403+P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Acetic acid	64-19-7	99.8%	200-580-7

Section 4 First Aid Measures

INGESTION: 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: HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE CORNEAL BURNS. 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 CAUSE SKIN IRRITATION AND/OR BURNS. 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. This chemical reacts violently with strong oxidizers, generating a fire and explosion hazard. Reacts violently with strong bases, strong acids and many other compounds.

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.

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, 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)
	Acetic acid	TWA: 25 mg/m ³ STEL: 37 mg/m ³	TWA: 25 mg/m ³	TWA: 25 mg/m ³ STEL: 37 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: Strong, acrid, vinegar-like odor. Odor threshold: Data not available. pH: <2 Melting / Freezing point: 16.7°C (62°F) Boiling point: 118.1°C (244°F) Flash point: 39°C (102.2°F) TCC ASTM D 56	Evaporation rate (Butyl acetate = 1): 0.97 Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: 4.0% / 19.9% Vapor pressure (mm Hg): 11.4 @ 20°C Vapor density (Air = 1): 2.07 Relative density (Specific gravity): 1.049 @ 20/4°C Solubility(ies): Soluble in water.	Partition coefficient: Data not available Auto-ignition temperature: 464°C (869°F) Decomposition temperature: Data not available. Viscosity: Data not available. Molecular formula: CH ₃ COOH Molecular weight: 60.05
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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: Bases, strong oxidizers, chromic acid, nitric acid, sodium peroxide, carbonates, hydroxides, phosphates. Corrosive to some metals. Potentially violent reaction with acetaldehyde and acetic anhydride. Ignites on contact with potassium-tert-butoxide.

Hazardous decomposition products: Carbon monoxide, hydrogen sulfide and other harmful gases or vapors including oxides and/or other compounds of sulfur and sodium.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 3,310 mg/kg ; Inhalation-rat LC50: 11.4 mg/L/4 hours ; Dermal-rabbit LD50: 1,060 mg/kg

Skin corrosion/irritation: Skin-rabbit - Severe irritant.

Serious eye damage/irritation: Eyes-rabbit - Severe irritant.

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: 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: 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 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: Data not available

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Exposure to vapor may cause irritation of the eyes, nose, and respiratory tract. May cause asthma-like symptoms, including coughing, wheezing, tightness of chest, shortness of breath, and headache.

Ingestion: May cause burns of the mouth, throat, esophagus, and stomach. Signs and symptoms may include pain, nausea, vomiting, diarrhea, dizziness, drowsiness, faintness, weakness, collapse and coma.

Skin: Contact with skin causes pain, redness, burns, and blisters.

Eyes: Contact with eyes may cause redness, pain, corneal burns, and loss of vision.

Signs and symptoms of exposure: See Potential health effects above. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: AF1225000

Section 12 Ecological Information

Toxicity to fish: *Gambusia affinis* (fish, fresh water), LC50 = 251 mg/L/24 hours

Toxicity to daphnia and other aquatic invertebrates: *Daphnia magna* (Crustacea), EC50 = 95 mg/L/24 hours

Toxicity to algae: *Euglena gracilis* (Algae), EC100 = 720 mg/L

Persistence and degradability: Easily biodegradable **Bioaccumulative potential:** Not expected to bioaccumulate

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 (US DOT / CANADA TDG)

UN/NA number: UN2789

Shipping name: Acetic acid, glacial

Hazard class: 8, (3)

Packing group: II

Reportable Quantity: 5,000 lbs (2270 kg)

Marine pollutant: No

Exceptions: Limited quantity equal to or less than 1 L

2016 ERG Guide # 132

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	CA Prop 65
Acetic acid, glacial	Listed	5,000 lbs (2270 kg)	D001, D002	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other 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.

Section 1 Chemical Product and Company Identification

Page E1 of E2



5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
St. Catharines, Ontario
L2S 3T4 Canada
Tel: (800) 387-9393

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product	ACETONE
Synonyms	2-Propanone / Dimethyl Ketone / Solvent

Section 2 Hazards Identification

Signal word: DANGER

Pictograms: GHS02 / GHS07

Target organs: Central nervous system

**GHS Classification:**

Flammable liquid (Category 2)

Eye irritation (Category 2A)

STOT-SE (Category 3)

GHS Label information: Hazard statement:

H225: Highly flammable liquid and vapour.

H319: Causes serious eye irritation.

H336: May cause drowsiness or dizziness.

Supplemental information:

Repeated exposure may cause skin dryness or cracking.

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.

P261: Avoid breathing 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.

P337+P313: If eye irritation persists: Get medical attention.

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.

P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water spray to extinguish.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405+P235: Store locked up. Keep cool.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Acetone	67-64-1	100%	200-662-2

Section 4 First Aid Measures

INGESTION: 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: 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 SEVERE 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: REPEATED OR PROLONGED CONTACT MAY CAUSE DRYING AND DEFATTING OF SKIN. 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. Acetone is extremely flammable and its vapors form explosive mixtures with air. Dangerous when exposed to heat, sparks, flame or oxidizing agents.

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.

Safety Data Sheet

Acetone

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: Acetone
Recommended Use: Science education applications
Synonyms: Dimethyl Ketone; , Ketone Propane; , 2-Propanone
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER



Highly flammable liquid and vapor. Causes serious eye irritation. Toxic to aquatic life.

GHS Classification:

Flammable Liquid Category 2, Serious Eye Damage/Eye Irritation Category 2, Hazardous to the aquatic environment - Acute Category 2

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Acetone	67-64-1	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
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 advice/attention.
Skin Contact: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Ingestion: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media: Use dry chemical, CO2 or appropriate foam.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Vapors may travel back to ignition source. Closed Containers exposed to heat may explode.
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Section 6 Spill or Leak Procedures

Safety Data Sheet

Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. 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. Also consider the expertise of employees in the area responding to the spill.

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area.

Section 7

Handling and Storage

Handling: 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. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Storage: Keep container tightly closed. Store in a well-ventilated place. Keep cool. Keep container tightly closed in a cool, well-ventilated place.

Storage Code: Red - Flammables. Store in approved flammable containers. Store away from oxidizing materials.

Section 8

Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
Acetone	500 ppm TWA	750 ppm STEL	1000 ppm TWA; 2400 mg/m3 TWA	N/A

Control Parameters

Engineering Measures:

No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

No respiratory protection required under normal conditions of use.

Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

No information available

Section 9

Physical Data

Formula: CH₃COCH₃
Molecular Weight: 58.05
Appearance: Liquid
Odor: No data available
Odor Threshold: No data available
pH: No data available
Melting Point: No data available
Boiling Point: 56 C
Flash Point: -20 C
Flammable Limits in Air: LEL: 2.6% - UEL: 12.8 %

Vapor Pressure: 233 hPa at 20 °C
Evaporation Rate (BuAc=1): 14.4
Vapor Density (Air=1): 2.0
Specific Gravity: 0.787 at 25°C
Solubility in Water: Soluble
Log Pow (calculated): -0.24
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: 100%

Section 10

Reactivity Data

Reactivity: Mildly reactive - See below
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: Temperatures above flash point in combination with sparks, open flames, or other sources of ignition.
Incompatible Materials: Caustics (bases), Peroxides, Strong acids, Oxidizing materials, Halogens
Hazardous Decomposition Products: Carbon dioxide, Carbon monoxide

Safety Data Sheet

Hazardous Polymerization:

Will not occur

Section 11

Toxicity Data

Routes of Entry: Inhalation, Ingestion, and Skin contact.
Symptoms (Acute): Eye disorders
Delayed Effects: Central Nervous System Disorders

Acute Toxicity:

Chemical Name
Acetone

CAS Number
67-64-1

Oral LD50
Oral LD50 Mouse
3000 mg/kg

Dermal LD50
Dermal LD50
Rabbit 20000
mg/kg

Inhalation LC50
Inhalation LC50
(8h) Rat 50.1
MG/L

Carcinogenicity:

Chemical Name
Acetone

CAS Number
67-64-1

IARC
Not listed

NTP
Not listed

OSHA
Not listed

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: Evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: Evidence of negative reproductive effects.
Target Organ Effects:
Acute: Central Nervous System, Cardiovascular system
Chronic: Male Reproductive System

Section 12

Ecological Data

Overview: Moderate ecological hazard. This product may be dangerous to plants and/or wildlife.
Mobility: This material is expected to have very high mobility in soil. It does not absorb to most soil types.
Persistence: No data
Bioaccumulation: Bioconcentration is not expected to occur.
Degradability: Biodegrades quickly.
Other Adverse Effects: No data

Chemical Name
Acetone

CAS Number
67-64-1

Eco Toxicity
96 HR LC50 ONCORHYNCHUS MYKISS 4.74 - 6.33 ml/l
96 HR LC50 LEPOMIS MACROCHIRUS 8300 MG/L
48 HR EC50 DAPHNIA MAGNA 12600 - 12700 MG/L

Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14

Transport Information

Ground - DOT Proper Shipping Name:
UN number: 1090 Class: 3 Packing group: II Proper shipping name: Acetone Reportable Quantity (RQ): 5000 lbs Marine pollutant: No Poison Inhalation Hazard: No

Air - IATA Proper Shipping Name:
UN number: 1090 Class: 3 Packing group: II EMS-No: F-E, S-D Proper shipping name: ACETONE

Section 15

Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Safety Data Sheet

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Acetone	67-64-1	No	No	5000 lb final RQ; 2270 kg final RQ	No	No

California Prop 65:

No California Proposition 65 ingredients

Section 16

Additional Information

Revised: 08/21/2018

Replaces: 06/15/2018

Printed: 08-24-2018

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.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 7.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Acetone

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: Serious eye damage or 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
Acetone	67-64-1	CH ₃ COCH ₃	58.08	

Synonyms: Dimethyl ketone, 2-Propanone

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

Class 1B flammable liquid.

A dangerous fire hazard from heat, flame or strong oxidizers.

Flash point: -17 °C (CC) Flammable limits: Upper 12.8% Lower 2.6% Autoignition temperature: 465 °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 other inert absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #4. Store with ethers, ketones, halogenated hydrocarbons and ethylene oxide. Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor™ can. Keep container tightly closed (P233). Keep cool (P235). Use only in a hood or well-ventilated area (P271). Take precautionary measures against static discharge (P243).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Use latex, not nitrile gloves. Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

Exposure guidelines: PEL 1000 ppm (OSHA); TLV 500 ppm, STEL 750 ppm (ACGIH); IDLH 2500 ppm (NIOSH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Sweet pungent odor like nail polish remover.
Soluble: Miscible with water, alcohol and many other organic solvents.

Boiling point: 56.5 °C
Density: 0.79
Melting point: -94.6 °C
Vapor density: 2.00

SECTION 10 — STABILITY AND REACTIVITY

Stable. Potentially explosive reaction with strong oxidizing agents and halogenated compounds.
Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye and respiratory tract irritant, dizziness, CNS depression.

Chronic effects: Dermatitis.

Target organs: Liver, kidneys, CNS, respiratory system.

ORL-RAT LD₅₀: 5800 mg/kg
IHL-RAT LC₅₀: 50,100 mg/m³/8H
SKN-RBT LD₅₀: 20 mL/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: Acetone. Hazard class: 3, Flammable Liquid. UN number: UN1090.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-662-2), RCRA code U002

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

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetone, ACS Grade

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Acetone, ACS Grade**Manufacturer/Supplier Trade name:****Manufacturer/Supplier Article number:** DWAC4800-Q**Recommended uses of the product and restrictions on use:****Manufacturer Details:**

AquaPhoenix Scientific, Inc.
9 Barnhart Drive
Hanover, PA 17331
1-717-632-1291

Supplier Details:

Ashland
5200 Blazer Memorial Parkway, Dublin, OH 43017

Emergency telephone number:

ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazards identification

Classification of the substance or mixture:**Flammable**

Flammable liquids, category 2

**Irritant**

Eye irritation, category 2A

Specific target organ toxicity following single exposure, category 3

Flam. Liq. 2.

Eye Irrit. 2A.

STOT SE 3.

Signal word: None**Hazard statements:**

Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness or dizziness.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Wear protective gloves/protective clothing/eye protection/face protection.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/light/equipment.
Use only non-sparking tools.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetone, ACS Grade

Take precautionary measures against static discharge.
 Avoid breathing dust/fume/gas/mist/vapours/spray.
 Wash skin thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 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. Continue rinsing.
 Call a POISON CENTER or doctor/physician if you feel unwell.
 If eye irritation persists get medical advice/attention.
 In case of fire, use agents recommended in section 5 for extinction.
 Store in a well ventilated place. Keep container tightly closed.
 Store in a well ventilated place. Keep cool.
 Store locked up.
 Protect from sunlight.
 Dispose of contents and container to an approved waste disposal plant.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:		
CAS 67-64-1	Acetone	100 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear.

After skin contact:

Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

Irritation. Headache. Nausea. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetone, ACS Grade

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing agents:

Water may be ineffective.

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides. Vapors can flow to distant ignition sources and flashback.

Advice for firefighters:

Protective equipment:

Wear protective eyewear, gloves, and clothing. Use NIOSH-approved respiratory protection/breathing apparatus. Refer to Section 8.

Additional information (precautions):

Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational. Avoid contact with eyes, skin, and clothing. Remove all sources of ignition.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Always obey local regulations. Containerize for disposal. Refer to Section 13. Use spark-proof tools and explosion-proof equipment. Remove all sources of ignition. Refer to Section 8. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Do not eat, drink, smoke, or use personal products when handling chemical substances. Use under a chemical fume hood. Use explosion proof equipment. Refer to Section 13.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Keep away from open flames, hot surfaces and sources of ignition. Provide ventilation for containers. Keep container tightly closed. Store away from incompatible materials.

SECTION 8: Exposure controls/personal protection



Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetone, ACS Grade

Control parameters:	67-64-1, Acetone, ACGIH TLV TWA 1,200 mg/m ³ . 67-64-1, Acetone, OSHA PEL TWA 2,400 mg/m ³ .
Appropriate engineering controls:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Use under a chemical fume hood.
Respiratory protection:	Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.
Protection of skin:	Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.
Eye protection:	Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.
General hygienic measures:	Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

SECTION 9: Physical and chemical properties
--

Appearance (physical state, color):	Clear, colorless liquid	Explosion limit lower:	2 %(V)
		Explosion limit upper:	13 %(V)
Odor:	sweet	Vapor pressure at 20°C:	231 mm Hg @ 25°C
Odor threshold:	Not determined	Vapor density:	0.791 g/cm ³ at 25 °C (77 °F)
pH-value:	7	Relative density:	Not determined
Melting/Freezing point:	-94 °C (-137 °F)	Solubilities:	Miscible in water.
Boiling point/Boiling range:	56 °C (133 °F)	Partition coefficient (n-octanol/water):	log pow: - 0.24
Flash point (closed cup):	40°C	Auto/Self-ignition temperature:	465.0 °C (869.0 °F)
Evaporation rate:	0.1	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Flammable liquid	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity:

Nonreactive under normal conditions.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions:

Acetone reacts violently with phosphorous oxychloride. Vapours may form explosive mixture with air.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetone, ACS Grade

Conditions to avoid:

Incompatible materials. Heat, Sparks, Open Flames. Direct Sunlight.

Incompatible materials:

Strong oxidizing agents. Strong reducing agents. Strong Bases. Nitric acid. sulfur dichloride potassium tert-butoxide. hexachloromelamine. chloroform. alkali, sulfuric acid.

Hazardous decomposition products:

Carbon oxides.

SECTION 11: Toxicological information

Acute Toxicity:

Dermal:

: LD50 Rabbit: 20000 mg/kg 67-64-1 (acetone).

Chronic Toxicity: No additional information.

Skin corrosion/irritation:

: Rabbit: Mild Skin Irritation - 24 h. 67-64-1 (acetone).

Serious eye damage/irritation:

: Rabbit: Mild Eye Irritation - 24 - h. 67-64-1 (acetone).

Respiratory or skin sensitization:

: guinea pig - Does not cause skin sensitisation.

Carcinogenicity:

Not listed as a carcinogen (ACGIH, IARC, NTP): 67-64-1 (acetone)

Germ cell mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

STOT-single and repeated exposure:

: May cause drowsiness or dizziness.

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

: Fish LC50 - Oncorhynchus mykiss (rainbow trout) - 5,540 mg/l - 96 h, 67-64-1 (acetone).

: Invertebrates EC50 - Daphnia magna (Water flea) - 8,800 mg/l - 48 h, 67-64-1 (acetone).

Persistence and degradability:

Readily biodegradable.

Bioaccumulative potential:

Not expected to bio accumulate.

Mobility in soil:

Aqueous solution has high mobility in soil.

Other adverse effects:

None identified.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetone, ACS Grade

SECTION 13: Disposal considerations
--

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14: Transport information
--

US DOT**UN Number:**

ADR, ADN, DOT, IMDG, IATA

1090

Limited Quantity Exception:

None

Bulk:**RQ (if applicable):** None**Proper shipping Name:** Acetone.**Hazard Class:** 3**Packing Group:** II.**Marine Pollutant (if applicable):** No additional information.**Comments:** None**Non Bulk:****RQ (if applicable):** None**Proper shipping Name:** Acetone.**Hazard Class:** 3**Packing Group:** II.**Marine Pollutant (if applicable):** No additional information.**Comments:** None

SECTION 15: Regulatory information

United States (USA)**SARA Section 311/312 (Specific toxic chemical listings):**

Acute, Chronic, Fire

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

67-64-1 Acetone - U002.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

67-64-1 Acetone 5000 lb.

Proposition 65 (California):**Chemicals known to cause cancer:**

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetone, ACS Grade

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 2-0-0

HMIS: 2-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.

Section 1

Chemical Product and Company Identification

Page E1 of E2



**Aldon
Corporation**

221 Rochester Street
Avon, NY 14414
(585) 226-6177

CHEMTEC 24 Hour Emergency
Phone Number (800) 424-9300
For laboratory use only.
Not for drug, food or household use.

Product	ACETYLSALICYLIC ACID
Synonyms	Salicylic acid, acetate ; Aspirin ; 2-(acetyloxy)-Benzoic acid

Section 2 Hazards Identification

Signal word: WARNING

Pictograms: GHS07

Target organs: Blood



GHS Classification:

Acute toxicity, oral (Category 4)

Skin irritation (Category 2)

Eye irritation (Category 2A)

STOT-SE (Category 3)

GHS Label information: Hazard statement(s):

H302: Harmful if swallowed.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

Precautionary statement(s):

P261: Avoid breathing dust.

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.

P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312: Call a POISON CENTER or doctor/physician 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+P364: Take off contaminated clothing and wash before reuse.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with all local, state and federal regulations.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Acetylsalicylic acid	50-78-2	>99%	200-064-1

Section 4 First Aid Measures

INGESTION: 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. MAY CAUSE 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: Use any media suitable for extinguishing supporting fire

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.

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: Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

SAFETY DATA SHEET

Issuing Date No data available

Revision Date 17-Nov-2015

Revision Number 1



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 Acrylic Brush Cleaner (6997)

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Acrylic Brush Cleaner

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name DCI Industries of Gainesville, Inc
Supplier Address PO BOX 358717 Gainesville, FL 32635
Supplier Phone Number 800-222-0477
Emergency Telephone Number Chemtrec: 800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS Label elements, including precautionary statements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Blue

Physical State Liquid

Odor Mask



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Precautionary Statements - Prevention

Obtain special instructions before use

Precautionary Statements - Response

None

Precautionary Statements - Storage

None

Precautionary Statements - Disposal

None

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

0.47% of the mixture consists of ingredient(s) of unknown toxicity

Other information

May cause slight eye irritation

Interactions with Other Chemicals

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Cocamidopropyl betaine	61789-40-0	3 - 7	*

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES**First aid measures****Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and If irritation persists consult a doctor/physician.

Skin Contact

Wash off immediately with soap and plenty of water for at least 15 minutes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.

Inhalation

Remove to fresh air.

Ingestion

Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person.



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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**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical

No information available.

Hazardous Combustion Products

Carbon oxides.

Explosion Data**Sensitivity to Mechanical Impact** No.**Sensitivity to Static Discharge** No.**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.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal Precautions** Avoid contact with eyes.**Environmental Precautions****Environmental Precautions** Refer to protective measures listed in Sections 7 and 8.**Methods and material for containment and cleaning up****Methods for Containment** Prevent further leakage or spillage if safe to do so.**Methods for cleaning up** Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

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7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed.

Incompatible Products None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethyl alcohol 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

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits 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)

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection No special protective equipment required.

Skin and Body Protection No special protective equipment required.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State Liquid



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Appearance	Water white	Odor	Mask
Color	Blue	Odor Threshold	No information available
Property	Values	Remarks/ Method	
pH	10.0	None known	
Melting / freezing point	No data available	None known	
Boiling point / boiling range	No data available	None known	
Flash Point	98°C / >210 °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	1.02	None known	
Water Solubility	Soluble 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		
<u>Other Information</u>			
Softening Point	No data available		
VOC Content (%)	No data available		
Particle Size	No data available		
Particle Size Distribution			

10. STABILITY AND REACTIVITY**Reactivity**

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

None known based on information supplied.

Incompatible materials

None known based on information supplied.

Hazardous Decomposition Products

Carbon oxides.



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11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product 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 64-17-5	-	-	= 124.7 mg/L (Rat) 4 h

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. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethyl alcohol 64-17-5	A3	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to 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.



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Chronic Toxicity No known effect based on information supplied. Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage.

Target Organ Effects None known.

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
Not applicable

12. ECOLOGICAL INFORMATION**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Ethyl alcohol 64-17-5		96h LC50: > 100 mg/L (Pimephales promelas) 96h LC50: 13400 - 15100 mg/L (Pimephales promelas) 96h LC50: 12.0 - 16.0 mL/L (Oncorhynchus mykiss)	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	48h LC50: 9268 - 14221 mg/L 48h EC50: = 2 mg/L 24h EC50: = 10800 mg/L

Persistence and Degradability

No information available.

Bioaccumulation

Chemical Name	Log Pow
Ethyl alcohol 64-17-5	-0.32

Other adverse effects

No information available.



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13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging

Dispose of contents/containers in accordance with local regulations.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Ethyl alcohol 64-17-5	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT Proper Shipping Name Hazard Class	NOT REGULATED NON REGULATED N/A
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA Proper Shipping Name Hazard Class	Not regulated NON REGULATED N/A
IMDG/IMO Hazard Class	Not regulated N/A
RID	Not regulated
ADR	Not regulated
ADN	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory



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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 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

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (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)

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

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals. Ethyl alcohol is only a considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage.

Canada

WHMIS Hazard Class

Non-controlled

16. OTHER INFORMATION

NFPA	Health Hazards 1	Flammability 1	Instability 0	Physical and Chemical Hazards - Personal Protection X
HMIS	Health Hazards 1	Flammability 1	Physical Hazard 0	

Revision Date 17-Nov-2015
Revision Note No information available



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Revision Date 17-Nov-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 Safety Data Sheet

Issued to : Landscape Structures Inc.
601 7th Street South, Rt.3
P.O. Box 198

Delano, MN 55328

Attention: : Material Safety Data Sheet Coordinator

The attached Material Safety Data Sheet relates potential hazards and recommended practices for safe handling of the product that you purchased from Raabe Corporation.

We urge you and your employees to review the entire MSDS prior to handling, use or disposal of the product.

You are required to keep this MSDS on file for reference by company employees or government regulatory officials.

If you resell or distribute this product, you must furnish a copy of the MSDS to your customer.

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL PRODUCT IDENTIFICATION:

PRODUCT CODE : 62285 033297 406
PRODUCT NAME : 101219-00-001 BLUE IF-7348M
PRODUCT CLASS : Aerosol Touch-Up

MSDS PREPARATION DATE : 03/01/2005

MANUFACTURER IDENTIFICATION:

RAABE COMPANY LLC
PO BOX 1090

MENOMONEE FALLS WI 53052

CUSTOMER IDENTIFICATION:

Landscape Structures Inc.
601 7th Street South, Rt.3
P.O. Box 198
Delano, MN 55328

EMERGENCY TELEPHONE NUMBERS:

24 HOURS A DAY - CALL CHEMTREC : 800-424-9300
INTERNATIONAL CALLS TO CHEMTREC : 703-527-3887
8 AM TO 4:30 PM CENTRAL TIME : 262-255-9500

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

1 ETHYLBENZENE
CAS# 100-41-4
ETHYLBENZENE

PCT BY WT: 2.2920 VAPOR PRESSURE: 19.000 MMHG @ 68F LEL 1.20
EXPOSURE LIMIT:
ACGIH TLV-TWA 100 ppm
ACGIH TLV-STEL 125 ppm
OSHA PEL-TWA 100 ppm
OSHA PEL-STEL 125 ppm
OTHER IARC (2B), CALIFORNIA PROP 65 (6/11/04)

2 N-BUTANE
CAS# 106-97-8
N-BUTANE
PCT BY WT: 6.0000 VAPOR PRESSURE: 879.100 MMHG @ 68F LEL 1.80
EXPOSURE LIMIT:
ACGIH TLV-TWA 800 ppm
ACGIH TLV-STEL NO INFO
OSHA PEL-TWA 800 ppm
COMPANY N.E.

3 PROPANE
CAS# 74-98-6
PROPANE
PCT BY WT: 19.0000 VAPOR PRESSURE: 5585.200 MMHG @ 68F LEL 2.20
EXPOSURE LIMIT:
ACGIH TLV-TWA 1000 ppm
ACGIH TLV-STEL NO INFORMATION

4 TITANIUM DIOXIDE
CAS# 13463-67-7
TITANIUM DIOXIDE
PCT BY WT: 1.0000
EXPOSURE LIMIT:
ACGIH TLV-TWA 10 mg/m3
ACGIH TLV-STEL NO INFO
OSHA PEL-TWA 10 mg/m3
COMPANY N.E.

5 XYLENE
CAS# 1330-20-7
XYLENE
PCT BY WT: 10.0000 VAPOR PRESSURE: 6.600 MMHG @ 68F LEL 1.00
EXPOSURE LIMIT:
ACGIH TLV-TWA 100 ppm
ACGIH TLV-STEL 150 ppm
OSHA PEL-TWA 100 ppm
OSHA PEL-STEL 150 ppm
COMPANY N.E.
LD50 (ORAL) 4300 mg/kg
LD50 (DERMAL) 1700 mg/kg
LC50 18892 mg/m3

6 Pigment Blue 15:2
CAS# 147-14-8
Copper Phthalocyanine
PCT BY WT: 1.0000

7 ACETONE
CAS# 67-64-1

ACETONE

PCT BY WT: 37.0000 VAPOR PRESSURE: 231.000 MMHG @ 68F LEL 2.60

EXPOSURE LIMIT:

ACGIH TLV-TWA 750 ppm
ACGIH TLV-STEL 1000 ppm
OSHA PEL-TWA 750 ppm
OSHA PEL-STEL 1000 ppm
COMPANY N.E.

8 GLYCOL ETHER PM ACETATE

CAS# 108-65-6

PROPYLENE GLYCOL METHYL ETHER ACETATE

PCT BY WT: 10.0000 VAPOR PRESSURE: 3.700 MMHG @ 68F LEL 1.30

EXPOSURE LIMIT:

ACGIH TLV-TWA NOT ESTABLISHED
ACGIH TLV-STEL NOT ESTABLISHED

This product contains one or more reported carcinogens or suspected carcinogens which are noted NTP, IARC, or OSHA-Z in the other limits recommended column.

This substance is classified as a hazardous air pollutant.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

May be fatal if swallowed.
Harmful if inhaled.
Harmful if absorbed through skin.
Causes eye irritation.
Causes skin irritation.
Vapors irritating to eyes and respiratory tract.
Extremely flammable liquid and vapor.
Vapors may cause flash fire or explosion.
Extremely flammable aerosol.
Contents under pressure.

EYE:

May cause severe eye irritation.

SKIN:

May cause skin irritation.
Prolonged contact with the skin can cause chemical burns.
Harmful if absorbed through the skin.
Material may aggravate an existing dermatitis.

INHALATION:

Exposure to high concentrations of vapors may cause dizziness, breathing difficulty, headaches or respiratory irritation.
Extremely high concentrations may cause drowsiness, staggering, confusion, unconsciousness, coma or death.
Excessive inhalation of vapors can cause nasal and respiratory irritation.
Liquid or vapor may be irritating to skin, eyes, throat or lungs.
Intentional misuse by deliberately concentrating and inhaling the contents of this product can be harmful or fatal.

INGESTION:

Moderately toxic. May cause stomach discomfort, nausea, vomiting, diarrhea, and narcosis.
Aspiration of material into the lungs if swallowed or if vomiting occurs can cause chemical pneumonitis which can be fatal.
May cause nausea, vomiting and diarrhea.

CHRONIC EFFECTS:

Chronic overexposure to a component or components in this material has been found to cause the following effects in laboratory animals:

- Kidney damage
- Eye damage
- Lung damage
- Liver damage
- Spleen damage
- Anemia
- Red blood cell damage

Chronic overexposure to a component or components in this product has been suggested as a cause of the following effects in humans:

Cardiac abnormalities

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Rats exposed to titanium dioxide dust at 250 mg/m³ developed lung cancer, however, such exposure levels are not attainable in the workplace with this material.

In February 2000 the International Agency for Research on Cancer (IARC) classified ethylbenzene as possibly carcinogenic to humans (Group 2B) on the basis of sufficient evidence for carcinogenicity in experimental animals but inadequate evidence for cancer in humans.

SECTION 4 - FIRST AID MEASURES

EYE CONTACT:

Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

Flush with large quantities of water for 15 minutes.

SKIN CONTACT:

Wash thoroughly with soap and water and seek medical attention if irritation persists. Remove contaminated clothing. Launder contaminated clothing before reuse.

INHALATION:

For inhalation overexposure move person to fresh air. If breathing stops, apply artificial respiration and seek medical attention.

INGESTION:

Since this product may contain materials which can cause lung damage if aspirated into the lungs, the decision whether to induce vomiting or not must be made by a physician after careful consideration of all materials ingested.

SECTION 5 - FIRE FIGHTING MEASURES

FIRE AND EXPLOSIVE PROPERTIES OF THE PRODUCT:

Flashpoint : Less Than -25 °F
Explosion Level : Low (LEL) - 1.0
High (UEL) - 13.1

EXTINGUISHING MEDIA:

Use Dry Chemical, Carbon Dioxide or Chemical Foam.

FIRE-FIGHTING PROCEDURES AND EQUIPMENT:

Keep containers tightly closed. Isolate from heat, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Contents under pressure. Do not use or store near sources of heat, sparks or open flame. Keep away from any source of heat such as sunlight, heaters or stoves that could cause the container to burst. Do not puncture or incinerate. Do not crush or place in a garbage compactor. Do not store above 120 degrees F. Aerosol containers may explode when exposed to extreme heat. Product vapors are heavier than air and may travel a long distance to a source of ignition and flash back. Full protective equipment including self-contained breathing apparatus to avoid inhalation of vapors should be used. Water spray should not be used except to keep down vapors or cool closed containers to prevent build-up of pressure. If water is used, fog nozzles are preferred.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

CLEAN-UP AND CONTAINMENT:

Remove all sources of ignition. Avoid heat, sparks, flames and anything which could cause fire. Ventilate area of spill and adjacent low lying areas. Avoid breathing solvent vapors. Remove with inert absorbent materials and non-sparking tools.

SECTION 7 - HANDLING AND STORAGE

HANDLING:

Wash hands thoroughly after handling. This product contains chemical(s) which are listed on California's proposition 65 list. If the product is to be sold or used in California the following warning statement must appear on the label: Warning! This product contains a chemical or chemicals known to the State of California to cause cancer.

STORAGE:

Store in a cool dry area with ventilation suitable for storing materials shown in section 2. Keep away from heat, sparks and flame. Store in a cool place away from direct sunlight or any source of ignition. Do not store at temperatures above 120 degrees F.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

ENGINEERING CONTROLS:

Sufficient ventilation, in volume and pattern, should be provided to keep air contamination below current applicable OSHA permissible exposure limit or ACGIH's TLV limit.

RESPIRATORY PROTECTION:

If workplace exposure limits are exceeded for any component (see section 2 for hazardous components and exposure limits), a NIOSH/OSHA approved respirator suitable for components listed is recommended.

SKIN PROTECTION:

Chemical resistant plastic or rubber gloves recommended for prolonged or repeated contact.

EYE PROTECTION:

Chemical goggles with side shields or face shield recommended if contact

CONSUMER COMMODITY, ORM-D

Ground shipment of liquid paint in containers more than 1 quart:

PAINT, FLAMMABLE LIQUID, UN1263, CLASS 3, GROUP II

(Regulatory sources: DOT 49CFR 172.101)

Air shipment of limited or excepted quantities of aerosols or liquid paint in containers of 1 quart or less:

CONSUMER COMMODITY, ID 8000, CLASS 9 MISCELLANEOUS LABEL

(Regulatory sources: ATAI Quantity Exemptions - Table 2.8.4, 2.7.A, 2.7.5, Packaging Instruction: 910)

OR

AEROSOLS, FLAMMABLE, UN1950, CLASS 2.1 LABEL

(Regulatory sources: ATAI Quantity Exemptions - Table 2.9.1, 2.8.4, Packaging Instruction: Y203)

SECTION 15 - REGULATORY INFORMATION

SARA 313 INFORMATION:

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:

ETHYLBENZENE

CAS# 100-41-4 PCT BY WT: 2.2920

XYLENE

CAS# 1330-20-7 PCT BY WT: 9.9580

FEDERAL REGULATIONS:

TOXIC SUBSTANCES CONTROL ACT: The chemical substances in this product are listed on the TSCA Section 8 inventory.

STATE REGULATIONS:

NEW JERSEY RIGHT-TO-KNOW

The following non-hazardous ingredients are among the top five components in this product

CHEMICAL NAME	CAS NUMBER
ALKYD RESIN SOLIDS	NONE

PENNSYLVANIA RIGHT-TO-KNOW

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

CHEMICAL NAME	CAS NUMBER
ALKYD RESIN SOLIDS	NONE
Acrylic Polymer	Not Listed

INTERNATIONAL REGULATIONS:

CANADA: The chemical substances in this product are listed on the Canadian Domestic Substances List.

SECTION 16 - OTHER INFORMATION

The information contained on this MSDS is believed to be reliable and accurate. Due to the changing nature of government information, it is impossible to guarantee the accuracy of the information contained herein. Since the conditions of handling and use are beyond our control, we make

no guarantee of results and assume no liability for damages incurred by the use of this material. This information should not be regarded as legal advice or regulation. It is the responsibility of the user to comply with all Federal, State, and Local laws and regulations. For questions relating to specific aspects of the requirements and regulations consult the proper regulatory agency.

HMIS RATINGS:

HEALTH: 2* FLAMMABILITY: 4 REACTIVITY: 0 PERSONAL PROTECTION: G

Safety Data Sheet

2% AGAR

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: 2% AGAR
Recommended Use: Science education applications
Synonyms: None known
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

GHS Classification:

Other Safety Precautions: Not a dangerous substance according to GHS classification criteria.
No known OSHA hazards.

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Water	7732-18-5	98
Agar	9002-18-0	2

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.
Ingestion: If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media: Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: N/A
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: No adverse health affects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Do not allow the spilled product to enter public drainage system or open waterways.

Safety Data Sheet

Section 7

Handling and Storage

Handling: Do not ingest or take internally.
Storage: Keep container tightly closed in a cool, well-ventilated place.
Storage Code: Green - general chemical storage

Section 8

Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>	<u>OSHA PEL</u>		
	<u>(TWA)</u>	<u>(STEL)</u>	<u>(TWA)</u>	<u>(STEL)</u>
No data available	N/A	N/A	N/A	N/A

Control Parameters

Engineering Measures: No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: No respiratory protection required under normal conditions of use.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: Natural latex,, Natural rubber, Nitrile, Polyvinyl chloride

Section 9

Physical Data

Formula: See Section 3	Vapor Pressure: N/A
Molecular Weight: N/A	Evaporation Rate (BuAc=1): N/A
Appearance: Off-white to tan Solid	Vapor Density (Air=1): N/A
Odor: No data available	Specific Gravity: N/A
Odor Threshold: No data available	Solubility in Water: Slightly Soluble
pH: 5.0 - 7 at 15 g/l at 50 °C	Log Pow (calculated): No data available
Melting Point: No data available	Autoignition Temperature: No data available
Boiling Point: 100 C	Decomposition Temperature: No data available
Flash Point: No data available	Viscosity: 10
Flammable Limits in Air: N/A	Percent Volatile by Volume: 0%

Section 10

Reactivity Data

Reactivity: No data available

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: None known.

Incompatible Materials: Water-reactive materials

Hazardous Polymerization: Will not occur

Section 11

Toxicity Data

Routes of Entry: Inhalation and ingestion.

Symptoms (Acute): N/A

Delayed Effects: No data available

Acute Toxicity:
Chemical Name
Water

CAS Number
7732-18-5

Oral LD50
Oral LD50 Rat
90000 mg/kg

Dermal LD50

Inhalation LC50

Safety Data Sheet

Agar

9002-18-0

Oral LD50 Mouse
16000 mg/kg

Carcinogenicity:
Chemical Name
No data available

CAS Number

IARC
Not listed

NTP
Not listed

OSHA
Not listed

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.

Target Organ Effects:

Acute: See Section 2
Chronic: Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12

Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

Chemical Name
Water

CAS Number
7732-18-5

Eco Toxicity
No data available

Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14

Transport Information

Ground - DOT Proper Shipping Name:
N/A

Air - IATA Proper Shipping Name:
Not regulated for air transport by IATA.

Safety Data Sheet

Section 15

Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
No data available		No	No	No	No	No

Section 16

Additional Information

Revised: 09/12/2014

Replaces: 09/03/2014

Printed: 09-12-2014

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.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

Safety Data Sheet

Agarose

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: Agarose
Recommended Use: Science education applications
Synonyms: Agar-agar, neutral gelatin fraction
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

GHS Classification:

Other Safety Precautions: Not a dangerous substance according to GHS classification criteria.
No known OSHA hazards.

Acute Toxicity Oral Contains 100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Dermal Contains 100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Gas Contains 100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Vapor Contains 100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Dust/Mist Contains 100 % of the mixture consists of ingredient(s) of unknown toxicity

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Agarose, 100%	9012-36-6	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact: After contact with skin, wash immediately with plenty of water.
Ingestion: If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media: Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: N/A
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: No adverse health affects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS. Avoid creating and inhaling dust. Avoid contact with skin and eyes.

Safety Data Sheet

No special spill clean-up considerations. Collect and discard in regular trash. Reduce airborne dust and prevent scattering by moistening with water Vacuum or sweep up material and place in a disposal container

Section 7 Handling and Storage

Handling: Keep container dry.
Storage: Keep container tightly closed in a cool, well-ventilated place.
Storage Code: Green - general chemical storage

Section 8 Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
No data available	N/A	N/A	N/A	N/A

Control Parameters

Engineering Measures: No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: No respiratory protection required under normal conditions of use.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: Natural rubber, Neoprene, PVC or equivalent.

Section 9 Physical Data

Formula: A polysaccharide complex	Vapor Pressure: N/A
Molecular Weight: N/A	Evaporation Rate (BuAc=1): N/A
Appearance: White Powder	Vapor Density (Air=1): N/A
Odor: No data available	Specific Gravity: N/A
Odor Threshold: No data available	Solubility in Water: Slightly Soluble
pH: No data available	Log Pow (calculated): No data available
Melting Point: No data available	Autoignition Temperature: No data available
Boiling Point: No data available	Decomposition Temperature: No data available
Flash Point: No data available	Viscosity: No data available
Flammable Limits in Air: N/A	Percent Volatile by Volume: N/A

Section 10 Reactivity Data

Reactivity: No data available

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: None known.

Incompatible Materials: Strong oxidizing agents

Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry: Inhalation and ingestion.

Symptoms (Acute): Respiratory disorders, Eye disorders

Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
No data available	9012-36-6	Not determined	Not determined	Not determined

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
No data available	9012-36-6	Not listed	Not listed	Not listed

Safety Data Sheet

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.

Target Organ Effects:

Acute: See Section 2
Chronic: Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12

Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
N/A	9012-36-6	

Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14

Transport Information

Ground - DOT Proper Shipping Name:	Air - IATA Proper Shipping Name:
N/A	Not regulated for air transport by IATA.

Section 15

Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
No data available	9012-36-6	No	No	No	No	No

Section 16

Additional Information

Revised: 09/05/2014

Replaces: 09/05/2014

Printed: 09-11-2014

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Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

AJAX TRADITIONAL DISHWASHING HAND LIQUID ORANGE - PALMOLIVE TRADITIONAL DISHWASHING HAND LIQUID ORANGE

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version 1.0

SDS Number: 660000002334

Revision Date: 2016/02/25

SECTION 1. IDENTIFICATION

Product name : AJAX TRADITIONAL DISHWASHING HAND LIQUID
ORANGE - PALMOLIVE TRADITIONAL DISHWASHING
HAND LIQUID ORANGE

Product code : 200000049985
Material : B02928820048

Manufacturer or supplier's details

Company : Colgate-Palmolive Co
300 Park Avenue
New York, NY 10022

Telephone : US: Consumer Affairs - 1-800-468-6502

Emergency telephone number : For emergencies involving spill, leak, fire, exposure or accident call CHEMTREC (24hr) at (800) 424-9300 or (703) 527-3887.

Medical Emergency (24HR): For MEDICAL EMERGENCIES involving this product call:
(888) 489-3861

Recommended use of the chemical and restrictions on use

Recommended use : A formulated dishwashing liquid

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

Hazardous components

Chemical Name	CAS-No.	Concentration (% w/w)
LAURAMIDOPROPYLDIMETHYLAMINE OXIDE	61792-31-2	>= 1 - < 5
SODIUM CHLORIDE	7647-14-5	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

AJAX TRADITIONAL DISHWASHING HAND LIQUID ORANGE - PALMOLIVE TRADITIONAL DISHWASHING HAND LIQUID ORANGE

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version 1.0

SDS Number: 660000002334

Revision Date: 2016/02/25

- General advice : No hazards which require special first aid measures.
- If inhaled : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.
If symptoms persist, call a physician.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
- In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : None known.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Hazardous combustion products : No hazardous combustion products are known
- Further information : Standard procedure for chemical fires.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Environmental precautions : No special environmental precautions required.
- Methods and materials for containment and cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : For personal protection see section 8.

**AJAX TRADITIONAL DISHWASHING HAND LIQUID ORANGE -
PALMOLIVE TRADITIONAL DISHWASHING HAND LIQUID ORANGE**

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version 1.0

SDS Number: 660000002334

Revision Date: 2016/02/25

No special handling advice required.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.

Materials to avoid : No special restrictions on storage with other products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Components	CAS-No.
LAURAMIDOPROPYLDIMET HYLAMINE OXIDE	61792-31-2
SODIUM CHLORIDE	7647-14-5

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection

Remarks : For prolonged or repeated contact use protective gloves.

Eye protection : Safety glasses

Skin and body protection : Protective suit

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : orange

pH : 7.2

Flash point : > 200 °F

Density : 1.009 g/cm³**SECTION 10. STABILITY AND REACTIVITY**

AJAX TRADITIONAL DISHWASHING HAND LIQUID ORANGE - PALMOLIVE TRADITIONAL DISHWASHING HAND LIQUID ORANGE

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version 1.0

SDS Number: 660000002334

Revision Date: 2016/02/25

Reactivity	: Stable under recommended storage conditions.
Chemical stability	: No decomposition if stored and applied as directed.
Possibility of hazardous reactions	: No hazards to be specially mentioned.
Conditions to avoid	: No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute dermal toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:

LAURAMIDOPROPYLDIMETHYLAMINE OXIDE:

Acute oral toxicity	: LC50 (Rat): 500 - 1,000 mg/kg Method: OECD Test Guideline 423
Acute inhalation toxicity	: Remarks: No data available
Acute dermal toxicity	: LC50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402

SODIUM CHLORIDE:

Acute oral toxicity	: LD50 (Rat): 3,550 mg/kg
Acute inhalation toxicity	: LC50 (Rabbit): > 42,000 mg/l Exposure time: 1 h Test atmosphere: No information available. Method: No information available.
Acute dermal toxicity	: LD50 (Rabbit): > 10,000 mg/kg Method: No information available.

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks: According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

AJAX TRADITIONAL DISHWASHING HAND LIQUID ORANGE - PALMOLIVE TRADITIONAL DISHWASHING HAND LIQUID ORANGE

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version 1.0 SDS Number: 660000002334 Revision Date: 2016/02/25

Components:

LAURAMIDOPROPYLDIMETHYLAMINE OXIDE:

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: Mild skin irritation

SODIUM CHLORIDE:

Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: According to the classification criteria of the European Union, the product is not considered as being an eye irritant.

Components:

LAURAMIDOPROPYLDIMETHYLAMINE OXIDE:

Species: Rabbit
Result: Irritation to eyes, reversing within 21 days
Exposure time: 1 h
Method: OECD Test Guideline 405

SODIUM CHLORIDE:

Result: Mild eye irritation

Respiratory or skin sensitisation

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

Product:

Remarks: No data available

Components:

LAURAMIDOPROPYLDIMETHYLAMINE OXIDE:

Exposure routes: Inhalation
Remarks: No data available

Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

SODIUM CHLORIDE:

Exposure routes: Inhalation
Remarks: No data available



AJAX TRADITIONAL DISHWASHING HAND LIQUID ORANGE - PALMOLIVE TRADITIONAL DISHWASHING HAND LIQUID ORANGE

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version 1.0

SDS Number: 660000002334

Revision Date: 2016/02/25

Exposure routes: Dermal
Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

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 component 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 component 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.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: This product has not been tested as a whole. However, this formula was reviewed by expert toxicologists in the Product Safety Assurance Department of Colgate-Palmolive and is determined to be safe for its intended use. This review has taken into consideration available safety-related information including information on individual ingredients, similar formulas and potential ingredient interactions. This review is a component of the hazard determination used to prepare the statements in Section 3 of the SDS.

SECTION 12. ECOLOGICAL INFORMATION

The product has not been tested as a whole for environmental toxicity. However, environmental information on the ingredients in this product have been reviewed by the Environmental, Health and Safety group of Colgate-Palmolive and determined to have an acceptable environmental profile. This evaluation is based on available information on individual ingredients, interactions of ingredients, and similar

AJAX TRADITIONAL DISHWASHING HAND LIQUID ORANGE - PALMOLIVE TRADITIONAL DISHWASHING HAND LIQUID ORANGE

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Version 1.0

SDS Number: 660000002334

Revision Date: 2016/02/25

ingredients. Biodegradability claims are supported by data on ingredients (i.e., surfactants are biodegradable) or testing conducted on the final product (i.e., This product is biodegradable).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

- Waste from residues : Offer surplus and non-recyclable solutions to a licensed disposal company.
- Contaminated packaging : Empty remaining contents.
 Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

- DOT** : Not regulated.
- TDG** : Not regulated.
- IATA** : Not regulated.
- IMDG** : Not regulated.
- ADR** : NOT REGULATED.

International Regulation

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

National Regulations

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Component RQ (lbs)
Sulfuric Acid	7664-93-9	1000	*
Sulfuric Acid	7664-93-9	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

AJAX TRADITIONAL DISHWASHING HAND LIQUID ORANGE - PALMOLIVE TRADITIONAL DISHWASHING HAND LIQUID ORANGE

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version 1.0

SDS Number: 66000002334

Revision Date: 2016/02/25

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sulfuric Acid	7664-93-9	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

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.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Sulfuric Acid	SULFURIC ACID
SODIUM HYDROXIDE	1310-73-2

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Sulfuric Acid	SULFURIC ACID
SODIUM HYDROXIDE	1310-73-2

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

Sulfuric Acid	SULFURIC ACID	0 - 0.1 %
---------------	---------------	-----------

Pennsylvania Right To Know

Water	WATER	70 - 90 %
C12-C15 0.6EO Ammonium Sulfate	Not Assigned	5 - 10 %
AMMONIUM SULFATE	7783-20-2	0 - 0.1 %

New Jersey Right To Know

Water	WATER	70 - 90 %
C12-C15 0.6EO Ammonium Sulfate	Not Assigned	5 - 10 %

**AJAX TRADITIONAL DISHWASHING HAND LIQUID ORANGE -
PALMOLIVE TRADITIONAL DISHWASHING HAND LIQUID ORANGE**

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version 1.0

SDS Number: 66000002334

Revision Date: 2016/02/25

LAURAMIDOPROPYLDIMETHYLAMINE OXIDE	61792-31-2	1 - 5 %
SODIUM CHLORIDE	7647-14-5	1 - 5 %

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

TSCA : All ingredients in this product are listed on the TSCA Inventory or are not required to be listed on the TSCA Inventory.

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION**Full text of other abbreviations**

(Q)SAR - (Quantitative) Structure Activity Relationship; ASTM - American Society for the Testing of Materials; bw - Body weight; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; DOT - Department of Transportation; EHS - Extremely Hazardous Substance; HMIS - Hazardous Materials Identification System; MSHA - Mine Safety and Health Administration; NFPA - National Fire Protection Association; RCRA - Resource Conservation and Recovery Act; RQ - Reportable Quantity; SARA - Superfund Amendments and Reauthorization Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice; ERG - Emergency Response Guide; NTP - National Toxicology Program; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods



AJAX CLEANER POWDER-OXYGEN BLEACH

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Version 1.1

SDS Number: 660000000222

Revision Date: 05/14/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : AJAX CLEANER POWDER-OXYGEN BLEACH

Product code : 200000017621

: B01809190000

Manufacturer or supplier's details

Company : Colgate-Palmolive Co
Commerical Consumer Group
191 East Hanover Avenue
Morristown, NJ 07960-3151

Telephone : US: Consumer Affairs - 1-800-468-6502

Emergency telephone number : For emergencies involving spill, leak, fire, exposure or accident call CHEMTREC (24hr) at (800) 424-9300 or (703) 527-3887.

Medical Emergency (24HR): For MEDICAL EMERGENCIES involving this product call: (888) 489-3861

Recommended use of the chemical and restrictions on use

Recommended use : A formulated multi-purpose cleaner

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	powder
Colour	off-white

GHS Classification

Acute toxicity (Inhalation) : Category 4

GHS Label element

Hazard pictograms :



Signal word : Warning

Hazard statements : H332 Harmful if inhaled.



AJAX CLEANER POWDER-OXYGEN BLEACH

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Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P271 Use only outdoors or in a well-ventilated area.
Response:
P304 + P340 + P312 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.

Potential Health Effects

Inhalation : May be harmful if inhaled.
Skin : May cause skin irritation upon prolonged contact.
Eyes : Causes eye irritation on direct contact.
Ingestion : May be harmful if swallowed in large quantities.
Aggravated Medical Condition : None known.

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.

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.

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.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
LIMESTONE	1317-65-3	>= 90 - <= 100
SODIUM CARBONATE	497-19-8	>= 5 - < 10

SECTION 4. FIRST AID MEASURES

If inhaled : Remove victim to fresh air. Get medical attention, if symptoms persist.



AJAX CLEANER POWDER-OXYGEN BLEACH

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- In case of skin contact : Flush skin with large amounts of water. If irritation develops and persists, get medical attention.
- In case of eye contact : Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.
- If swallowed : Drink 8 ounces of clear water. Get medical attention.
- Most important symptoms and effects, both acute and delayed : Harmful if inhaled.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Hazardous combustion products : No hazardous combustion products are known
- Special protective equipment for firefighters : Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protection recommended in Section 8 of the SDS.
- Methods and materials for containment and cleaning up : Cover with inert, absorbent material and remove to disposal container. Spill area may be slippery. Flush with plenty of water.

SECTION 7. HANDLING AND STORAGE

- Conditions for safe storage : Store at controlled room temperature at 20-25°C (68-77°F).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
LIMESTONE	1317-65-3	TWA (Respirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (Respirable)	5 mg/m3	NIOSH REL



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		TWA (total)	10 mg/m ³	NIOSH REL
		TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
		TWA (Total dust)	15 mg/m ³	OSHA P0
		TWA (respirable dust fraction)	5 mg/m ³	OSHA P0

Engineering measures : In an industrial work environment, no special precautions or control measures are required.

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.

Protective measures : In an industrial work environment, if a splash is likely, chemical goggles may be needed. Prolonged skin contact may require protective gloves. For consumer use, no unusual precautions are necessary.

Hygiene measures : In an industrial work environment, avoid eye and prolonged skin contact.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : powder

Colour : off-white

pH : 10.4

Flash point : No data available

Density : 1.04 g/cm³

SECTION 10. STABILITY AND REACTIVITY



AJAX CLEANER POWDER-OXYGEN BLEACH

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- Possibility of hazardous reactions : Hazardous polymerisation does not occur.
- Incompatible materials : Strong oxidizing agents
- Hazardous decomposition products : None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if inhaled.

Product:

Acute oral toxicity : Acute toxicity estimate : > 5,000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 1.63 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Components:

LIMESTONE:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 420

Acute inhalation toxicity : LC50 (Rabbit): > 3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402

SODIUM CARBONATE:

Acute oral toxicity : LD50 (Rat): 2,800 mg/kg

Acute inhalation toxicity : LC50 (Rabbit): 2.3 mg/l
Exposure time: 2 h
Test atmosphere: No information available.
Method: No information available.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Method: No information available.

Skin corrosion/irritation

Not classified based on available information.

Components:

LIMESTONE:

AJAX CLEANER POWDER-OXYGEN BLEACH

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Result: No skin irritation

SODIUM CARBONATE:

Remarks: No data available

Serious eye damage/eye irritation

Not classified based on available information.

Components:

LIMESTONE:

Result: No eye irritation

SODIUM CARBONATE:

Result: Irritation to eyes, reversing within 21 days

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Components:

LIMESTONE:

Exposure routes: Inhalation

Result: Does not cause respiratory sensitisation.

Exposure routes: Dermal

Result: Does not cause skin sensitisation.

SODIUM CARBONATE:

Exposure routes: Inhalation

Remarks: No data available

Exposure routes: Dermal

Remarks: No data available

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.



AJAX CLEANER POWDER-OXYGEN BLEACH

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Version 1.1

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Revision Date: 05/14/2015

Further information

Product:

Remarks: This product has not been tested as a whole. However, this formula was reviewed by expert toxicologists in the Product Safety Assurance Department of Colgate-Palmolive and is determined to be safe for its intended use. This review has taken into consideration available safety-related information including information on individual ingredients, similar formulas and potential ingredient interactions. This review is a component of the hazard determination used to prepare the statements in Section 3 of the SDS.

SECTION 12. ECOLOGICAL INFORMATION

The product has not been tested as a whole for environmental toxicity. However, environmental information on the ingredients in this product have been reviewed by the Environmental, Health and Safety group of Colgate-Palmolive and determined to have an acceptable environmental profile. This evaluation is based on available information on individual ingredients, interactions of ingredients, and similar ingredients. Biodegradability claims are supported by data on ingredients (i.e., surfactants are biodegradable) or testing conducted on the final product (i.e., This product is biodegradable).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environment agency for specific rules). Do not dump in sewers, any body of water or on the ground.

SECTION 14. TRANSPORT INFORMATION

DOT : Not regulated.

TDG : Not regulated.

IATA : Not regulated.

IMDG : Not regulated.

International Regulation

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

SECTION 15. REGULATORY INFORMATION



AJAX CLEANER POWDER-OXYGEN BLEACH

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OSHA Hazards : Combustible dust, Moderate skin irritant, Severe eye irritant

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SODIUM DODECYL BENZENE SULFONATE	25155-30-0	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SULFUR DIOXIDE	7446-09-5	500	*

*: Calculated RQ exceeds reasonably attainable upper limit.

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.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMi Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

SODIUM DODECYL BENZENE SULFONATE 25155-30-0
Sulfuric Acid SULFURIC ACID

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

SODIUM DODECYL BENZENE SULFONATE 25155-30-0
Sulfuric Acid SULFURIC ACID

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

Massachusetts Right To Know



AJAX CLEANER POWDER-OXYGEN BLEACH

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LIMESTONE	1317-65-3
SODIUM DODECYL BENZENE SULFONATE	25155-30-0
Sulfuric Acid	SULFURIC ACID
SULFUR DIOXIDE	7446-09-5

Pennsylvania Right To Know

LIMESTONE	1317-65-3
SODIUM CARBONATE	497-19-8
SODIUM DODECYL BENZENE SULFONATE	25155-30-0
Sulfuric Acid	SULFURIC ACID
SULFUR DIOXIDE	7446-09-5
SODIUM SULFATE	7757-82-6

New Jersey Right To Know

LIMESTONE	1317-65-3
SODIUM CARBONATE	497-19-8
SODIUM DODECYL BENZENE SULFONATE	25155-30-0

California Prop 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

TSCA : All ingredients in this product are listed on the TSCA Inventory or are not required to be listed on the TSCA Inventory.

Inventories

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



AJAX CLEANER POWDER-OXYGEN BLEACH

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Version 1.1

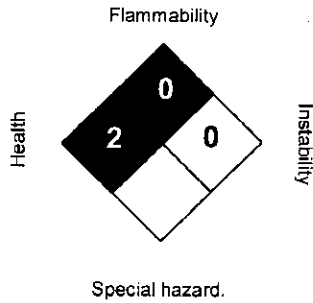
SDS Number: 66000000222

Revision Date: 05/14/2015

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Disclaimer: The information on this sheet is limited to the material identified and is believed by the Colgate-Palmolive Company to be correct based on its knowledge and information as of the date noted. Colgate makes no representation, guarantee or warranty, expressed or implied, as to the accuracy, reliability or completeness of the information and assumes no responsibility for injury, damage or loss resulting from the use of the material.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015

Revision : 12.10.2015

Trade Name: Alconox**1 Identification of the substance/mixture and of the supplier****1.1 Product identifier****Trade Name:** Alconox**Synonyms:****Product number:** Alconox**1.2 Application of the substance / the mixture :** Cleaning material/Detergent**1.3 Details of the supplier of the Safety Data Sheet**

Manufacturer	Supplier
Alconox, Inc. 30 Glenn Street White Plains, NY 10603 1-914-948-4040	Not Applicable

Emergency telephone number:**ChemTel Inc**

North America: 1-800-255-3924

International: 01-813-248-0585

2 Hazards identification**2.1 Classification of the substance or mixture:**

In compliance with EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments.

Hazard-determining components of labeling:

Tetrasodium Pyrophosphate
Sodium tripolyphosphate
Sodium Alkylbenzene Sulfonate

2.2 Label elements:

Skin irritation, category 2.

Eye irritation, category 2A.

Hazard pictograms:**Signal word:** Warning**Hazard statements:**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements:

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 If on skin: Wash with soap and water.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P321 Specific treatment (see supplemental first aid instructions on this label).

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P501 Dispose of contents and container as instructed in Section 13.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015

Revision : 12.10.2015

Trade Name: Alconox**Additional information:** None.**Hazard description****Hazards Not Otherwise Classified (HNOC):** None**Information concerning particular hazards for humans and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments, and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

3 Composition/information on ingredients**3.1 Chemical characterization :** None**3.2 Description :** None**3.3 Hazardous components (percentages by weight)**

Identification	Chemical Name	Classification	Wt. %
CAS number: 7758-29-4	Sodium tripolyphosphate	Skin Irrit. 2 ; H315 Eye Irrit. 2; H319	12-28
CAS number: 68081-81-2	Sodium Alkylbenzene Sulfonate	Acute Tox. 4; H303 Skin Irrit. 2 ; H315 Eye Irrit. 2; H319	8-22
CAS number: 7722-88-5	Tetrasodium Pyrophosphate	Skin Irrit. 2 ; H315 Eye Irrit. 2; H319	2-16

3.4 Additional Information : None.**4 First aid measures****4.1 Description of first aid measures****General information:** None.**After inhalation:**

Maintain an unobstructed airway.

Loosen clothing as necessary and position individual in a comfortable position.

After skin contact:

Wash affected area with soap and water.

Seek medical attention if symptoms develop or persist.

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes.

Remove contact lens(es) if able to do so during rinsing.

Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly.

Seek medical attention if irritation, discomfort, or vomiting persists.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015**Revision :** 12.10.2015**Trade Name:** Alconox**4.2 Most important symptoms and effects, both acute and delayed**

None

4.3 Indication of any immediate medical attention and special treatment needed:

No additional information.

5 Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents:**

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

For safety reasons unsuitable extinguishing agents : None**5.2 Special hazards arising from the substance or mixture :**

Thermal decomposition can lead to release of irritating gases and vapors.

5.3 Advice for firefighters**Protective equipment:**

Wear protective eye wear, gloves and clothing.

Refer to Section 8.

5.4 Additional information :

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols.

Avoid contact with skin, eyes and clothing.

6 Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures :**

Ensure adequate ventilation.

Ensure air handling systems are operational.

6.2 Environmental precautions :

Should not be released into the environment.

Prevent from reaching drains, sewer or waterway.

6.3 Methods and material for containment and cleaning up :

Wear protective eye wear, gloves and clothing.

6.4 Reference to other sections : None**7 Handling and storage****7.1 Precautions for safe handling :**

Avoid breathing mist or vapor.

Do not eat, drink, smoke or use personal products when handling chemical substances.

7.2 Conditions for safe storage, including any incompatibilities :

Store in a cool, well-ventilated area.

7.3 Specific end use(s):

No additional information.

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Effective date: 12.08.2015

Revision : 12.10.2015

Trade Name: Alconox

8 Exposure controls/personal protection
--



8.1 Control parameters :

7722-88-5, Tetrasodium Pyrophosphate, OSHA TWA 5 mg/m3.

8.2 Exposure controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Respiratory protection:

Not needed under normal conditions.

Protection of skin:

Select glove material impermeable and resistant to the substance.

Eye protection:

Safety goggles or glasses, or appropriate eye protection.

General hygienic measures:

Wash hands before breaks and at the end of work.

Avoid contact with skin, eyes and clothing.

9 Physical and chemical properties

Appearance (physical state, color):	White and cream colored flakes - powder	Explosion limit lower: Explosion limit upper:	Not determined or not available. Not determined or not available.
Odor:	Not determined or not available.	Vapor pressure at 20°C:	Not determined or not available.
Odor threshold:	Not determined or not available.	Vapor density:	Not determined or not available.
pH-value:	9.5 (aqueous solution)	Relative density:	Not determined or not available.
Melting/Freezing point:	Not determined or not available.	Solubilities:	Not determined or not available.
Boiling point/Boiling range:	Not determined or not available.	Partition coefficient (n-octanol/water):	Not determined or not available.
Flash point (closed cup):	Not determined or not available.	Auto/Self-ignition temperature:	Not determined or not available.
Evaporation rate:	Not determined or not available.	Decomposition temperature:	Not determined or not available.

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Effective date: 12.08.2015**Revision :** 12.10.2015

Trade Name: Alconox			
Flammability (solid, gaseous):	Not determined or not available.	Viscosity:	a. Kinematic: Not determined or not available. b. Dynamic: Not determined or not available.
Density at 20°C:	Not determined or not available.		

10 Stability and reactivity

- 10.1 Reactivity :** None
- 10.2 Chemical stability :** None
- 10.3 Possibility hazardous reactions :** None
- 10.4 Conditions to avoid :** None
- 10.5 Incompatible materials :** None
- 10.6 Hazardous decomposition products :** None

11 Toxicological information**11.1 Information on toxicological effects :****Acute Toxicity:****Oral:**

: LD50 > 5000 mg/kg oral rat - Product .

Chronic Toxicity: No additional information.**Skin corrosion/irritation:**

Sodium Alkylbenzene Sulfonate: Causes skin irritation. .

Serious eye damage/irritation:

Sodium Alkylbenzene Sulfonate: Causes serious eye irritation .

Tetrasodium Pyrophosphate: Rabbit - Risk of serious damage to eyes .

Respiratory or skin sensitization: No additional information.**Carcinogenicity:** No additional information.**IARC (International Agency for Research on Cancer):** None of the ingredients are listed.**NTP (National Toxicology Program):** None of the ingredients are listed.**Germ cell mutagenicity:** No additional information.**Reproductive toxicity:** No additional information.**STOT-single and repeated exposure:** No additional information.**Additional toxicological information:** No additional information.**12 Ecological information**

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according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015**Revision :** 12.10.2015**Trade Name:** Alconox**12.1 Toxicity:**

Sodium Alkylbenzene Sulfonate: Fish, LC50 1.67 mg/l, 96 hours.
 Sodium Alkylbenzene Sulfonate: Aquatic invertebrates, EC50 Daphnia 2.4 mg/l, 48 hours.
 Sodium Alkylbenzene Sulfonate: Aquatic Plants, EC50 Algae 29 mg/l, 96 hours.
 Tetrasodium Pyrophosphate: Fish, LC50 - other fish - 1,380 mg/l - 96 h.
 Tetrasodium Pyrophosphate: Aquatic invertebrates, EC50 - Daphnia magna (Water flea) - 391 mg/l - 48 h.

12.2 Persistence and degradability: No additional information.**12.3 Bioaccumulative potential:** No additional information.**12.4 Mobility in soil:** No additional information.**General notes:** No additional information.**12.5 Results of PBT and vPvB assessment:****PBT:** No additional information.**vPvB:** No additional information.**12.6 Other adverse effects:** No additional information.**13 Disposal considerations****13.1 Waste treatment methods (consult local, regional and national authorities for proper disposal)****Relevant Information:**

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities. (US 40CFR262.11).

14 Transport information

14.1 UN Number: None
 ADR, ADN, DOT, IMDG, IATA

14.2 UN Proper shipping name: None
 ADR, ADN, DOT, IMDG, IATA

14.3 Transport hazard classes:
 ADR, ADN, DOT, IMDG, IATA

Class:	None
Label:	None
LTD. QTY:	None

US DOT
Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: None
Hazard Class: None
Packing Group: None
Marine Pollutant (if applicable): No additional information.

Non Bulk:
RQ (if applicable): None
Proper shipping Name: None
Hazard Class: None
Packing Group: None
Marine Pollutant (if applicable): No additional information.

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Trade Name: Alconox	
Comments: None	Comments: None
14.4 Packing group: ADR, ADN, DOT, IMDG, IATA	None
14.5 Environmental hazards :	None
14.6 Special precautions for user: Danger code (Kemler): EMS number: Segregation groups:	None None None None
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.	
14.8 Transport/Additional information: Transport category: Tunnel restriction code: UN "Model Regulation":	
	None None None

15 Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.****North American**

SARA Section 313 (specific toxic chemical listings): None of the ingredients are listed. Section 302 (extremely hazardous substances): None of the ingredients are listed.
CERCLA (Comprehensive Environmental Response, Clean up and Liability Act) Reportable Spill Quantity: None of the ingredients are listed.
TSCA (Toxic Substances Control Act): Inventory: All ingredients are listed. Rules and Orders: Not applicable.
Proposition 65 (California): Chemicals known to cause cancer: None of the ingredients are listed. Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed. Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed. Chemicals known to cause developmental toxicity: None of the ingredients are listed.

Canadian

Canadian Domestic Substances List (DSL):
All ingredients are listed.

EU

REACH Article 57 (SVHC): None of the ingredients are listed.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015**Revision :** 12.10.2015**Trade Name:** Alconox**Germany MAK:** Not classified.**Asia Pacific****Australia****Australian Inventory of Chemical Substances (AICS):** All ingredients are listed.**China****Inventory of Existing Chemical Substances in China (IECSC):** All ingredients are listed.**Japan****Inventory of Existing and New Chemical Substances (ENCS):** All ingredients are listed.**Korea****Existing Chemicals List (ECL):** All ingredients are listed.**New Zealand****New Zealand Inventory of Chemicals (NZOIC):** All ingredients are listed.**Philippines****Philippine Inventory of Chemicals and Chemical Substances (PICCS):** All ingredients are listed.**Taiwan****Taiwan Chemical Substance Inventory (TSCI):** All ingredients are listed.**16 Other information****Abbreviations and Acronyms:** None**Summary of Phrases****Hazard statements:**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements:

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 If on skin: Wash with soap and water.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P321 Specific treatment (see supplemental first aid instructions on this label).

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P501 Dispose of contents and container as instructed in Section 13.

Manufacturer Statement:

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.

NFPA: 1-0-0

Safety Data Sheet

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Effective date: 12.08.2015

Revision : 12.10.2015

Trade Name: Alconox

HMIS: 1-0-0



1. COMPANY AND PRODUCT IDENTIFICATION

iLoveToCreate
A Duncan Enterprises Company
5673 East Shields Avenue
Fresno, CA 93727
559-291-4444
559-291-9444 (Fax)
www.ilovetocreate.com

EMERGENCY TELEPHONE NUMBERS

Health Emergencies:
559-291-4444 7:00 am – 3:30 pm Pacific Std. 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:

Aleene's Original Tacky Glue

2oz-15600
8oz-15599
16oz-15601
8oz-15606
16oz-15607
128oz-15611
3pk-25804
2/3oz-24355
3oz tube-21372
Brush on-21704
64oz-33611

Product Description/Use:
Restrictions On Use:

Adhesive
None known

2. HAZARDS IDENTIFICATION

Emergency Overview: Not classified. Read entire Safety Data Sheet.

Hazard Class	None
Hazard Category	None
Pictograms	None
Precautionary Statements	
Prevention	Not prescribed
Response	Not prescribed
Storage	Not prescribed
Disposal	Not prescribed
Classification complies with OSHA Hazard Communication Standart (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally harmonized System of Classification and Labelin of Chemicals (GHS).	

See section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Detailed formualtion is submitted by the client and it is proprietary information.

Products are made by physical manipulation and chemical reaction from the ingredients. These ingredient chemicals may not exist as its original formula in final products. None of these ingredients are hazardous substances.

Hazardous Components	CAS Number	%
None	None	None

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If symptoms develop and persist, seek medical attention.
Skin Contact:	Wash with soap. If symptoms develop and persist, get medical attention. Wash affected area immediately with soap and water. Remove contaminated clothing and footwear. If symptoms develop and persist, see medical attention.
Eye Contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms develop and persist, get medical attention.
Ingestion:	If material is ingested, immediately contact a physician or poison control center. DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Notes to Physician:	Treat symptomatically and supportively.
Symptoms:	See section 11.

5. FIRE FIGHTING MEASURES

Extinguishing Media:	Water spray (fog), foam, dry chemical or carbon dioxide. Use extinguishing measures appropriate for local circumstances and the surrounding environment.
Special Firefighting Procedures:	Wear self-contained breathing apparatus. Do not breathe combustion gases.
Unusually fire or explosion hazards:	This product is a aqueous mixture which will not burn. If evaporated to dryness, the solid residue may pose a moderate fire hazard. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.
Hazardous combustions products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.	
Environmental precautions:	Prevent further leakage or spillage if safe to do so. Prevent contamination of soil and water.
Clean-Up methods:	Keep unnecessary personnel away. Ensure adequate ventilation. Wear appropriate protective equipment and clothing during clean-up. Small spills can be absorbed with vermiculite, clay or other suitable non-biodegradable absorbent material, scooped up and placed in containers. For large spills dike ahead and collect liquid. Dispose of contaminated material as waste according to Section 13.

7. HANDLING AND STORAGE

Handling:	Wash thoroughly after handling. Use only with adequate ventilation. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Keep container closed. Do not breathe gas/fumes/vapor/spray.
Storage:	For safe storage, store between 5° C (41°F) and 37°C (98° F). Keep the container tightly closed and in a cool, well ventilated place. Protect from freezing.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Components:	None
ACGIH TLV:	None
OSHA PEL:	None
AIHA WEEL:	None
OTHER:	None
Engineering Controls:	Work should be done in an adequately ventilated area (i.e., ventilation sufficient to maintain concentrations below one half of the PEL and other relevant standards). Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination.
Respiratory Protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Observe OSHA regulations for respirator use (29 CFR 1910.134).
Eye/Face Protection:	Wear safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.
Skin Protection:	Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	White
Odor:	Slight
Odor Threshold:	Not available.
pH:	4.5
Vapor Pressure:	Not determined.
Boiling Point/Range:	100.0° C (212°F) Approximately
Melting Point/Range:	< 5°C (<41°F) (Freezing Point)
Specific gravity:	1.08
Vapor Density:	Not determined.
Flash Point:	No flash point up to 100°C. Aqueous preparation.
Flammable/Explosive Limits – Lower:	Not available.
Flammable/Explosive Limits – Upper:	Not available.
Autoignition temperature:	Not applicable.
Evaporation rate:	Not determined.
Solubility in water:	Miscible
Partition coefficient (n-octanol/water):	Not determined.
VOC content:	Not available.
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Oxides of Carbon. Thermal decomposition can lead to release of irritating gases and vapors.
Incompatible materials:	This product may react with strong oxidizing agents.
Conditions to Avoid:	Freezing conditions.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure	Skin, inhalation, eyes.
Potential Health Effects/Symptoms	
Inhalation:	Inhalation of vapors of mists of the product may be irritating to the respiratory system.
Skin Contact:	No skin irritation can be expected from single short-term exposure to this product. Prolonged or repeated contact may produce some irritation.
Eye Contact:	May cause slight irritation to eyes on contact.
Ingestion:	May cause gastrointestinal tract irritation if swallowed. Not expected under normal conditions of use.

Hazardous Components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
None	None	None	None
Hazardous Components		Health Effects/Target Organs	
None		None	

12. ECOLOGICAL INFORMATION

Ecological information: No data available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal:	Legal disposition of wastes is the responsibility of the owner/generator of the waste. Applicable federal, state and/or local regulation must be followed during treatment, storage, or disposal of waste containing this product.
Hazardous waste number:	To the best of our knowledge, this product is not listed nor does it meet the criteria of a hazardous waste if discarded in its purchased form. However, under RCRA, it is the responsibility of the user to determine at the time of disposal whether a product meets any of the RCRA hazardous waste criteria. This is because product uses, transformation, mixtures, processes, etc., may render the resulting material hazardous, under the criteria ignitability, corrosively, reactivity and toxicity characteristics under the new Toxicity Characteristics Leaching Procedure (TCLP) 40 Code of Federal Regulations 261.20-24.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)	
Proper shipping name:	Not regulated.
Hazard class or division:	None
Identification number:	None
Packing group:	None
International Air Transportation (ICAO/IATA)	
Proper shipping name:	Not regulated.
Hazard class or division:	None
Identification number:	None
Packing group:	None

Water Transportation (INO/IMDG)	
Proper shipping name:	Not regulated.
Hazard class or division:	None
Identification number:	None
Packing group:	None

15. REGULATORY INFORMATION

United States Regulatory Information	
TSCA 8 (b) Inventory Status:	All components are listed or are exempt from the listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification:	None above reporting de minimus.
CERCLA/SARA Section 302 EHS:	None above reporting de minimus.
CERCLA/SARA Section 311/312:	Immediate Health
CERCLA/SARA 313	None above reporting de minimus.
California Proposition 65:	This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
Canada Regulatory Information	
CEPA DSL/NDSL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class:	Not Controlled

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous versions in sections: New information added in Section(s): 15

Disclaimer: The data contained herein are furnished for information only and are believed to be reliable. We do not assume responsibility for any results obtained by persons over whose methods whom we have no control. It is the user's responsibility to determine the suitability of the product(s) mentioned above or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of these products. In light of the foregoing specifically disclaimed all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of the products mentioned in this document. Further disclaims all liability for consequential or incidental damages of any kind, including lost profits.

Date Issued: 4/30/2013

END SAFETY DATA SHEET

Date Issued	Revision Date	Version
April 30, 2013	Sept. 2, 2014	2
	December 30, 2015	3



1. COMPANY AND PRODUCT IDENTIFICATION

iLoveToCreate
A Duncan Enterprises Company
5673 East Shields Avenue
Fresno, CA 93727
559-291-4444
559-291-9444 (Fax)
www.ilovetocreate.com

EMERGENCY TELEPHONE NUMBERS
Health Emergencies:
559-291-4444 7:00 am – 3:30 pm Pacific Std. 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: Aleene's Quick Dry Tacky Glue
Product Use/Description: Water-based adhesive
Restrictions on use: None known.

2. HAZARDS IDENTIFICATION

Classification:	This mixture does not meet the criteria for classification.
Hazard Statement:	None.
Other Hazards:	Not hazardous
Signal Word:	No data.
Precautionary Statement:	Observe good industrial hygiene practices.
Pictogram(s) by GHS:	None.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Detailed formulation is submitted by the client and it is proprietary information.
Products are made by physical manipulation and chemical reaction from the ingredients. These ingredient chemicals may not exist as its original formula in final products. None of these ingredients are hazardous substances.
Reportable ingredients (if applicable): None listed.

4. FIRST AID MEASURES

General Advice:	
On Inhalation:	Health injuries are not known or expected under normal use.
On Skin Contact:	Health injuries are not known or expected under normal use.
On Eye Contact:	Direct contact with eyes may cause temporary irritation.
On Ingestion:	Health injuries are not known or expected under normal use.
Acute/Delayed Symptoms:	None
Medical Advice:	Treat symptomatically and supportively.
Symptoms /Effects:	See section 11.
Special Treatment Needed:	None.

5. FIRE FIGHTING MEASURES

Extinguishing Media	
Suitable extinguishing media:	Use fire-extinguisher media appropriate for surrounding materials.
Unsuitable extinguishing media:	None.
Protection of Firefighters	

Specific hazards arising from the chemical:	This product is an aqueous mixture which will not burn. If evaporated to dryness, the solid residue may pose a moderate fire hazard. Closed containers may rupture (due to buildup of pressure) when exposed to extreme heat.
Protective equipment for firefighters:	No special precautions.
Special precautions for fire fighters:	No special precautions.
Will hazardous combustion occur?:	Carbon oxides.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	No special precautions.
Environmental Precautions:	Avoid discharge into drains, water courses or on to the ground.
Methods for Cleaning Up:	Absorb spillage with suitable absorbent material. Clean up in accordance with all applicable regulations.
Emergency Procedures:	None listed.
Recommended Personal Protective Equipment:	See section 8.

7. HANDLING AND STORAGE

Safe Storage:	Store in closed original container in a dry place. Store away from incompatible materials. Storage temperature: 40°F and 100°F. Protect from freezing.
Safe Handling:	No specific usage precautions noted.
Known Incompatibilities:	None known.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Occupational Exposure Limits: No exposure limits noted for ingredient(s).

Appropriate Engineering Controls: No specific hygiene procedures noted but well personal hygiene practices are always advisable, especially when working with chemicals.

Individual Protection measures, such as PPE (Personal Protective Equipment):

Personal Protection Equipment:	
Respiratory Protection:	Under normal conditions, respirator is not normally required.
Eye Protection:	Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.
Hand Protection:	No special precautions.
Skin Protection:	No special precautions.
Thermal Protection:	None.
General Safety and Hygiene Measures:	No special requirements.
Further Information:	None.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance:	Liquid
Color:	White
Odor:	Slightly sweet.
Odor Threshold:	Not available.
pH:	4 – 6.
Boiling Point/Range:	>212°F (>100°C)
Melting Point/Range:	32°F (0°C) Approx.
Flash Point:	>212°F (>100°C)
Evaporation Rate:	1 Water=1

Vapor Density:	0.62 (Air=1)
Solubility(ies):	Soluble.
Vapor Pressure:	17.5 mm Hg at 20°C
Relative Density:	No data.
Viscosity:	No data.
Partition Coefficient (n-octanol/water), if applicable:	Not available.
Explosive Properties:	No data.
Flammability: (Solid, gas)	Not available.
Flammability Limit in Air: Upper/Lower	Not available.
Autoignition temperature:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	Heat and direct sunlight.
Incompatible Materials:	Strong oxidizing agents. Alkalies.
Hazardous Decomposition Products:	Carbon oxides.
Possibility of Hazardous Reactions:	Will not occur.
Reactivity:	Will not occur.
Hazardous polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Delayed or Immediate effects:	None known.			
Germ Cell Mutagenicity:	None known.			
Specific target organ toxicity (single exposure):	None known.			
Specific target organ toxicity (repeated exposure):	None known.			
Chemicals listed on NTP, IARC or OSHA as a Carcinogen?:	None known.			
Chemical Name:	Oral LD50	Dermal LD50	Inhalation LC50	Percentage
None	X	X	X	X

*Estimates for product may be based on additional component data not shown.

12. ECOLOGICAL INFORMATION (NON-MANDATORY)

Ecotoxicity:	Not expected to be harmful to aquatic organisms.
Persistence and degradability:	No data available.
Bioaccumulative potential:	No data available.
Aquatic / Terrestrial warnings:	No data.
Mobility in soil:	The product is insoluble in water and will sediment in water systems.
Other adverse effects:	None known.

13. DISPOSAL CONSIDERATIONS (NON-MANDATORY)

Disposal instructions:	Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Do not discharge into drains, water courses or onto the ground.
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Local disposal regulations:	No data.
Hazardous waste code:	No data.
Contaminated packaging:	No data.
Waste residues:	No data.

14. TRANSPORTATION INFORMATION (NON-MANDATORY)

	<u>DOT</u>	<u>IMDG</u>	<u>IATA</u>
UN/ID number:	Not regulated as dangerous goods.	Not regulated as dangerous goods.	Not regulated as dangerous goods.
Proper shipping name:	X	X	X
Transport hazard class:	X	X	X
Packing group (if applicable):	X	X	X
Environmental Provisions:	X	X	X
Special Precautions:	X	X	X
Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code			
Emergency Response Guide Number:		EmS-No:	None

Pictograms

<u>US:</u> None	<u>IATA; IMDG:</u> None	<u>Marine Pollutant:</u> None
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15. REGULATORY INFORMATION (NON-MANDATORY)

US Federal Regulations:					
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D):			Not regulated.		
CERCLA (Superfund) reportable quantity (lbs.) (40 CFR 302.4)			None		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):			None		
Hazard Categories:					
Immediate Hazard:			No		
Delayed Hazard:			No		
Fire Hazard:			No		
Pressure Hazard:			No		
Reactivity Hazard:			No		
Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):			No		
Chemical Name:	CAS Number:	Reportable Quantity:	Threshold planning quantity:	Threshold planning quantity, lower value:	Threshold planning quantity, upper value:
None	X	X	X	X	X
Superfund Amendments and Reauthorization Act of 1986 (SARA)					
SARA 304 Emergency release notification:			None		
SARA 311/312 (40 CFR 370) Hazardous Chemical:			None		
SARA 313 (TRI reporting):			<u>Chemical Name:</u> None	<u>CAS Number:</u> N/A	<u>% by wt.</u> N/A
Drug Enforcement Administration (DEA) (21 CFR 1308.11-15):			Not controlled.		

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (Haps) List:	No data.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):	No data.
Safe Drinking Water Act (SDWA):	No data.
Canadian Domestic Substances List (DSL):	No data.

State Regulations

TSCA:	This product is manufactured in compliance with all provisions of the Toxic Substances Control Act, 15 U.S. C. 2601 et. Seq.
FDA:	21 CFR 175.105
SARA/Title III:	This product does not contain any substances at or above the reported threshold under Section 313, based on available data.
Conforms to Non-Toxic ASTM-4236:	Products 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).
California Proposition 65 Warning:	This product contains the following chemicals that are known to the State of California to cause cancer, birth defects, or other reproductive harm: None
HMIS III Rating:	No data.

Unless a concentration is specified in Section 2 of the SDS, the above chemical(s) are present in trace amounts.

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

16. OTHER INFORMATION

These recommendations and information contained in this MSDS have been compiled from sources believed to represent the most current information available when the MSDS was prepared. However, the manufacturer / distributor of this product does not provide any warranty, guaranty of representation as to the correctness or sufficient of this information. If this material is used in large amounts and/or an unusual manner, the user is obliged to determine what safety measures are appropriate, including the applicable and relevant workplace and environmental regulations pertaining to handling, use and disposal.

Creation Date:	Version: 2	Revision date:
8/8/2011	1	
	2	3/7/16-JL

Table of Abbreviations			
ACGIH:	American Conference of Governmental Industrial Hygienists	LD:	Lethal Dose
ANSI:	American National Standards Institute	MARPOL:	Marine Pollution
ASTM:	American Society for Testing Materials	mg / kg:	Milligram per Kilogram
°C:	Degrees Centigrade	mm:	Millimeter
CAA:	Clean Air Act	MSHA:	Mine Safety and Health Administration
CAS:	Chemical Abstract Service	N/A:	Not Applicable
CERCLA:	Comprehensive Environmental Response, Compensation & Liability Act	NFPA:	National Fire Protections Association
CFR:	Code of Federal Regulations	NIOSH:	National Institute for Occupational Safety and Health
CPR:	Controlled Products Regulations	NTP:	National Toxicology Program
DEA:	Drug Enforcement Act	OEL:	Over Exposure Limit
DOT:	Department of Transportation	OSHA:	Occupational Safety and Health Administration
DSL:	Canadian Domestic Substances List	PEL:	Permissible Exposure Limits
EmS:	Emergency Medical Goods Services	ppm	Parts Per Million
EPA:	Environmental Protection Agency	SARA	Superfund Amendment and Reauthorization Act
°F:	Degrees Fahrenheit	STEL	Short-Term Exposure Limit
FDA:	Food & Drug Administration	SDS:	Safety Data Sheet
g/l:	Grams per Liter	SDWA:	Safe Drinking Water Act
HAPs:	Hazardous Air Pollutants	TLV:	Threshold Limit Value
Hg:	Mercury	TRI:	Toxics Release Inventory
HMIS:	Hazardous Materials Identification System	TSCA	Toxic Substances Control Act
HNOC:	Hazard(s) Not otherwise classified	TWA	Time – Weighted Average
IARC:	International Agency for Research on Cancer	U.N.	United Nations
IATA:	International Air Transport Association	WHMIS	Workplace Hazardous Materials Information System
ID:	Identification / Identity	>	Greater Than
IDLH:	Immediate Danger to Life or Health	<	Less Than
IMDG:	International Maritime Dangerous Goods	73/78:	1973 & 1978
LC:	Lethal Concentration		

END SAFETY DATA SHEET



Safety Data Sheet

Alizarin Yellow R Solution, 0.1%

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Alizarin Yellow R Solution, 0.1%

Synonyms/Generic Names: Mordant Orange 1; 2-Hydroxy-5-[(4-nitrophenyl)azo]benzoic acid; 5-(4-Nitrophenylazo)salicylic acid

SDS Number: 18.10

Product Use: For Educational Use Only

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Contact: Ward's Science
5100 West Henrietta Rd.
PO Box 92912-9012
Rochester, NY 14692
(800) 962-2660 (Monday-Friday 7:30-7:00 Eastern Time)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: No known OSHA hazards.

Target Organs: None

Signal Word: None

Pictograms: None

GHS Classification:

None	
------	--

GHS Label Elements, including precautionary statements:

Hazard Statements:

None	
------	--

Precautionary Statements:

None	
------	--

Potential Health Effects

Eyes	May cause eye irritation.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	0
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	0
Fire	0
Reactivity	0
Personal	A

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Alizarin Yellow R	<1	2243-76-7	218-818-3	C ₁₃ H ₉ N ₃ O ₅	287.23 g/mol
Water	Balance	7732-18-5	231-791-2	H ₂ O	18.00 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with water for at least 15 minutes.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.
Skin	Flush with plenty of water and wash using soap.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (carbon oxides, nitrogen oxides) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Contains no substances with occupational exposure limit values.

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, and apron or lab coat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Yellow/brown, translucent liquid.
Odor	Not Available
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Density	1.0005 g/cm ³ (water = 1)
Solubility (ies)	Not Available
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Not Available
Incompatible Materials	Oxidizing agents.
Hazardous Decomposition Products	Carbon oxides, nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	Not Available

Carcinogenicity

IARC	No components 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 components 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 components 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 components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Irritation.
Eyes	Irritation.
Respiratory	Irritation.
Ingestion	Irritation.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residues.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product containers.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	No SARA Hazards
SARA 312	No SARA Hazards
SARA 313	Not Listed
WHMIS Canada	Not Listed

16. OTHER INFORMATION

Revision	Date
Revision 1	01/08/2013
Revision 2	06/19/2013

Disclaimer: Columbus Chemical Industries, Inc. ("Columbus") 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 Columbus 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. COLUMBUS MAKES NO WARRANTY, EXPRESS 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.



Fisher Scientific

Part of Thermo Fisher Scientific

SAFETY DATA SHEET

Creation Date 29-Sep-2009

Revision Date 10-Nov-2014

Revision Number 1

1. Identification

Product Name Alumina (Activated/Adsorption/Dry Powder/Acid/Basic/Neutral/Polishing Gamal)

Cat No. : A446-100, A447-500, A505-212, A540-3, A540-500, A591-3, A591-500, A620-500, A634-3, A941-500, A948-500, A950-500, B365-250, C218-3, P467R, P477, S716842

Synonyms Aluminum oxide; Alundum; morin dyed

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) Identification

Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Based on available data, the classification criteria are not met

Label Elements

None required

Hazards not otherwise classified (HNOC)

None identified

3. Composition / Information on Ingredients

Component	CAS-No	Weight %
Aluminum oxide	1344-28-1	100

4. First aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.
Ingestion	Do not induce vomiting. Obtain medical attention.
Most important symptoms/effects	No information available.
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Unsuitable Extinguishing Media	No information available
Flash Point	Not applicable
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

None known

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 1	Flammability 0	Instability 1	Physical hazards N/A
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6. Accidental release measures

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation.
Environmental Precautions	See Section 12 for additional ecological information.

Methods for Containment and Clean Up Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

7. Handling and storage

Handling	Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls, personal protection

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
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Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Aluminum oxide	TWA: 1 mg/m ³	(Vacated) TWA: 10 mg/m ³ (Vacated) TWA: 5 mg/m ³ TWA: 15 mg/m ³ TWA: 5 mg/m ³	

Component	Quebec	Mexico OEL (TWA)	Ontario TWA EV
Aluminum oxide	TWA: 10 mg/m ³	TWA: 10 mg/m ³	TWA: 1 mg/m ³

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
 OSHA - Occupational Safety and Health Administration

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection

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 and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

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.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	White
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	2000 °C / 3632 °F
Boiling Point/Range	2980 °C / 5396 °F
Flash Point	Not applicable
Evaporation Rate	No information available
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	negligible
Vapor Density	No information available
Relative Density	4.0 (H ₂ O=1)
Solubility	Insoluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	Al ₂ O ₃
Molecular Weight	101.96

10. Stability and reactivity

Reactive Hazard

None known, based on information available

Stability Stable under normal conditions. Hygroscopic.

Conditions to Avoid Incompatible products.

Incompatible Materials Strong oxidizing agents

Hazardous Decomposition Products None under normal use conditions

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological Information

Acute Toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Aluminum oxide	> 5000 mg/kg (Rat) (OECD Guideline 401)	Not listed	> 2.3 mg/l 4 h (OECD Guideline 403)

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Aluminum oxide	1344-28-1	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological Information

Ecotoxicity

Do not empty into drains.

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available.

Mobility No information available.

13. Disposal considerations

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT	Not regulated
TDG	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated

15. Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Aluminum oxide	X	X	-	215-691-6	-		X	X	X	X	X

Legend:

- X - Listed
- E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - Indicates a commenced PMN substance
- R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
- T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).
- Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Aluminum oxide	1344-28-1	100	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals

State Right-to-Know Not applicable

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Aluminum oxide	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

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 Non-controlled

16. Other information

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 29-Sep-2009

Revision Date 10-Nov-2014

Print Date 10-Nov-2014

Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer

The information provided on 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 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.

End of SDS



Aluminum Safety Data Sheet (SDS)

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Aluminum

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
Chemtrec Emergency Phone Number: (800) 424-9372

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
Aluminum (/link/3e3b2d18f049434fbf3ac5a911d24370.aspx)	7429-90-5	Al	26.98	

Synonyms: Aluminum foil, strips, wire, sheet

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

Aluminum, as dust, is a flammable solid.

Powder Autoignition Temperature: 760 °C

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a class D fire extinguisher or dry sand for extinction (P370+P378). Never use water.

NFPA Code

H-0

F-3

R-1

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Contain spill. Add sand or absorbent material to the zinc dust. Gather mixture and deposit in sealed bag or container. Dispose of bag or container. Wash spill site only after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, eye protection, and face protection (P280). Wash hands thoroughly after handling.

Exposure guidelines: (as total dust) PEL 15 mg/m³ (OSHA); (as respirable fraction) TLV 1 mg/m³ (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Silvery solid. Odorless.

Boiling point: 2467 °C

Insoluble in water. Heat is generated when fine powder and dust are mixed with water.

Melting point: 660 °C

Specific gravity: 2.70

SECTION 10 — STABILITY AND REACTIVITY

Contact with acids liberates flammable hydrogen gas. Contact with water generates heat.

Avoid contact with acids, acid chlorides, oxidizers, and halogens.

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.

ORL-RAT LD₅₀: N.A.

Chronic effects: Pneumoconiosis

IHL-RAT LC₅₀: N.A.

Target organs: Lungs

SKN-RBT LD₅₀: N.A.

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. Do not allow aluminum dust to become wet. See Section 6 for further information.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not dangerous good

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-072-3)

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).

N.A. = Not available, not all health aspects of this substance have been fully investigated.

N/A = Not applicable

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: June 29, 2015

Section 1 Chemical Product and Company Identification

Page E1 of E2



5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
St. Catharines, Ontario
L2S 3T4 Canada
Tel: (800) 387-9393

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product ALUMINUM METAL POWDER
Synonyms Aluminum ; Aluminum Metal ; Aluminum Powder

Section 2 Hazards Identification

Signal word: DANGER
Pictograms: GHS02
Target organs: Eyes, Skin, Respiratory system



GHS Classification:
Flammable solid (Category 1)
Water reactive (Category 2)

GHS Label information: Hazard statement:
H228: Flammable solid.
H261: In contact with water releases flammable gas.

Precautionary statement:

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P223: Keep container tightly closed.
P231+P232: Handle under inert gas. Protect from moisture.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P335+P334: Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
P370+P378: In case of fire: Use DRY SAND ONLY to extinguish.
P402+P404: Store in a dry place. Store in a closed container.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Combustible dust
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Aluminum	7429-90-5	>99.5%	231-072-3

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. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE 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. MAY CAUSE 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: DRY SAND ONLY!

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Molten metals produce fume, vapor and/or dust that may be toxic and/or a respiratory irritant. Metal reacts with oxidizing agents. Powders form explosive mixtures with air which may be ignited by a spark.

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: Recover for reuse if not contaminated. Remove all sources of ignition. Use non-sparking tools. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 1 Chemical Product and Company Information

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**Aldon
Corporation**221 Rochester Street
Avon, NY 14414
(585) 226-6177**CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300**
For laboratory use only.
Not for drug, food or household use.**Product** ALUMINUM METAL POWDER
Synonyms Aluminum ; Aluminum Metal ; Aluminum Powder**Section 2 Hazards Identification****Signal word:** DANGER**Pictograms:** GHS02**Target organs:** Eyes, Skin, Respiratory system**GHS Classification:**

Flammable solid (Category 1)

Water reactive (Category 2)

GHS Label information: Hazard statement:

H228: Flammable solid.

H261: In contact with water releases flammable gas.

Precautionary statement:

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P223: Keep container tightly closed.

P231+P232: Handle under inert gas. Protect from moisture.

P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical/ventilating/lighting equipment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P335+P334: Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

P370+P378: In case of fire: Use DRY SAND ONLY to extinguish.

P402+P404: Store in a dry place. Store in a closed container.

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
Aluminum	7429-90-5	>99.5%	231-072-3

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. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.**EYE CONTACT:** MAY CAUSE 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. MAY CAUSE 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:** DRY SAND ONLY!**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear.**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Molten metals produce fume, vapor and/or dust that may be toxic and/or a respiratory irritant. Metal reacts with oxidizing agents. Powders form explosive mixtures with air which may be ignited by a spark.**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:** Recover for reuse if not contaminated. Remove all sources of ignition. Use non-sparking tools. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

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 dusts. 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. Avoid exposure to water and moisture.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Aluminum metal and insoluble compounds	TWA: 1(R) mg/m ³ (A4)	TWA: 15 mg/m ³ Total dust	TWA: 10 mg/m ³ Total dust

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 dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid, Silvery-gray metallic powder
Odor: No odor.
Odor threshold: Data not available.
pH: Data not available.
Melting / Freezing point: 657°C (1215°F)
Boiling point: Not applicable
Flash point: Data not available

Evaporation rate (= 1): Not applicable
Flammability (solid/gas): Flammable solid
Explosion limits: Lower: 40 mg/L **Upper:** Not available
Vapor pressure (mm Hg): Data not available
Vapor density (Air = 1): Data not available
Relative density (Specific gravity): 2.7
Solubility(ies): Insoluble in water.

Partition coefficient: Data not available
Auto-ignition temperature: Data not available
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: Al
Molecular weight: 26.98

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, mineral acids, strong alkalis, halogenated hydrocarbons, and water.

Hazardous decomposition products: Reacts with water, acids or alkalis to generate hydrogen gas.

Section 11 Toxicological Information

Acute toxicity: Data not available

Skin corrosion/irritation: Data not available

Serious eye damage/irritation: Data not available

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogeny: 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 1: Carcinogenic to humans (production).

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: Data not available

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: It has been reported that chronic exposure has been suspected of causing lung injury.

Ingestion: May be harmful if ingested.

Skin: Contact with skin may cause irritation.

Eyes: Contact with eyes may cause irritation and corneal abrasions.

Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: BD0330000

Section 12 Ecological Information

Toxicity to fish: No data available

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

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 (US DOT / CANADA TDG)

UN/NA number: UN1396

Shipping name: Aluminum powder, uncoated

Hazard class: 4.3

Packing group: II

Reportable Quantity: No

Marine pollutant: No

Exceptions: Limited quantity equal to or less than 0.5 Kg (1.1 lb)

2012 ERG Guide # 138

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	CERCLA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Aluminum	Listed	Not listed	D001 (dust only)	Listed	Not listed	 B6

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.

Section 1 Chemical Product and Company Identification

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Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
St. Catharines, Ontario
L2S 3T4 Canada
Tel: (800) 387-9393

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product	ALUMINUM NITRATE, NONAHYDRATE
Synonyms	Aluminum Trinitrate ; Aluminum Nitrate 9-Hydrate

Section 2 Hazards Identification

Signal word: WARNING
Pictograms: GHS03 / GHS07
Target organs: Liver, Kidneys, Blood



GHS Classification:
Oxidizing solid. (Category 3)
Acute toxicity, oral (Category 5)
Skin irritation (Category 2)
Eye irritation (Category 2A)

GHS Label information: Hazard statement(s):
H272: May intensify fire; oxidizer.
H303: May be harmful if swallowed.
H315: Causes skin irritation.
H319: Causes serious eye irritation.

Precautionary statement(s):

P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P220: Keep away from clothing and combustible or incompatible materials.
P221: Take any precaution to avoid mixing with combustibles or incompatible materials.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352: IF ON SKIN: Wash with plenty of soap and water
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash before reuse.
P370+P378: In case of fire: Use water to extinguish.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with all local, state and federal regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Aluminum nitrate, nonahydrate	7784-27-2	100%	236-751-8 (anhydrous CAS # 13473-90-0)

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. MAY CAUSE 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: 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: Use water. Do not use dry chemicals or foams. CO₂ or Halon® may provide limited control.

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. Although not flammable, substance is a strong oxidizer which releases oxygen on heating, increasing the burning rate of any material with a flare-burning effect. It may cause re-ignition after a fire is extinguished.

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. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

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 dusts. 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)
	Particulates not otherwise classified/regulated	None established.	TWA: 5 mg/m ³ Respirable fraction	None established.

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 dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid. White crystals Odor: No odor. Odor threshold: Data not available. pH: Data not available. Melting / Freezing point: 70°C (158°F) Boiling point: Data not available Flash point: Data not available	Evaporation rate (= 1): Data not available Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): Data not available Vapor density (Air = 1): Data not available Relative density (Specific gravity): Data not available Solubility(ies): 64 g/100 ml water @ 20°C	Partition coefficient: Data not available Auto-ignition temperature: Data not available Decomposition temperature: 135°C (275°F) Viscosity: Data not available. Molecular formula: Al(NO ₃) ₃ •9H ₂ O Molecular weight: 375.13
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Section 10 Stability & Reactivity

Chemical stability: Stable **Hazardous polymerization:** Will not occur.

Conditions to avoid: Excessive temperatures and other sources of ignition. Combustible materials.

Incompatible materials: Reducing agents, organic materials.

Hazardous decomposition products: Nitrogen oxides.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 3,671 mg/kg [Aluminum nitrate]

Skin corrosion/irritation: Data not available

Serious eye damage/irritation: Data not available

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: 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: 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 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: Data not available

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.

Ingestion: May cause gastroenteritis and abdominal pains. Purging and diuresis can be expected. Rare cases of nitrates being converted to the more toxic nitrites have been reported, mostly with infants.

Skin: Causes irritation to skin. Symptoms include redness, itching, and pain.

Eyes: Causes irritation, redness, and pain.

Signs and symptoms of exposure: Small repeated oral doses of nitrates may cause weakness, depression, headache, and mental impairment. Persons with stomach diseases and infants are much more sensitive to nitrate ion toxicity.

Additional information: RTECS #: BD1050000 [Aluminum nitrate]

Section 12 Ecological Information

Toxicity to fish: No data available

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

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 (US DOT / CANADA TDG)

UN/NA number: UN1438

Shipping name: Aluminum nitrate

Hazard class: 5.1

Packing group: III

Reportable Quantity: No

Marine pollutant: No

Exceptions: Limited quantity equal to or less than 5 Kg

2016 ERG Guide # 140

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	CA Prop 65
Aluminum nitrate	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other 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.

Section 1 Chemical Product and Company Identification

Page E1 of E2



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CHEMTREC 24 Hour Emergency USA
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For laboratory and industrial use only.
Not for drug, food or household use.

Product ALUMINUM POTASSIUM SULFATE

Synonyms Potassium Alum / Alum

Section 2 Hazards Identification

Signal word: WARNING

Pictograms: GHS07

Target organs: Liver, Kidneys

**GHS Classification:**

Acute toxicity, oral (Category 4)

Skin irritation (Category 2)

Eye irritation (Category 2B)

GHS Label information: Hazard statement:

H302: Harmful if swallowed.

H315+H320: Causes skin and eye irritation.

Precautionary statement:

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

P302+P352: IF ON SKIN: Wash with plenty of water and soap.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

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.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Aluminum potassium sulfate	7784-24-9	100%	233-141-3

Section 4 First Aid Measures

INGESTION: 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: 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: Fire or excessive heat above 760°C (1400°F), may produce hazardous decomposition products of toxic and corrosive gases, Sulfur trioxide and Aluminum oxide. Sulfur trioxide is an oxidizing agent which supports combustion and will react with water to form Sulfuric acid.

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: Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

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 dusts. 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.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Aluminum, metal and insoluble compounds	TWA: 1 mg/m ³ Respirable fraction	TWA: 5 mg/m ³ Respirable fraction	TWA: 5 mg/m ³ Respirable fraction

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 dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid. White crystals or powder. Odor: No odor. Odor threshold: Data not available. pH: 3.5 (1% solution) Melting / Freezing point: Loses H ₂ O at 93°C (199°F) Boiling point: Data not available Flash point: Data not available	Evaporation rate (= 1): Data not available Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): Data not available Vapor density (Air = 1): Data not available Relative density (Specific gravity): 1.97 Solubility(ies): Moderately soluble in water.	Partition coefficient: Data not available Auto-ignition temperature: Data not available Decomposition temperature: Data not available Viscosity: Data not available. Molecular formula: AlK(SO ₄) ₂ ·12H ₂ O Molecular weight: 474.39
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Section 10 Stability & Reactivity

Chemical stability: Stable
Conditions to avoid: Excessive temperature and heat.
Incompatible materials: Aluminum, copper, steel, zinc, strong oxidizing agents.
Hazardous decomposition products: Oxides of sulfur, aluminum oxide, oxides of potassium.
Hazardous polymerization: Will not occur.

Section 11 Toxicological Information

Acute toxicity: Data not available
Skin corrosion/irritation: Data not available
Serious eye damage/irritation: Data not available
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenicity: 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: 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 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: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: Causes respiratory tract irritation. May be harmful if inhaled.
Ingestion: Harmful if swallowed. Ingestion of large amounts may cause gastrointestinal irritation.
Skin: Causes skin irritation. May be harmful if absorbed through the skin.
Eyes: Causes eye irritation. May cause chemical conjunctivitis.
Signs and symptoms of exposure: To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.
Additional information: RTECS #: WS5690000

Section 12 Ecological Information

Toxicity to fish: No data available
Toxicity to daphnia and other aquatic invertebrates: No data available
Toxicity to algae: No data available
Persistence and degradability: No data available
Mobility in soil: No data available
Bioaccumulative potential: 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 (US DOT / CANADA TDG)

UN/NA number: Not applicable
Hazard class: Not applicable
Exceptions: Not applicable
Shipping name: Not Regulated
Packing group: Not applicable
2016 ERG Guide # Not applicable
Reportable Quantity: No
Marine pollutant: No

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	CA Prop 65
Aluminum potassium sulfate (CAS # 10043-67-1)	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other 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.

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 42.00

Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Aluminum Potassium Sulfate

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
Aluminum potassium sulfate	7784-24-9	$\text{AlK}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$	474.39	
Synonym: Alum				

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

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.

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.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White, crystalline powder. Odorless.
Soluble: Water. Insoluble in alcohol.

Melting point: 92.5 °C
Specific gravity: 1.7

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, bases, steel, aluminum, copper, and zinc. When heated to decomposition (200 °C), emits toxic sulfur trioxide fumes.

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, gastrointestinal disturbances.
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 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 (233-141-3).

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: February 6, 2014

Section 1 Identification

Page E1 of E2



CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product AMMONIA SOLUTION (HOUSEHOLD)

Synonyms Ammonium Hydroxide, Water Solution

Section 2 Hazards identification

Signal word: WARNING

Pictograms: GHS07 / GHS09

Target organs: Eyes, Skin, Mucous membranes

**GHS Classification:**

Skin irritation (Category 2)

Eye irritation (Category 2A)

Acute aquatic (Category 1)

GHS Label information: Hazard statement:

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H400: Very toxic to aquatic life.

Precautionary statement:

P264: Wash hands thoroughly after handling.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352: IF ON SKIN: Wash with plenty of water and soap.

P332+P313: If skin irritation occurs: Get medical attention.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists: Get medical attention.

P362+P364: Take off contaminated clothing and wash it before reuse.

P391: Collect spillage.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / information on ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	Approximately 96.0%	231-791-2
Ammonium hydroxide (as Ammonia)	1336-21-6	Approximately 4.0%	215-647-6

Section 4 First aid measures

INGESTION: 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: 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 SERIOUS 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: CAUSES 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.

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: Carefully neutralize with Sodium bicarbonate, 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.

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 dusts/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, well-ventilated area away from incompatible substances.

Section 8 Exposure controls / personal protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Ammonia CAS No. 7664-41-7	TWA: 17 mg/m ³ ; STEL: 24 mg/m ³	TWA: 50 ppm, 35 mg/m ³	TWA: 18 mg/m ³ ; STEL: 27 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 and chemical properties

Appearance: Clear, colorless liquid. Odor: Strong ammonia odor. Odor threshold: Data not available. pH: Data not available. Melting / Freezing point: Approximately 0°C (32°F) (water) Boiling point: Approximately 100°C (212°F) (water) Flash point: Data not available	Evaporation rate (Water = 1): <1 Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): 14 (water) Vapor density (Air = 1): 0.7 (water) Relative density (Specific gravity): Approximately 1.0 (water) Solubility(ies): Complete in water.	Partition coefficient: Data not available Auto-ignition temperature: Data not available Decomposition temperature: Data not available. Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture
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Section 10 Stability and reactivity

Chemical stability: Stable **Hazardous polymerization:** Will not occur.

Conditions to avoid: Excessive temperatures which cause evaporation.

Incompatible materials: Acids, strong oxidizers, halogens, heavy metals.

Hazardous decomposition products: Decomposes to ammonia gas and above 450°C (842°F) to hydrogen gas and nitrogen oxides.

Section 11 Toxicological information

Acute toxicity: Oral-rat LD50: 350 mg/kg [Ammonium hydroxide, anhydrous]

Skin corrosion/irritation: Data not available

Serious eye damage/irritation: Data not available

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: 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: 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 component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

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: [Ammonium hydroxide, anhydrous]

Inhalation: Burning sensation, cough, labored breathing, shortness of breath, sore throat.

Ingestion: Abdominal cramps, abdominal pain, sore throat, vomiting,

Skin: Redness, skin burns, pain, blisters.

Eyes: Redness, pain, blurred vision, burns.

Signs and symptoms of exposure: Material is extremely destructive to tissue of the mucous membranes, upper respiratory, gastrointestinal and digestive tracts, eyes and skin. Inhalation may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.

Additional information: RTECS #: BQ9625000 [Ammonium hydroxide, anhydrous]

Section 12 Ecological information

Toxicity to fish: LC50 Lepomis macrochirus (bluegill) 0.024-0.093 mg/L/48H

Toxicity to daphnia and other aquatic invertebrates: LC50 Daphnia magna (water flea) 0.66 mg/L/48H @ 22°C

Toxicity to algae: TLM Diatom (algae) 420 mg/L/120H @ 22°C (50% growth reduction)

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: Not applicable

Shipping name: Not Regulated

Hazard class: Not applicable

Packing group: Not applicable

Reportable Quantity: Yes

Marine pollutant: No

Exceptions: Not applicable

2020 ERG Guide # Not applicable

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	CA Prop 65
Ammonium hydroxide	Listed	1,000 lbs (454 kg)	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other 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.

Section 1 Chemical Product and Company Identification

Page E1 of E2



5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
St. Catharines, Ontario
L2S 3T4 Canada
Tel: (800) 387-9393

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product AMMONIA SOLUTION (HOUSEHOLD)

Synonyms Ammonium Hydroxide, Water Solution

Section 2 Hazards Identification

Signal word: WARNING

Pictograms: GHS07 / GHS09

Target organs: Eyes, Skin, Mucous membranes

**GHS Classification:**

Skin irritation (Category 2)

Eye irritation (Category 2A)

Acute aquatic (Category 1)

GHS Label information: Hazard statement:

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H400: Very toxic to aquatic life.

Precautionary statement:

P264: Wash hands thoroughly after handling.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352: IF ON SKIN: Wash with plenty of water and soap.

P332+P313: If skin irritation occurs: Get medical attention.

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.

P362+P364: Take off contaminated clothing and wash it before reuse.

P391: Collect spillage.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	Approximately 96.0%	231-791-2
Ammonium hydroxide (as Ammonia)	1336-21-6	Approximately 4.0%	215-647-6

Section 4 First Aid Measures

INGESTION: 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: 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 SERIOUS 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: CAUSES 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.

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: Carefully neutralize with Sodium bicarbonate, 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.

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 dusts/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, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Ammonia CAS No. 7664-41-7	TWA: 17 mg/m ³ ; STEL: 24 mg/m ³	TWA: 50 ppm, 35 mg/m ³	TWA: 18 mg/m ³ ; STEL: 27 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: Strong ammonia odor. Odor threshold: Data not available. pH: Data not available. Melting / Freezing point: Approximately 0°C (32°F) (water) Boiling point: Approximately 100°C (212°F) (water) Flash point: Data not available	Evaporation rate (Water = 1): <1 Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): 14 (water) Vapor density (Air = 1): 0.7 (water) Relative density (Specific gravity): Approximately 1.0 (water) Solubility(ies): Complete in water.	Partition coefficient: Data not available Auto-ignition temperature: Data not available Decomposition temperature: Data not available. Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture
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Section 10 Stability & Reactivity

Chemical stability: Stable **Hazardous polymerization:** Will not occur.

Conditions to avoid: Excessive temperatures which cause evaporation.

Incompatible materials: Acids, strong oxidizers, halogens, heavy metals.

Hazardous decomposition products: Decomposes to ammonia gas and above 450°C (842°F) to hydrogen gas and nitrogen oxides.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 350 mg/kg [Ammonium hydroxide, anhydrous]

Skin corrosion/irritation: Data not available

Serious eye damage/irritation: Data not available

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: 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: 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 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: [Ammonium hydroxide, anhydrous]

Inhalation: Burning sensation, cough, labored breathing, shortness of breath, sore throat.

Ingestion: Abdominal cramps, abdominal pain, sore throat, vomiting,

Skin: Redness, skin burns, pain, blisters.

Eyes: Redness, pain, blurred vision, burns.

Signs and symptoms of exposure: Material is extremely destructive to tissue of the mucous membranes, upper respiratory, gastrointestinal and digestive tracts, eyes and skin. Inhalation may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.

Additional information: RTECS #: BQ9625000 [Ammonium hydroxide, anhydrous]

Section 12 Ecological Information

Toxicity to fish: LC50 *Lepomis macrochirus* (bluegill) 0.024-0.093 mg/L/48H

Toxicity to daphnia and other aquatic invertebrates: LC50 *Daphnia magna* (water flea) 0.66 mg/L/48H @ 22°C

Toxicity to algae: TLM *Diatom* (algae) 420 mg/L/120H @ 22°C (50% growth reduction)

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 (US DOT / CANADA TDG)

UN/NA number: Not applicable

Shipping name: Not Regulated

Hazard class: Not applicable

Packing group: Not applicable

Reportable Quantity: Yes

Marine pollutant: No

Exceptions: Not applicable

2016 ERG Guide #: Not applicable

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	CA Prop 65
Ammonium hydroxide	Listed	1,000 lbs (454 kg)	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other 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.

Safety Data Sheet

Ammonia Solution, Household

CAROLINA[®]
www.carolina.com

Section 1

Product Description

Product Name: Ammonia Solution, Household
Recommended Use: Science education applications
Synonyms: Ammonia Aqueous, Aqua Ammonia, Ammonium Solution
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2

Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200:

DANGER



Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

GHS Classification:

Skin Corrosion/Irritation Category 1A, Serious Eye Damage/Eye Irritation Category 1, Hazardous to the aquatic environment - Acute Category 1, Hazardous to the aquatic environment - Chronic Category 2, Acute Toxicity - Oral Category 4

Section 3

Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Water	7732-18-5	90
Ammonium Hydroxide	1336-21-6	10

Section 4

First Aid Measures

Emergency and First Aid Procedures

Inhalation: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin Contact: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Section 5

Firefighting Procedures

Extinguishing Media: Use dry chemical, CO2 or appropriate foam.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Dangerous fire hazard; emits irritating fumes and liquid can inflict burns. Ammonia hydroxide is non-combustible and non explosive, but ammonia vapors released from solution can form an explosive mixture in air.
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Safety Data Sheet

Section 6

Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Wear a self-contained breathing apparatus and appropriate Personal protection. (See Section 8.) Ventilate the contaminated area. Persons not wearing appropriate protective equipment should be excluded from area of spill until clean-up has been completed. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Avoid creating dusts. Cover material with absorbent and moisten and collect for disposal. Collect spillage.

Section 7

Handling and Storage

Handling: Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Keep away from ... (incompatible materials to be indicated by the manufacturer). Do not breathe dust/vapor. Do not get in eyes, on skin, or on clothing. Retained residue may make empty containers hazardous; use caution.

Storage: Store locked up. Keep container tightly closed in a cool, well-ventilated place.

Storage Code: White - Corrosive. Separate acids from bases; separate oxidizer acids from organic acids.

Section 8

Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>	<u>OSHA PEL</u>		
	<u>(TWA)</u>	<u>(STEL)</u>	<u>(TWA)</u>	<u>(STEL)</u>
No data available	N/A	N/A	N/A	N/A

Control Parameters

Engineering Measures:

No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

No respiratory protection required under normal conditions of use.

Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

Butyl rubber, Impervious rubber, Natural latex, Natural rubber, Nitrile - Extra Thick (8 mm)

Section 9

Physical Data

Formula: NH₄ * OH
Molecular Weight: 35.06
Appearance: Colorless
Odor: Strong Ammonia
Odor Threshold: No data available
pH: No data available
Melting Point: No data available
Boiling Point: 100 C
Flash Point: No data available
Flammable Limits in Air: NH₃ gas LEL 16% UEL 25%

Vapor Pressure: 115 mmHg at 20 °C for 10% solution
Evaporation Rate (BuAc=1): N/A
Vapor Density (Air=1): 0.6 NH₃
Specific Gravity: 0.9
Solubility in Water: Soluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: 100%

Section 10

Reactivity Data

Safety Data Sheet

Reactivity: No data available
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: None known.
Incompatible Materials: Water-reactive materials, Copper, Iron Salts, Zinc
Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry: Inhalation.
Symptoms (Acute): Respiratory disorders
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		
Ammonium Hydroxide	1336-21-6	Oral LD50 Rat = 350 mg/kg		INHALATION LC50 Mouse 4500 ppm INHALATION LC50 Mouse 21430 ppm INHALATION LC50 Rat 9500 ppm

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
No data available		Not listed	Not listed	Not listed

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.

Target Organ Effects:

Acute: See Section 2
Chronic: Mutation data cited., Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12 Ecological Data

Overview: Extreme ecological hazard. This product may be highly toxic to plants and/or wildlife. Keep out of waterways.

Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available
Ammonium Hydroxide	1336-21-6	96 HR LC50 PIMEPHALES PROMELAS 8.2 MG/L 48 HR EC50 DAPHNIA PULEX 0.66 MG/L 48 HR EC50 WATER FLEA 0.66 MG/L

Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Safety Data Sheet

Section 14

Transport Information

Ground - DOT Proper Shipping Name:

*** Consumer commodity/ORM-D for 500 ml and 4 L bottles. ***

Air - IATA Proper Shipping Name:

Not regulated for air transport by IATA.

Section 15

Regulatory Information

TSCA Status:

All components in this product are on the TSCA Inventory.

Chemical Name**CAS
Number****§ 313 Name****§ 304 RQ****CERCLA RQ****§ 302 TPQ****CAA 112(2)
TQ**

Ammonium Hydroxide

1336-21-6

No

1000 lb
RQ1000 lb final
RQ; 454 kg
final RQ

No

No

Section 16

Additional Information

Revised: 09/03/2014**Replaces: 09/03/2014****Printed: 09-11-2014**

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.

Glossary

ACGIH

American Conference of Governmental
Industrial Hygienists

CAS

Chemical Abstract Service Number

CERCLA

Comprehensive Environmental Response,
Compensation, and Liability Act

DOT

U.S. Department of Transportation

IARC

International Agency for Research on Cancer

N/A

Not Available

NTP

OSHA

PEL

ppm

RCRA

SARA

TLV

TSCA

IDLH

National Toxicology Program

Occupational Safety and Health Administration

Permissible Exposure Limit

Parts per million

Resource Conservation and Recovery Act

Superfund Amendments and Reauthorization Act

Threshold Limit Value

Toxic Substances Control Act

Immediately dangerous to life and health

Safety Data Sheet

Ammonium Chloride

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: Ammonium Chloride
Recommended Use: Science education applications
Synonyms: Sal Ammoniac, Ammoneric, Ammonium Muriate
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

WARNING



Harmful if swallowed. Causes serious eye irritation. Toxic to aquatic life.

GHS Classification:

Serious Eye Damage/Eye Irritation Category 2A, Hazardous to the aquatic environment - Acute Category 2, Acute Toxicity - Oral Category 4

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Ammonium Chloride	12125-02-9	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
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 advice/attention.
Skin Contact: After contact with skin, wash immediately with plenty of water.
Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Section 5 Firefighting Procedures

Extinguishing Media: Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Thermal decomposition produces highly toxic fumes. Explosive reaction with potassium chlorate or bromine trifluoride. Violent reaction (ignition) with bromine pentafluoride, NH₄, NO₃, and IF₇.
Hazardous Combustion Products: Nitrogen containing gases, Hydrogen chloride

Section 6 Spill or Leak Procedures

Safety Data Sheet

Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. 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. Also consider the expertise of employees in the area responding to the spill. Persons not wearing appropriate protective equipment should be excluded from area of spill until clean-up has been completed. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

Section 7 Handling and Storage

Handling: Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with material. Avoid creating and inhaling dust. Keep away from ... (incompatible materials to be indicated by the manufacturer). After contact with skin, wash immediately with plenty of water.

Storage: Store in a dry area. Material is hygroscopic (absorbs moisture).

Storage Code: Green - general chemical storage

Section 8 Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
Ammonium Chloride	10 mg/m ³ TWA (fume)	20 mg/m ³ STEL (fume)	10 mg/m ³	20 mg/m ³

Control Parameters

Engineering Measures: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Follow the ACGIH recommended exposure limit of 10 mg/m³ for Particulates Not Otherwise Classified (PNOC).

Eye Protection: Wear safety glasses with side shields and a Face shield

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: No information available

Section 9 Physical Data

Formula: NH ₄ Cl	Vapor Pressure: .97 mmHg at 30 °C
Molecular Weight: 53.50	Evaporation Rate (BuAc=1): No data available
Appearance: Powder	Vapor Density (Air=1): No data available
Odor: No data available	Specific Gravity: 1.53
Odor Threshold: No data available	Solubility in Water: Soluble
pH: 4.5 - 5.5 at 50.00000 g/l at 20.0 °C (68.0 °F)	Log Pow (calculated): No data available
Melting Point: 338 C	Autoignition Temperature: No data available
Boiling Point: No data available	Decomposition Temperature: No data available
Flash Point: No data available	Viscosity: No data available
Flammable Limits in Air: No data available	Percent Volatile by Volume: No data available

Section 10 Reactivity Data

Reactivity: No data available

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: Exposure to moisture

Incompatible Materials: Strong acids, Strong oxidizing agents, Caustics (bases)

Hazardous Decomposition Products: Hydrogen chloride, Nitrogen containing gases

Hazardous Polymerization: Will not occur

Safety Data Sheet

Section 11

Toxicity Data

Routes of Entry: Inhalation and ingestion.
Symptoms (Acute): , Eye disorders
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Ammonium Chloride	12125-02-9	Oral LD50 Mouse 1300 mg/kg Oral LD50 Rat 1650 mg/kg	Not determined	Not determined

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
No data available	12125-02-9	Not listed	Not listed	Not listed

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: See Section 2
Chronic: Mutation data cited., Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12

Ecological Data

Overview: Severe ecological hazard. This product may be toxic to plants and/or wildlife.
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Ammonium Chloride	12125-02-9	24 HR LC50 LEPOMIS MACROCHIRUS 725 MG/L 96 HR LC50 CYPRINUS CARPIO 209 MG/L [STATIC] 24 HR LC50 DAPHNIA MAGNA 202 MG/L

Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14

Transport Information

Ground - DOT Proper Shipping Name: Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Ammonium chloride) Reportable Quantity (RQ): 5000 lbs
Air - IATA Proper Shipping Name: Not regulated for air transport by IATA.

Section 15

Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Ammonium Chloride	12125-02-9	No	5000 lb RQ	5000 lb final RQ; 2270 kg final RQ	No	No

Safety Data Sheet

Section 16

Additional Information

Revised: 09/03/2014

Replaces: 09/03/2014

Printed: 09-11-2014

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Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

Section 1 Chemical Product and Company Identification

Page E1 of E2



5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
St. Catharines, Ontario
L2S 3T4 Canada
Tel: (800) 387-9393

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product	AMMONIUM CHLORIDE
Synonyms	Ammonium Muriate ; Sal Ammoniac

Section 2 Hazards Identification

Signal word: WARNING
Pictograms: GHS07
Target organs: None known



GHS Classification:
Acute toxicity, oral (Category 4)
Eye irritation (Category 2A)

GHS Label information: Hazard statement:
H302: Harmful if swallowed.
H319: Causes serious eye irritation.

Precautionary statement:

P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.
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.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Ammonium chloride	12125-02-9	100%	235-186-4

Section 4 First Aid Measures

INGESTION: 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 CAUSE 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. Reacts violently with ammonium nitrate and potassium chlorate. This generates fire and explosion hazard. Vaporizes at temperatures of about 335°C (653°F) evolving fumes of nitrogen oxides, chloride ions and ammonia gas.

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: Recover for reuse if not contaminated. Remove all sources of ignition. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

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 dusts. 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)
	Ammonium chloride fume	TWA: 10 mg/m ³ STEL: 20 mg/m ³	None established	TWA: 10 mg/m ³ STEL: 20 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 dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid, white, crystalline powder

Odor: No odor.

Odor threshold: Data not available.

pH: Data not available.

Melting / Freezing point: 520°C (968°F)

Boiling point: Sublimes @ 340°C (644°F)

Flash point: Data not available

Evaporation rate (= 1): Data not available

Flammability (solid/gas): Data not available.

Explosion limits: as NH₃ Lower: 15% Upper: 28%

Vapor pressure (mm Hg): Data not available

Vapor density (Air = 1): Data not available

Relative density (Specific gravity): 1.527

Solubility(ies): Soluble in water.

Partition coefficient: Data not available

Auto-ignition temperature: Data not available

Decomposition temperature: Data not available.

Viscosity: Data not available.

Molecular formula: NH₄Cl

Molecular weight: 53.49

Section 10 Stability & Reactivity

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Somewhat hygroscopic. Has an acid reaction in aqueous solution, solid tends to lose ammonia and become more acid on exposure and in storage.

Incompatible materials: Oxidizing agents, acids, bases, lead and silver salts.

Hazardous decomposition products: Ammonia and hydrogen chloride.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 1,650 mg/kg

Skin corrosion/irritation: Skin-rabbit - Slight irritant.

Serious eye damage/irritation: Eyes-rabbit - irritant.

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: 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: 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 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: Data not available

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Inhalation of dust or fume from heating may cause upper respiratory tract irritation, coughing, and choking sensation.

Ingestion: Ingestion of large doses cause nausea, vomiting, acidosis, irritation of the mouth, esophagus and gastric system. Ingestion may result in low grade toxicity.

Skin: Contact with skin causes irritation and/or dermatitis.

Eyes: Contact with eyes causes irritation and/or visual impairment.

Signs and symptoms of exposure: See Potential health effects above. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: BP455000

Section 12 Ecological Information

Toxicity to fish: Salmo clarki (fish, fresh water, marine), LC50 = 123.8 - 166.6 mg/L/96 hours

Toxicity to daphnia and other aquatic invertebrates: Artemia salina (Crustacea), EC50 = 28 mg/L/24 hours

Toxicity to algae: Dunaliella tertiolecta (Algae) EC40 = 21.3 mg/L/90 minutes

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 (US DOT / CANADA TDG)

UN/NA number: Not applicable

Shipping name: Not Regulated

Hazard class: Not applicable

Packing group: Not applicable

Reportable Quantity: No

Marine pollutant: No

Exceptions: Not applicable

2016 ERG Guide # Not applicable

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	CA Prop 65
Ammonium chloride	Listed	5000 lbs (2270 kg)	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other 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.

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 53.10

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Ammonium Chloride Solution

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 corrosion or irritation (Category 2). Causes skin irritation (H315).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Ammonium chloride	12125-02-9	NH ₄ Cl	53.49	5-10%
Water	7732-18-5	H ₂ O	18.00	90-95%

Synonym: Ammonium muriate

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, noncombustible solution.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

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.

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

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Concentrated solutions maybe slightly cloudy. Odorless. pH: ~5

SECTION 10 — STABILITY AND REACTIVITY

Avoid heat; decomposes when heated.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.	ORL-RAT LD ₅₀ : 1650 mg/kg as Ammonium Chloride
Chronic effects: N.A.	IHL-RAT LC ₅₀ : N.A.
Target organs: 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

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

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.31.2014

Ammonium Hydroxide**SECTION 1: Identification of the substance/mixture and of the supplier****Product name:** Ammonium Hydroxide**Manufacturer/Supplier Trade name:****Manufacturer/Supplier Article number:** AH1200-P**Recommended uses of the product and restrictions on use:****Manufacturer Details:**

AquaPhoenix Scientific, Inc.
9 Barnhart Drive
Hanover, PA 17331
1-717-632-1291

Supplier Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Emergency telephone number:

ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazards identification**Classification of the substance or mixture:****Corrosive**

Skin corrosion, category 1B

**Environmentally Damaging**

Acute hazards to the aquatic environment, category 1

**Irritant**

Specific target organ toxicity following single exposure, category 3

STOT SE 3.
AcAq Tox 1.
Skin Corr. 1B.

Signal word: None**Hazard statements:**

Causes severe skin burns and eye damage.
May cause respiratory irritation.
Very toxic to aquatic life.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not breathe dust/fume/gas/mist/vapours/spray.
Avoid release to the environment.

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Ammonium Hydroxide

Wear protective gloves/protective clothing/eye protection/face protection.
Use personal protective equipment as required.
Do not eat, drink or smoke when using this product.
Wash skin thoroughly after handling.
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. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Collect spillage.
Specific treatment (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
Store locked up.
Store in a dry place.
Store in a well ventilated place. Keep container tightly closed.
Dispose of contents/container.

Other Non-GHS Classification: None

SECTION 3: Composition/Information on ingredients

Ingredients:

Ingredients:		
CAS 1336-21-6	Ammonium Hydroxide	<40 %
CAS 12125-02-9	Ammonium Chloride	<7 %
CAS 7732-18-5	Water, purified	>53 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. If breathing difficult, give oxygen.

After skin contact:

Wash affected area with soap and water. Rinse/flush exposed skin gently using water for 15-20 minutes. Seek medical advice if discomfort or irritation persists.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath.

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Ammonium Hydroxide**Indication of any immediate medical attention and special treatment needed:**

If seeking medical attention, provide SDS document to physician.

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing agents:**

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors. Thermal decomposition can lead to release of irritating gases and vapors. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Advice for firefighters:**Protective equipment:**

Use NIOSH-approved respiratory protection/breathing apparatus.

Additional information (precautions):

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible. Use spark-proof tools and explosion-proof equipment.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures:**

Wear protective equipment. Transfer to a disposal or recovery container. Use spark-proof tools and explosion-proof equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air. Collect solids in powder form using vacuum with HEPA filter.

Reference to other sections: None

SECTION 7: Handling and storage**Precautions for safe handling:**

Wash hands after handling. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid contact with eyes, skin, and clothing.

Conditions for safe storage, including any incompatibilities:

Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Store with like hazards.

SECTION 8: Exposure controls/personal protection

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Ammonium Hydroxide

**Control parameters:**

1336-21-6, Ammonium Hydroxide, ACGIH TLV: 17 mg/m³.
 1336-21-6, Ammonium Hydroxide, OSHA PEL: 35 mg/m³.
 1336-21-6, Ammonium Hydroxide, OSHA TWA 25 ppm (18 mg/m³) ST 35 ppm (27 mg/m³).
 1336-21-6, Ammonium Hydroxide, ACGIH TWA 25 ppm (18 mg/m³) ST 35 ppm (27 mg/m³).
 12125-02-9, Ammonium chloride, ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) 10 mg/m³ TWA (fume).
 12125-02-9, Ammonium chloride, ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) 20 mg/m³ STEL (fume).
 12125-02-9, Ammonium chloride, NIOSH REL - TWA 10 mg/m³ TWA (fume).
 12125-02-9, Ammonium chloride, NIOSH - REL- STELs 20 mg/m³ STEL (fume).

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Use under a fume hood. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Respiratory protection:

Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

Protection of skin:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye protection:

Safety glasses with side shields or goggles.

General hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear, colorless liquid	Explosion limit lower:	Not determined
		Explosion limit upper:	Not determined
Odor:	Ammonia - like	Vapor pressure at 20°C:	115 at 20 C
Odor threshold:	Not determined	Vapor density:	3.38
pH-value:	9	Relative density:	0.9

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Effective date : 12.31.2014

Ammonium Hydroxide

Melting/Freezing point:	- 72 C	Solubilities:	Infinite solubility in water.
Boiling point/Boiling range:	36 C	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not determined	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	0.9 g/cm ³ at 20 °C		

SECTION 10: Stability and reactivity

Reactivity: None**Chemical stability:**

No decomposition if used and stored according to specifications.

Possible hazardous reactions: None**Conditions to avoid:**

Store away from oxidizing agents, strong acids or bases.

Incompatible materials:

Strong oxidizers, acids, gold, mercury, halogens, silver, calcium hypochlorite bleaches.

Hazardous decomposition products:

Ammonia and nitrogen oxides.

SECTION 11: Toxicological information

Acute Toxicity:**Chronic Toxicity:** No additional information.**Skin corrosion/irritation:** No additional information.**Serious eye damage/irritation:** No additional information.**Respiratory or skin sensitization:** No additional information.**Carcinogenicity:** No additional information.**Germ cell mutagenicity:** No additional information.**Reproductive Toxicity:** No additional information.**STOT-single and repeated exposure:** No additional information.**Additional toxicological information:** No additional information.

SECTION 12: Ecological Information

Ecotoxicity:

: Fish (acute 1336-21-6), 96 Hr LC50 Pimephales promelas: 8.2 mg/L.

: Crustacea (acute 1336-21-6), 48 Hr EC50 water flea: 0.66 mg/L; 48 Hr EC50 Daphnia pulex: 0.66 mg/L.

: Fish (acute 12125-02-9), 96 Hr LC50 Cyprinus carpio: 209 mg/L .

Persistence and degradability:

Readily degradable in the environment.

Bioaccumulative potential: No additional information.**Mobility in soil:** No additional information.**Other adverse effects:** No additional information.

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.31.2014

Ammonium Hydroxide

SECTION 13: Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

2672

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Ammonia Solution.

Hazard Class: 8

Packing Group: III.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Ammonia Solution.

Hazard Class: 8

Packing Group: III.

Marine Pollutant (if applicable): No additional information.

Comments: None



SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Chronic

SARA Section 313 (Specific toxic chemical listings):

1336-21-6 Ammonium Hydroxide.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

1336-21-6 Ammonium Hydroxide, ACS 1000.

12125-02-9 Ammonium chloride 5000 lbs.

Proposition 65 (California):

Chemicals known to cause cancer:

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.31.2014

Ammonium Hydroxide

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 2-0-0

HMIS: 2-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 58.05

Revision Date: December 13, 2013

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Ammonium Hydroxide Solution, 1M or Less

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: Skin corrosion or irritation (Category 2). Causes skin irritation (H315).

Hazard class: Serious eye damage or irritation (Category 1). Causes serious eye damage (H318).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Ammonium hydroxide	1336-21-6	NH ₄ OH	35.05	4% or less
Water	7732-18-5	H ₂ O	18.00	96% or more

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. Continue rinsing. Immediately call a POISON CENTER or physician (P305+P351+P338+P310).**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. Do NOT induce vomiting.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

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.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store in a dedicated base cabinet. If a cabinet is not available, store in a Flinn Saf-Cube™. Keep container tightly closed (P233).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Strong ammonia odor.

Odor threshold: 5-50 ppm as ammonia
pH: basic

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with acids, copper, galvanized iron, and aluminum.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, corrosive to skin, eyes, and respiratory tract,
lachrymator
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD₅₀: 350 mg/kg as ammonia water
IHL-HUMAN TLC₀: 408 ppm as ammonia water
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 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: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (215-647-6), RCRA code D002.

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.

Section 1 Chemical Product and Company Identification

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5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
St. Catharines, Ontario
L2S 3T4 Canada
Tel: (800) 387-9393

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product	AMMONIUM MOLYBDATE
Synonyms	Ammonium Heptamolybdate Tetrahydrate

Section 2 Hazards Identification

Signal word: WARNING
Pictograms: GHS07
Target organs: None known

**GHS Classification:**

Acute toxicity, oral (Category 4)
Skin irritation (Category 2)
Eye irritation (Category 2A)
STOT-SE (Category 3)

GHS Label information: Hazard statement:

H302: Harmful if swallowed.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.

Precautionary statement:

P261: Avoid breathing dust.
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.
P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.
P302+P352: IF ON SKIN: Wash with plenty of water and soap.
P332+P313: If skin irritation occurs: Get medical attention.
P362+P364: Take off contaminated clothing and wash it 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 comfortable for breathing.
P312: Call a POISON CENTER or doctor if you feel unwell.
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.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Ammonium molybdate	12054-85-2	100%	236-031-3

Section 4 First Aid Measures

INGESTION: 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 CAUSE RESPIRATORY IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SERIOUS 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: 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: Use any media suitable for extinguishing supporting fire.

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.

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: Recover for reuse if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

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 dusts. 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.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Ammonium molybdate	Not established	Not established	Not established

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 dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid. Greenish-white crystalline powder.	Evaporation rate (= 1): Data not available	Partition coefficient: Data not available
Odor: Slight ammonia odor.	Flammability (solid/gas): Not applicable	Auto-ignition temperature: Data not available
Odor threshold: Data not available	Explosion limits: Lower / Upper: Not applicable	Decomposition temperature: Data not available
pH: Data not available	Vapor pressure (mm Hg): Data not available	Viscosity: Data not available
Melting / Freezing point: Decomposes	Vapor density (Air = 1): Data not available	Molecular formula: (NH ₄) ₆ Mo ₇ O ₂₄ •4H ₂ O
Boiling point: Decomposes	Relative density (Specific gravity): 2.276	Molecular weight: 1235.86
Flash point: Not applicable	Solubility(ies): Soluble in water.	

Section 10 Stability & Reactivity

Chemical stability: Stable **Hazardous polymerization:** Will not occur.
Conditions to avoid: Heating material above 75°C (167°F) will cause decomposition with the evolution of ammonia.
Incompatible materials: Strong oxidizers, acids.
Hazardous decomposition products: Carbon oxides, nitrogen oxides, ammonia fumes.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 333 mg/kg (anhydrous)
Skin corrosion/irritation: Data not available
Serious eye damage/irritation: Data not available
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenicity: 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: 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 component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
 Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
Reproductive toxicity: Data not available
STOT-single exposure: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
 Inhalation: May be harmful by inhalation.
 Ingestion: May be harmful if swallowed.
 Skin: Causes skin irritation.
 Eyes: Causes serious eye irritation.
Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.
Additional information: RTECS #: QA5076000

Section 12 Ecological Information

Toxicity to fish: No data available
Toxicity to daphnia and other aquatic invertebrates: No data available
Toxicity to algae: No data available
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 (US DOT / CANADA TDG)

UN/NA number: Not applicable **Shipping name:** Not Regulated
Hazard class: Not applicable **Packing group:** Not applicable **Reportable Quantity:** No **Marine pollutant:** No
Exceptions: Not applicable **2016 ERG Guide #** Not applicable

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	CA Prop 65
Ammonium molybdate	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other 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.

Section 1 Chemical Product and Company Identification

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**Aldon
Corporation**

221 Rochester Street
Avon, NY 14414
(585) 226-6177

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product AMMONIUM MOLYBDATE, 0.1 MOLAR SOLUTION

Synonyms Ammonium Molybdate, Water Solution

Section 2 Hazards Identification

Signal word: WARNING

Pictograms: GHS07

Target organs: None known

**GHS Classification:**

Acute toxicity, oral (Category 4)

Skin irritation (Category 2)

Eye irritation (Category 2A)

STOT SE (Category 3)

GHS Label information: Hazard statement:

H302: Harmful if swallowed.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

Precautionary statement:

P261: Avoid breathing mist/vapours/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.

P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.

P302+P352: IF ON SKIN: Wash with plenty of water and soap.

P332+P313: If skin irritation occurs: Get medical attention.

P362+P364: Take off contaminated clothing and wash it 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 comfortable for breathing.

P312: Call a POISON CENTER or doctor if you feel unwell.

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.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	88.36%	231-791-2
Ammonium molybdate	12054-85-2	11.64%	236-031-3

Section 4 First Aid Measures

INGESTION: 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 CAUSE RESPIRATORY IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SERIOUS 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: 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: Use any media suitable for extinguishing supporting fire.

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.

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: Recover for reuse if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

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 mist/vapours/spray. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Ammonium molybdate	Not established	Not established	Not established

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: No odor. Odor threshold: Data not available. pH: Data not available. Melting / Freezing point: Approximately 0°C (32°F) (water) Boiling point: Approximately 100°C (212°F) (water) Flash point: Data not available	Evaporation rate (Water = 1): <1 Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): 14 (water) Vapor density (Air = 1): 0.7 (water) Relative density (Specific gravity): Approximately 1.0 (water) Solubility(ies): Complete in water.	Partition coefficient: Data not available Auto-ignition temperature: Data not available Decomposition temperature: Data not available. Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture
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Section 10 Stability & Reactivity

Chemical stability: Stable **Hazardous polymerization:** Will not occur.

Conditions to avoid: Excessive temperatures which cause evaporation.

Incompatible materials: Strong oxidizers, acids.

Hazardous decomposition products: Carbon oxides, nitrogen oxides, ammonia fumes.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 333 mg/kg (anhydrous) [Ammonium molybdate]

Skin corrosion/irritation: Data not available

Serious eye damage/irritation: Data not available

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: 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: 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 component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Reproductive toxicity: Data not available

STOT-single exposure: Data not available

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: May be harmful by inhalation.

Ingestion: May be harmful if swallowed.

Skin: Causes skin irritation.

Eyes: Causes serious eye irritation.

Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: QA5076000 [Ammonium molybdate]

Section 12 Ecological Information

Toxicity to fish: No data available

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

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 nonprofessional 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 (US DOT / CANADA TDG)

UN/NA number: Not applicable

Shipping name: Not Regulated

Hazard class: Not applicable

Packing group: Not applicable

Reportable Quantity: No

Marine pollutant: No

Exceptions: Not applicable

2016 ERG Guide # Not applicable

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	CA Prop 65
Ammonium molybdate	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other 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.

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 61.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Ammonium 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: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Serious eye damage or irritation (Category 2B). Causes eye irritation (H320).

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
Ammonium nitrate	6484-52-2	NH ₄ NO ₃	80.04	
Synonym: Nitric acid, ammonium salt				

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 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, noncombustible solid.

May explode under confinement and high temperatures or if exposed to reducing agents.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher. Take any precautions to avoid mixing with combustibles (P221+P370+P378).

NFPA CODE

H-0

F-0

R-3

OX

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and water. 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

Flinn Suggested Chemical Storage Pattern: Inorganic #8. Store with borates, chromates, manganates, and permanganates. Store away from all combustibles. Keep and store away from clothing and combustible materials (P220). Take any precautions to avoid mixing with combustibles (P221). 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).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals. Odorless.
Soluble: Water, alcohol, and alkalies.

Boiling point: 210 °C (decomposes)
Melting point: 170 °C
Specific gravity: 1.725

SECTION 10 — STABILITY AND REACTIVITY

Store away from any source of combustion or ignition. Avoid contact with reducing agents, strong acids, finely powdered metals, and organic materials. Do not grind in a mortar and pestle - potentially shock sensitive.
Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, gastrointestinal disturbances.	ORL-RAT LD ₅₀ : 2217 mg/kg
Chronic effects: N.A.	IHL-RAT LC ₅₀ : N.A.
Target organs: Blood, central nervous system.	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: Ammonium Nitrate. Hazard class: 5.1, Oxidizer. UN number: UN1942.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (229-347-8), RCRA code D001, D003.

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



Safety Data Sheet

Ammonium Nitrate Granular, ACS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ammonium Nitrate Granular, ACS

Synonyms/Generic Names: Ammonium salt, nitram; Norway saltpeter; Nitric acid ammonium salt

Product Number: 0515

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Call: 920-623-2140 (Monday-Friday 8:00-4:30)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Oxidizer, Carcinogen, Target organ effect, Irritant

Target Organs: Blood, Central nervous system

Signal Words: Warning

Pictograms:



GHS Classification:

Oxidizing solids	Category 3
Acute toxicity, Oral	Category 5
Skin irritation	Category 2
Eye irritation	Category 2A
Specific target organ toxicity – single exposure	Category 3

GHS Label Elements, including precautionary statements:

Hazard Statements:

H272	May intensify fire; oxidizer.
H303	May be harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Precautionary Statements:

P220	Keep/store away from clothing/combustible materials.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

Potential Health Effects

Eyes	Causes eye irritation.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	1
Flammability	0
Reactivity	3
Specific hazard	OX

HMIS Ratings

Health	1
Fire	0
Reactivity	3
Personal	E

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Ammonium Nitrate	>98	6484-52-2	229-347-8	NH ₄ NO ₃	80.04 g/mol

4. FIRST-AID MEASURES

Eyes	In case of eye contact, rinse with plenty of water and seek medical attention if necessary.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention if necessary.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (nitrogen oxides, ammonia) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.

Methods and materials for containment and cleaning up	Pick up and arrange disposal without creating dust. Sweep up and shovel. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.
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7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Keep away from sources of ignition – No smoking. Avoid formation of dusts.

Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities). Hygroscopic. Store under inert gas. Keep away from sources of ignition – No smoking.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Contains no substances with occupational exposure limit values.

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, body covering clothing or plastic apron, boots.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Colorless to white crystals.
Odor	Not Available
Odor threshold	Not Available
pH	4.5-6.0 @80.40 g/l @ 25°C (77°F)
Melting point/freezing point	169°C (336°F)
Initial boiling point and boiling range	210°C (410°F)
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Flammable
Vapor pressure	Not Available
Vapor density	Not Available
Relative density	Not Available
Solubility (ies)	Completely soluble in water.
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Heat, moisture, sources of ignition.
Incompatible Materials	Organic and combustible materials, strong reducing agents, acids, powdered metals, alkalis.
Hazardous Decomposition Products	Nitrogen oxides, ammonia.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	LD50 Oral – rat – 2217 mg/kg

Carcinogenicity

IARC	2A – Group 2A: Probably carcinogenic to humans.
ACGIH	No components 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 components 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 components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Irritation, redness, and/or swelling.
Eyes	Irritation, redness.
Respiratory	Irritation, cough, difficulty breathing, sneezing.
Ingestion	Nausea, irritation of esophagus and mouth, gastrointestinal pain.

Chronic Toxicity	Causes damage to the following organs: lungs, mucous membranes. May cause damage to the following organs: blood, gastrointestinal tract.
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Inhalation – May cause respiratory irritation.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN1942, Ammonium Nitrate, 5.1, pg III
TDG	UN1942, AMMONIUM NITRATE, 5.1, pg III
IMDG	UN1942, AMMONIUM NITRATE, 5.1, pg III
Marine Pollutant	No
IATA/ICAO	UN1942, Ammonium Nitrate, 5.1, pg III

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Ammonium Nitrate
SARA 312	Ammonium Nitrate
SARA 313	Listed: Ammonium Nitrate
WHMIS Canada	Class C: Oxidizing material.

16. OTHER INFORMATION

Revision	Date
Revision 1	06/11/2012

Disclaimer: Columbus Chemical Industries, Inc. ("Columbus") 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 Columbus 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. COLUMBUS MAKES NO WARRANTY, EXPRESS 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.

ANALYSIS OF DRUGS AND POISONS KIT #10-502

KEMTEC AQUAPHOENIX

Introduce students to qualitative analysis in the intriguing context of criminal investigation in a Toxicology Laboratory. Analysis of Drugs & Poisons includes five experiments: Identifying Over-The-Counter Drugs, Identification of Simulated Controlled Substances, Presumptive Testing for Cocaine, Determination of Poisoning through Amino Acids in Simulated Urine, and Analysis of Unknowns from a Crime Scene. Ideal for teaching chain of custody and techniques for isolating drug sample evidence. Includes instructor's manual with reproducible student instructions, data sheets, and complete answer keys.

Chemicals Included:

- Scott Reagent
- Butanol
- Acetic Acid
- Acidified Ferric Nitrate
- Acetone
- Hydrochloric Acid
- Sodium Bicarbonate
- Ninhydrin

****PLEASE LOOK UP CHEMICAL SDS'S INDIVIDUALLY****

ANALYSIS OF MINERALS AND SOILS KIT # 10-500

Kemtec AKA - AQUAPHOENIX

Kemtec's Analysis of Minerals & Soils kit now extends the student's experience from investigating the physical and chemical properties of trace evidence from a crime scene, to learning to characterize soil texture. Ideal for forensic science, agriculture, and environmental science courses. Experiments include: Characterizing Soil Appearance, Acidity of Soil, Soil Comparison by Particle Size Analysis, Forensic Density Distribution of Soil Particles, Chemical Reactions of Substances in Soil, and Analysis of Glass Samples. Includes hands-on soil classification extension activities for determining soil texture by sedimentation and by using the feel method.

Chemicals Included:

Universal Indicator
Bromoform
Bromobenzene
Hydrochloric Acid

****PLEASE LOOK UP CHEMICAL SDS'S INDIVIDUALLY****

Section 1 Identification

Page E1 of E2



**Aldon
Corporation**

221 Rochester Street
Avon, NY 14414
(585) 226-6177

**CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300**
For laboratory and industrial use only.
Not for drug, food or household use.

Product ANTI-SERUM, SIMULATED, ANTI-RH

Synonyms None assigned

Section 2 Hazards identification

Signal word: WARNING

Pictograms: No symbol required

Target organs: Liver

GHS Classification:

Eye irritation (Category 2B)

GHS Label information: Hazard statement:

H320: Causes eye irritation.

Precautionary statement:

P264: Wash hands thoroughly after handling.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists: Get medical attention.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / information on ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	92.00%	231-791-2
Sodium salicylate	54-21-7	8.00%	200-198-0

Section 4 First aid measures

INGESTION: 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: 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: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire.

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: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

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: 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.

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, well-ventilated area away from incompatible substances. Light sensitive. Protect from light.

Section 8 Exposure controls / personal protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Sodium salicylate	Not established	Not established	Not established

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 and chemical properties

Appearance: Clear liquid	Evaporation rate (Water = 1): <1	Partition coefficient: Data not available
Odor: No odor.	Flammability (solid/gas): Data not available.	Auto-ignition temperature: Data not available
Odor threshold: Data not available.	Explosion limits: Lower / Upper: Data not available	Decomposition temperature: Data not available.
pH: Data not available.	Vapor pressure (mm Hg): 14 (water)	Viscosity: Data not available.
Melting / Freezing point: Approximately 0°C (32°F) (water)	Vapor density (Air = 1): 0.7 (water)	Molecular formula: Mixture
Boiling point: Approximately 100°C (212°F) (water)	Relative density (Specific gravity): Approximately 1.0 (water)	Molecular weight: Mixture
Flash point: Data not available	Solubility(ies): Complete in water.	

Section 10 Stability and reactivity

Chemical stability: Stable **Hazardous polymerization:** Will not occur.

Conditions to avoid: Excessive temperatures which cause evaporation. Light sensitive.

Incompatible materials: Strong oxidizers, strong acids.

Hazardous decomposition products: Carbon oxides, sodium oxides.

Section 11 Toxicological information

Acute toxicity: Acute toxicity estimate: Oral-rat LD50: 11,625 mg/kg

Skin corrosion/irritation: Data not available

Serious eye damage/irritation: Eyes-rabbit - Irritant.

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: 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: 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 component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Reproductive toxicity: Data not available

STOT-single exposure: Data not available

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion: Harmful if swallowed.

Skin: Prolonged contact may cause irritation and/or defatting of skin.

Eyes: Causes serious eye irritation.

Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: VO5075000 [Sodium salicylate]

Section 12 Ecological information

Toxicity to fish: LC50 - Pimephales promelas (fathead minnow) - 1,370 mg/l - 96 h [Sodium salicylate]

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

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: Not applicable

Shipping name: Not Regulated

Hazard class: Not applicable

Packing group: Not applicable

Reportable Quantity: No

Marine pollutant: No

Exceptions: Not applicable

2020 ERG Guide #: Not applicable

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	CA Prop 65
Sodium salicylate	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other 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.

Section 1 Identification

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**Aldon
Corporation**

221 Rochester Street
Avon, NY 14414
(585) 226-6177

**CHEMTEC 24 Numéros De Téléphone De
Secours D'Heure (800) 424-9300**
Pour l'usage industriel et de laboratoire seulement.
Pas pour l'usage de drogue, de nourriture ou de ménage.

Produit ANTISÉRUM, SIMULÉ, ANTI-RH

Synonymes Non attribué

Section 2 Identification des dangers

Mention d'avertissement: AVERTISSEMENT

Pictogrammes: Aucun symbole n'est demandé

Les organes cibles: Le foie

Classification par le GHS:

Eye irritation (Catégorie 2B)

Renseignements sur l'étiquette GHS: Mention de danger:

H320: Provoque une irritation des yeux.

Déclarations de précaution:

P264: Se laver les mains soigneusement après manipulation.

P305+P351+P338: EN CAS DE CONTACT AVEC LES YEUX: Rincer avec précaution à l'eau pendant 15 minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.

P337+P313: Si l'irritation oculaire persiste: Obtenir des soins médicaux.

Dangers non classés autrement:

Dangers pour la santé non classés ailleurs (HHNOC) - pas connu

Dangers physiques non classés autrement (PHNOC) - pas connu

Section 3 Composition / information sur les ingrédients

Nommé Chimique	# CAS	%	EINECS
L'eau	7732-18-5	92.00%	231-791-2
Salicylate de sodium	54-21-7	8.00%	200-198-0

Section 4 Premiers soins

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: 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: PROVOQUE UNE 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: Enlever les vêtements contaminés. Rincer soigneusement avec du savon doux et d'eau. En cas d'irritation, consulter un médecin.

Section 5 Mesures à prendre en cas d'incendie

Moyens d'extinction: Utiliser un agent extincteur approprié au type de feu environnant.

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 de feu, de l'eau peut s'évaporer à partir de cette solution, qui peut causer les produits dangereux de décomposition à être formée comme poussière ou vapeur.

Section 6 Mesures à prendre en cas de déversement 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: Absorber avec un matériau inerte, balayer à sec ou sous vide et placer dans un récipient approprié pour l'élimination. Laver la zone de déversement avec du savon et de l'eau.

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 et bien aéré, loin des substances incompatibles. Sensible à la lumière. Protéger de la lumière.

Section 8 Contrôle de l'exposition / protection individuelle

Limites d'exposition:	Nommé Chimique	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Salicylate de sodium	Aucun établi	Aucun établi	Aucun établi

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. Si les conditions brumeuses prévaloir, travailler dans la hotte ou de porter un masque respiratoire approuvé NIOSH / MSHA.

Section 9 Propriétés physiques et chimiques

Apparence: Liquide transparent	Taux d'évaporation (Eau = 1): <1	Coefficient de partage: Données non disponibles
Odeur: Aucun odeur.	Inflammabilité (solide / gaz): Données non disponibles.	Auto-inflammation: Données non disponibles
Seuil de l'odeur: Données non disponibles.	Limites d'explosivité: Bas / Max: Données non disponibles	Température de décomposition: Données non disponibles.
pH: Données non disponibles.	Pression de vapeur (mm Hg): 14 (eau)	Viscosité: Données non disponibles.
Point de fusion / congélation: Environ 0°C (32°F) (eau)	Densité de vapeur (Air = 1): 0.7 (eau)	Formule moléculaire: Mélange
Point d'ébullition: Environ 100°C (212°F) (eau)	Densité relative (gravité spécifique): Environ 1.0 (eau)	Poids moléculaire: Mélange
Point d'éclair: Données non disponibles	Solubilité (s): Complet dans l'eau.	

Section 10 Stabilité et réactivité

Stabilité chimique: Stable **Polymérisation dangereuse:** N'aura pas lieu.

Conditions à éviter: Les températures excessives qui causent l'évaporation. Sensible à la lumière.

Matières incompatibles: Combustibles fortes, acides fortes.

Produits dangereux de décomposition: Oxydes de carbones, oxydes de sodium.

Section 11 Données toxicologiques

Toxicité aiguë: Estimation de la toxicité aiguë: Oral-rat LD50: 11,625 mg/kg

La corrosion de la peau et l'irritation: Données non disponibles

Des lésions oculaires graves / irritation: Yeux-lapin - Irritant

Respiratoire ou sensibilisation de la peau: Données non disponibles

Mutagenicité des cellules germinales: Données 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 cancérogène reconnu ou présumé par NTP.

IARC: Aucun composant de ce produit présent à des niveaux supérieurs ou égaux à 0,1% n'a été identifié comme cancérogène probable, possible ou confirmé par IARC.

OSHA: Aucun composant de ce produit présent à des niveaux supérieurs ou égaux à 0,1% n'a été identifié comme cancérogène ni comme cancérogène possible par OSHA.

Toxicité pour la reproduction: Données non disponibles

STOT-exposition unique: Données non disponibles

STOT-une exposition répétée: Données non disponibles

Risque d'aspiration: Données non disponibles

Effets d'une surexposition:

Inhalation: Peut être nocif en cas d'inhalation. Peut causer une irritation des voies respiratoires.

Ingestion: Nocif en cas d'ingestion.

Peau: Un contact prolongé peut provoquer une irritation et / ou le dégraissage de la peau.

Yeux: Provoque une irritation des yeux.

Les signes et les symptômes de l'exposition: Au meilleur de notre connaissance les propriétés chimiques, physiques et toxicologiques n'ont pas été à fond étudiées. Les données spécifiques ne sont pas disponibles. Procédures appropriées d'exercice pour réduire au minimum des risques

Informations complémentaires: RTECS #: VO5075000 [Salicylate de sodium]

Section 12 Données écologiques

Toxicité pour les poissons: LC50 - Pimephales promelas (fathead minnow) - 1,370 mg/l - 96 h [Salicylate de sodium]

Toxicité pour les daphnies et autres invertébrés aquatiques: Pas de données disponible

Toxicité pour les algues: Pas de données disponible

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 Données sur l'élimination

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 Informations relatives au transport

Numéro UN / NA: Non applicable

Nom d'expédition: Non réglé

Classe de danger: Non applicable

Groupe d'emballage: Non applicable

Quantité à déclarer: Non

Polluant marin: Non

Exceptions: Non applicable

2020 ERG Guide #: Non applicable

Section 15 Informations sur la réglementation

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
Salicylate de sodium	Listed	Not listed	Not listed	Listed	Not listed

Section 16 Autres renseignements

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.



SAFETY DATA SHEET

Issue Date No data available

Revision Date 11-May-2015

Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Antibac Spray - All Fragrances

Product Code MSDS-M

Recommended Use Consumer use
Cleaning agent
Disinfectant

Supplier Address

Method Products Inc.
637 Commercial St
Suite 300
San Francisco, CA 94111
866-963-8463

Emergency Telephone No information available

2. HAZARDS IDENTIFICATION

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance pale yellow **Physical state** Liquid. **Odor** Pleasant

Potential health effects

Principle Routes of Exposure Skin Contact

Acute toxicity

Eyes May cause slight irritation
Skin Prolonged or repeated contact may dry skin and cause irritation
Inhalation Not an expected route of exposure.
Ingestion Not an expected route of exposure. . Intentional ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

CHRONIC EFFECTS No known effect based on information supplied

Aggravated Medical Conditions None known

Environmental hazard See Section 12: Ecological Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Citric Acid	77-92-9	3-7
Sodium Lauryl Sulfate	151-21-3	0.1-1
Sodium Alphasulfo Methyl C12-18 ester	149458-07-1	0.1-1

4. FIRST AID MEASURES

General advice	If symptoms persist, call a physician.
Eye Contact	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice
Skin Contact	Wash off immediately with plenty of water
Inhalation	Remove to fresh air.
Ingestion	Clean mouth with water and drink plenty of water. Do NOT induce vomiting. Get medical attention
Note to physicians	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable properties	Not flammable
Flash Point Method	Not flammable (based on components)
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment
Explosion data	
Sensitivity to Mechanical Impact	None
Sensitivity to Static Discharge	None
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 hazards 0 Flammability 0 Stability 0 Physical and Chemical Properties -
HMIS	Health hazards 0 Flammability 0 Physical hazards 0 Personal protection -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Avoid contact with eyes.
Environmental precautions	Avoid release to the environment
Methods for containment	Prevent further leakage or spillage if safe to do so
Methods for cleaning up	Take up mechanically, placing in appropriate containers for disposal.

7. HANDLING AND STORAGE

Advice on safe handling	Avoid contact with eyes. Keep container closed when not in use.
--------------------------------	---

Storage Conditions Keep out of the reach of children. Keep container tightly closed in a dry and well-ventilated place

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

For Household Settings This product is safe for consumers and other users under normal and reasonably foreseen use.

For Occupational Settings Use safety goggles if splash hazards exist. Avoid prolonged contact with skin and clothing. Always follow good hygienic work practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state Liquid
Odor Pleasant
Color pale yellow

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	2.55 - 3.05	
Melting point / freezing point	< 0 °C	
Boiling point / boiling range	> 100 °C	
Flash Point	Not flammable	
Evaporation rate	> 1.00 (water = 1)	
Flammability (solid, gas)		
Flammability Limit in Air		
Upper Flammability Limit	Not flammable	
Lower flammability limit	Not flammable	
Vapor pressure	2.27 kPa @ 20 °C	
Vapor density	0.62 (air = 1)	
Specific Gravity	1.02	
Water solubility	Soluble in water	
Autoignition temperature	Not Applicable	
Decomposition temperature	Not established	
Kinematic viscosity	Not Determined	
Dynamic viscosity	water-thin	
Explosive properties	Not an explosive	
Oxidizing properties	Not Applicable	
VOC Content (%)	0	
Bulk density	Not established	

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions

Incompatible materials None known based on information supplied

Conditions to Avoid None known based on information supplied

Hazardous Decomposition Products None known based on information supplied

Hazardous polymerization Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information

Eye Contact	May cause slight irritation
Skin Contact	Prolonged or repeated contact may dry skin and cause irritation
Ingestion	Intentional ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium Lauryl Sulfate	= 977 mg/kg (Rat)	= 580 mg/kg (Rat)	

Chronic toxicity

Target Organ Effects None known

12. ECOLOGICAL INFORMATION

Ecotoxicity

Considering the limited amount applied during normal use and the size of the container, the risk of adverse environmental effects is considered small.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Citric Acid Solution			120: 72 h Daphnia magna mg/L EC50
Sodium Lauryl Sulfate	117: 96 h Pseudokirchneriella subcapitata mg/L EC50	10.2 - 22.5: 96 h Pimephales promelas mg/L LC50 semi-static 4.3 - 8.5: 96 h Oncorhynchus mykiss mg/L LC50 static	1.8: 48 h Daphnia magna mg/L EC50
Methanol		100: 96 h Pimephales promelas mg/L LC50 static	

Persistence and degradability The surface active component(s) used in this product are readily biodegradable.

Chemical Name	Partition coefficient
Citric Acid Solution	-1.72
Sodium Lauryl Sulfate	1.6

13. DISPOSAL CONSIDERATIONS

Contaminated packaging Dispose of in accordance with federal, state and local regulations. Recover or recycle if possible.

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO (air)</u>	Not regulated
<u>IATA</u>	Not regulated

IMDG Not regulated**RID** Not regulated**ADR** Not regulated**ADN** Not regulated**15. REGULATORY INFORMATION****International Inventories**

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Citric Acid Solution	Present	X		Present		Present	X	Present	X	X
Sodium Lauryl Sulfate	Present	X		Present		Present	X	Present	X	X
Sodium Alphasulfo Methyl C12-18 ester	Present	X					X	Present		X

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AICS** - Australian Inventory of Chemical Substances**US 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

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (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)

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

US State Regulations**California Proposition 65**

Complies

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania
Methanol	X	X	X
Sodium Sulfate	X		X

International Regulations

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

Non-controlled

16. OTHER INFORMATION

Revision Date

11-May-2015

Revision Note

No information available

End of Safety Data Sheet

SAFETY DATA SHEET

Creation Date 22-Sep-2009

Revision Date 22-May-2017

Revision Number 3

1. Identification

Product Name Antimony
Cat No. : A845-500
Synonyms Antimony Regulus; Stibium
Recommended Use Laboratory chemicals.
Uses advised against Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company

Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number

CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) Identification

Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

Label Elements

Signal Word

Warning

Hazard Statements

Harmful if inhaled
Harmful if swallowed
Causes skin irritation
Causes eye irritation
May cause respiratory irritation

**Precautionary Statements****Prevention**

Wear protective gloves/protective clothing/eye protection/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Avoid breathing dust/fume/gas/mist/vapors/spray

Inhalation

Call a POISON CENTER or doctor/physician if you feel unwell

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin

IF ON SKIN: Wash with plenty of soap and water

Take off contaminated clothing and wash before reuse

If skin irritation occurs: Get medical advice/attention

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 advice/attention

Ingestion

Rinse mouth

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

3. Composition / Information on Ingredients

Component	CAS-No	Weight %
Antimony	7440-36-0	>= 99.5

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.
Ingestion	Do not induce vomiting. Obtain medical attention.
Most important symptoms/effects Notes to Physician	No information available. Treat symptomatically

5. Fire-fighting measures

Unsuitable Extinguishing Media	No information available
Flash Point	No information available
Method -	No information available
Autoignition Temperature	330 °C
Explosion Limits	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Fumes

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	Flammability	Instability	Physical hazards
3	1	0	N/A

6. Accidental release measures

Personal Precautions	Ensure adequate ventilation. Use personal protective equipment.
Environmental Precautions	See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

Methods for Containment and Clean Up Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and storage

Handling Ensure adequate ventilation. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid ingestion and inhalation.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Antimony	TWA: 0.5 mg/m ³	(Vacated) TWA: 0.5 mg/m ³ TWA: 0.5 mg/m ³	IDLH: 50 mg/m ³ TWA: 0.5 mg/m ³	TWA: 0.5 mg/m ³

- American Conference of Governmental Industrial Hygienists

- Occupational Safety and Health Administration

The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection	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 and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory Protection	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.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	Silver
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	630 °C
Boiling Point/Range	1635 °C
Flash Point	No information available
Evaporation Rate	negligible
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	negligible
Vapor Density	No information available
Specific Gravity	6.684
Solubility	Insoluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	330 °C
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	Sb
Molecular Weight	121.71

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Fumes
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information No acute toxicity information is available for this product
Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
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Antimony	LD50 = 7 g/kg (Rat)	Not listed	Not listed
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Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Irritating to eyes, respiratory system and skin

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Antimony	7440-36-0	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Antimony	Not listed	Cyprinodon variegatus: LC50 = 6.2-8.3 mg/L/96h	Not listed	Not listed

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available.

Mobility No information available.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No UN2871
 Proper Shipping Name ANTIMONY POWDER
 Hazard Class 6.1
 Packing Group III

TDG

UN-No	UN2871
Proper Shipping Name	ANTIMONY POWDER
Hazard Class	6.1
Packing Group	III
IATA	
UN-No	UN2871
Proper Shipping Name	ANTIMONY POWDER
Hazard Class	6.1
Packing Group	III
IMDG/IMO	
UN-No	UN2871
Proper Shipping Name	ANTIMONY POWDER
Hazard Class	6.1
Packing Group	III

15. Regulatory Information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Antimony	X	X	-	231-146-5	-		X	-	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Antimony	7440-36-0	>= 99.5	1.0

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

CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Antimony	-	-	X	X

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Antimony	X		-

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
Not applicable

Component	Hazardous Substances RQs	CERCLA EHS RQs
Antimony	5000 lb 10 lb	-

California Proposition 65 This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Antimony	X	X	X	X	X

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

16. Other Information

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 22-Sep-2009
Revision Date 22-May-2017
Print Date 22-May-2017

Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

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



Safety Data Sheet

Antimony Metal

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Antimony Metal

Synonyms/Generic Names: Stibium

SDS Number: 66.00

Product Use: For Educational Use Only

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Contact: Ward's Science
5100 West Henrietta Rd.
PO Box 92912-9012
Rochester, NY 14692
(800) 962-2660 (Monday-Friday 7:30-7:00 Eastern Time)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Target organ effect

Target Organs: Respiratory and Cardiovascular system, Liver, Kidneys

Signal Words: None

Pictograms: None

GHS Classification:

Not a dangerous substance according to GHS

GHS Label Elements, including precautionary statements:

Hazard Statements:

None

Precautionary Statements:

None

Potential Health Effects

Eyes	May cause eye irritation.
Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	1
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	1
Fire	0
Reactivity	0
Personal	C

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Antimony	100	7440-36-0	231-146-5	Sb	121.76

4. FIRST-AID MEASURES

Eyes	Flush eyes with water as a precaution.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin	Wash off with soap and plenty of water.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (antimony oxide) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Sweep up and shovel. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE**Precautions for safe handling**

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Antimony	0.5 mg/m ³	TLV	ACGIH
	0.5 mg/m ³	PEL	OSHA
	0.5 mg/m ³	REL	NIOSH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, apron or lab coat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Silver metal lumps.
Odor	Odorless.
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	630°C (1,166°F)
Initial boiling point and boiling range	1,950°C (3,542°F)
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Flammable
Vapor pressure	Not Available
Vapor density	Not Available
Relative density	Not Available
Solubility (ies)	Insoluble
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Heat.
Incompatible Materials	Oxidizers, acids, hydrogen gas, halogen acids, reducing agents.
Hazardous Decomposition Products	Antimony oxide.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	LD50 Oral – rat – 7,000 mg/kg

Carcinogenicity

IARC	No components 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 components 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 components 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 components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Redness, itching.
Eyes	Redness, tearing.
Respiratory	Irritation of mucous membranes.
Ingestion	Irritation and burning sensations of mouth and throat, nausea, vomiting, abdominal pain.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	May cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residues.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product containers.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Not Listed
SARA 312	Not Listed
SARA 313	Listed: Antimony
WHMIS Canada	Not Listed

16. OTHER INFORMATION

Revision	Date
Revision 1	01/08/2013
Revision 2	06/20/2013

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SAFETY DATA SHEET

1. Identification

Product identifier **Appearance 2000**

Other means of identification

Product code 9641/5/55

Recommended use Floor Finish

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Fuller Commercial Products	
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 Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word Warning

Hazard statement Direct contact with eyes may cause temporary irritation. May Cause Skin Irritation. The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response If exposed or concerned: Get medical advice/attention.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority 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	%
DIETHYLENE GLYCOL MONOETHYL ETHER		111-90-0	5 - < 10
TRIBUTOXYETHYLPHOSPHATE		78-51-3	1 - < 3
AMMONIUM HYDROXIDE		1336-21-6	< 0.2
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. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. 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 prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. 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. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
AMMONIUM HYDROXIDE (CAS 1336-21-6)	PEL	35 mg/m3
		50 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
AMMONIUM HYDROXIDE (CAS 1336-21-6)	STEL	35 ppm
	TWA	25 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
AMMONIUM HYDROXIDE (CAS 1336-21-6)	STEL	27 mg/m3
		35 ppm
	TWA	18 mg/m3 25 ppm

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
DIETHYLENE GLYCOL MONOETHYL ETHER (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 (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	In case of insufficient ventilation, wear suitable respiratory equipment.
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	Liquid.
Physical state	Liquid.
Form	Liquid. Emulsion
Color	Opaque white emulsion
Odor	Matches to Standard
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	14 °F (-10 °C) estimated
Initial boiling point and boiling range	384.8 °F (196 °C) estimated
Flash point	204.8 °F (96.0 °C) estimated
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	0.01 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	400 °F (204.44 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	8.60 lbs/gal estimated
Flammability class	Combustible IIIB estimated
Percent volatile	79.5 % estimated
pH in aqueous solution	8.6
Pounds per gallon	8.6 lb/gal
Specific gravity	1.03 estimated
VOC (Weight %)	0 % 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.
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

Ingestion	Expected to be a low ingestion hazard.
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
Appearance 2000 (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	158429.9063 mg/kg estimated
<i>Oral</i>		
LD50	Mouse	122.9907 g/kg estimated
	Rabbit	67663.5547 mg/kg estimated
	Rat	25523.3418 mg/kg estimated
<i>Other</i>		
LD50	Mouse	7442.0278 mg/kg estimated
	Rat	41121.4961 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	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.
Further information	This product has no known adverse effect on human health.

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	
Appearance 2000 (CAS Mixture)			
Aquatic			
Crustacea	EC50	Daphnia	23125000 mg/l, 48 hours estimated
Fish	LC50	Fish	491.3087 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)	
DIETHYLENE GLYCOL MONOETHYL ETHER	-0.54
TRIBUTOXYETHYLPHOSPHATE	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.
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.

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 This substance/mixture is not intended to be transported in bulk.

15. Regulatory information

US federal regulations All components are listed or exempted from listing on the U.S. EPA TSCA Inventory List. 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)

AMMONIUM HYDROXIDE (CAS 1336-21-6)	Listed.
DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)	Listed.
TRIBUTOXYETHYLPHOSPHATE (CAS 78-51-3)	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 - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
DIETHYLENE GLYCOL MONOETHYL ETHER	111-90-0	5 - < 10

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)
 TRIBUTOXYETHYLPHOSPHATE (CAS 78-51-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations**US. Massachusetts RTK - Substance List**

AMMONIUM HYDROXIDE (CAS 1336-21-6)

US. New Jersey Worker and Community Right-to-Know Act

AMMONIUM HYDROXIDE (CAS 1336-21-6)
 DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)
 TRIBUTOXYETHYLPHOSPHATE (CAS 78-51-3)

US. Pennsylvania Worker and Community Right-to-Know Law

AMMONIUM HYDROXIDE (CAS 1336-21-6)
 DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)
 TRIBUTOXYETHYLPHOSPHATE (CAS 78-51-3)

US. Rhode Island RTK

AMMONIUM HYDROXIDE (CAS 1336-21-6)
 DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)
 TRIBUTOXYETHYLPHOSPHATE (CAS 78-51-3)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

16. Other information, including date of preparation or last revision

Issue date 10-16-2014

Revision date 01-27-2015

Version # 02

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.

Revision Information Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Toxicological Information: Toxicological Data

SAFETY DATA SHEET

6/8/2015

SECTION I - IDENTIFICATION

Material Name

APPLE BARREL

Manufacturer Information

Plaid Enterprises, Inc.
3225 Westech Drive
Norcross, Georgia 30092
Phone: 1-678-291-8213
Fax: 1-678-291-8363
Email: jstanley@plaidonline.com

For transportation emergencies only call: cell: 770-778-3221
For health emergencies call the Poison Control Center: 1-800-222-1222

SECTION II - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

There are no GHS label elements.

PRIMARY ROUTES OF ENTRY: INHALATION, INGESTION, EYE, SKIN

EFFECTS AND SYMPTOMS OF ACUTE EXPOSURE: NONE EXPECTED

EFFECTS AND SYMPTOMS OF CHRONIC EXPOSURE: NONE EXPECTED

CARCINOGEN LISTING: NTP: **NO** IARC: **NO** OSHA: **NO**

SEE SECTION III FOR COMPONENTS AFFECTED

MEDICAL CONDITIONS USUALLY AGGRAVATED BY OVER EXPOSURE TO THIS PRODUCT: NONE

SECTION III - COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS/EC #</u>	<u>PEL/TLV (MG/M#)</u>	<u>Max % Weight</u>	<u>NTP</u>	<u>IARC</u>
None					

SECTION IV - FIRST AID MEASURES

FIRST AID MEASURES: NONE REQUIRED. NO ACUTE HEALTH EFFECTS EXPECTED.

SECTION V - FIRE FIGHTING MEASURES

FLASH POINT (METHOD): N/A
EXPLOSION LIMITS IN AIR (% BY VOLUME): NOT EXPLOSIVE
EXTINGUISHING MEDIA: NO SPECIAL MEDIA REQUIRED
FIRE FIGHTING PROCEDURES: NO SPECIAL FIRE FIGHTING PROCEDURES REQUIRED
UNUSUAL FIRE & EXPLOSION HAZARDS: NOT COMBUSTIBLE

AUTOIGNITION TEMPERATURE: N/A

SECTION VI - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE A MATERIAL IS SPILLED: Clean up in accordance with all applicable regulations. Absorb spillage with non-combustible, absorbent material. For waste disposal, see Section XIII

SECTION VII - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING STORAGE AND HANDLING: Good industrial hygiene practice requires that exposure be maintained below the TLV. This is preferably achieved through the provision of adequate ventilation. When exposure cannot be adequately controlled in this way, personal respiratory protection should be employed.

SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION AND SPECIAL VENTILATION REQUIREMENTS: NONE REQUIRED
OTHER PROTECTIVE EQUIPMENT (GLOVES, GOGGLES, ETC): NONE REQUIRED
WORK/HYGIENE PRACTICES: NONE REQUIRED
ENGINEERING CONTROLS: NONE REQUIRED

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/A
VAPOR PRESSURE: N/A
SPECIFIC VAPOR DENSITY (AIR=1): N/A
SOLUBILITY IN WATER: N/A

MELTING POINT: N/A

SPECIFIC GRAVITY: N/A
REACTIVITY IN WATER: NON-REACTIVE

SECTION X - STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION PRODUCTS: NONE
STABILITY: STABLE CONDITIONS TO AVOID: NONE
INCOMPATIBILITY (MATERIALS TO AVOID): NONE
HAZARDOUS DECOMPOSITION PRODUCTS: NONE

SECTION XI - TOXICOLOGICAL INFORMATION

ACUTE EFFECTS ASSOCIATED WITH USE OF THIS MATERIAL: NONE EXPECTED
The summated LD50 is 13762 mg/kg.
The summated LC50 is 26664 mg/cubic meter.
This product is not considered to be a known or suspected human carcinogen by NTP, IARC or OSHA (see section III)

SECTION XII - ECOLOGICAL INFORMATION

NO HARMFUL EFFECTS KNOWN OTHER THAN THOSE ASSOCIATED WITH SUSPENDED INERT SOLIDS IN WATER.

SECTION XIII - DISPOSAL CONSIDERATIONS

RCRA HAZARD CLASS (40 CFR 261): THIS PRODUCT IS NOT CLASSIFIED AS A HAZARDOUS WASTE.
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION XIV - TRANSPORTATION INFORMATION

U.S. DOT (49 CFR 172.101): THIS IS NOT A HAZARDOUS MATERIAL AS CLASSIFIED BY CFR 172.101.

SECTION XV - REGULATORY INFORMATION

CONTENTS OF THIS SDS COMPLY WITH OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200
EPA SARA TITLE III CHEMICAL LISTINGS
NONE

SECTION 302.4 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
NONE

SECTION 313 TOXIC CHEMICALS (40 CFR 372):
ALUMINUM
IODOPROPYNYL BUTYL CARBAMATE

INTERNATIONAL REGULATIONS

CANADIAN WHMIS: THIS PRODUCT IS A CONTROLLED PRODUCT UNDER CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. IT CONTAINS THE FOLLOWING TOXIC OR HIGHLY TOXIC MATERIALS:

ALUMINUM
FERRIC OXIDE
MICA
PROPYLENE GLYCOL

SUPPLEMENTAL STATE COMPLIANCE INFORMATION:

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) LISTED UNDER NEW JERSEY'S RIGHT TO KNOW PROGRAM:

AMMONIUM HYDROXIDE
CHROMIUM OXIDE GREEN
MICA
PIGMENT RED 101
PIGMENT WHITE 6

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) REQUIRING NOTIFICATION TO THE STATE OF WASHINGTON UNDER THEIR CHILDREN'S SAFE PRODUCTS ACT:
ALKYLPHENOL ETHOXYLATE

Under CPSC's consumer product regulations (16CFR1500.3 and 1500.14), this product has the following required acute and chronic hazard labeling:

NONE

SECTION XVI - OTHER INFORMATION

LAST REVISION DATE: 06/08/2015

Prepared by Duke OEM Toxicology

COLOR INFORMATION

THIS SDS APPLIES TO THE FOLLOWING COLORS WHICH ARE ASSOCIATED WITH HAZARDOUS AND/OR NON-HAZARDOUS INGREDIENTS

Product Color	SKU	Hazardous Ingredient
20203 LT. PEACH		(NONE)
20204 WILD BERRY		(NONE)
20205 HOT PINK		(NONE)
20206 LT. ORCHID		(NONE)
20207 RED VIOLET		(NONE)
20209 LT. PERIWINKLE		(NONE)
20210 TURQUOISE		(NONE)
20211 LT. LEAF GREEN		(NONE)
20215 BUBBLE GUM		(NONE)
20216 FUCHSIA		(NONE)
20217 GERANIUM RED		(NONE)
20218 MANGO		(NONE)
20219 BANANA		(NONE)
20220 GREEN APPLE		(NONE)
20221 KIWI		(NONE)
20222 SEA GREEN		(NONE)
20223 POOL BLUE		(NONE)
20224 CAROLINA BLUE		(NONE)
20225 BRIGHT BLUE		(NONE)
20226 PETUNIA PURPLE		(NONE)
20227 BLUE IRIS		(NONE)
20240 FORGET ME NOT		(NONE)
20241 IT'S A BOY		(NONE)
20242 IT'S A GIRL		(NONE)
20243 PRETTY IN PINK		(NONE)
20244 HONEYSUCKLE		(NONE)
20245 LAVENDER SHERBERT		(NONE)
20246 PLUM KISS		(NONE)
20247 CARRIBEAN		(NONE)
20251 PINK PARFAIT		(NONE)
20253 LIMEADE		(NONE)
20254 DIVA PINK		(NONE)
20258 MELTED CHOCOLATE		(NONE)
20501 BRIGHT RED		(NONE)
20502 YELLOW		(NONE)
20503 WHITE		(NONE)
20504 BLACK		(NONE)
20505 ANTIQUE WHITE		(NONE)
20506 ANTIQUE GOLD		(NONE)
20507 AVOCADO		(NONE)
20509 ENGLISH LACE		(NONE)
20511 BROWN OXIDE		(NONE)
20512 BURNT UMBER		(NONE)
20513 BRIGHT YELLOW		(NONE)
20514 FLESH		(NONE)
20515 BURNT SIENNA		(NONE)
20516 IVORY		(NONE)
20517 GALAXY BLUE		(NONE)
20519 CLAY BRICK		(NONE)
20520 LAVENDER		(NONE)
20521 NUTMEG BROWN		(NONE)
20522 DUTCH BLUE		(NONE)
20523 KELLY GREEN		(NONE)
20524 GOLDEN BROWN		(NONE)
20525 BERRY RED		(NONE)
20526 COUNTRY GREY		(NONE)
20528 LEAF GREEN		(NONE)

Product Color	SKU	Hazardous Ingredient
20529 CHRISTMAS GREEN		(NONE)
20530 WEDGEWOOD GREEN		(NONE)
20531 TERRA COTTA		(NONE)
20532 MAROON		(NONE)
20533 CRIMSON		(NONE)
20534 STRAW		(NONE)
20535 LIGHT PINK		(NONE)
20536 PARCHMENT		(NONE)
20538 FOREST GREEN		(NONE)
20539 GEORGIA CLAY		(NONE)
20540 REAL SPICE		(NONE)
20541 WOODLAND GREEN		(NONE)
20542 PINEAPPLE		(NONE)
20543 BUTTERCUP		(NONE)
20544 DEEP SEA BLUE		(NONE)
20545 SCOTCH BLUE		(NONE)
20546 INDIAN RED		(NONE)
20547 TAN		(NONE)
20548 VIKING BLUE		(NONE)
20549 MIDNIGHT BLUE		(NONE)
20552 ROCK GREY		(NONE)
20553 BOSTON BLUE		(NONE)
20554 BLUE MIST		(NONE)
20555 BURGANDY ROSE		(NONE)
20556 MEDIUM FLESH		(NONE)
20558 TERRITORIAL BEIGE		(NONE)
20559 LILAC DUST		(NONE)
20560 DUSTY MAUVE		(NONE)
20561 ORANGE		(NONE)
20562 LAGUNA		(NONE)
20563 LIBERTY BLUE		(NONE)
20564 DARK NIGHT		(NONE)
20565 POWDER BLUE		(NONE)
20566 BLUE STONEWARE		(NONE)
20567 MILITARY BLUE		(NONE)
20568 SAGE GREEN		(NONE)
20569 SALEM GREEN		(NONE)
20570 ROSE BOUQUET		(NONE)
20571 APPLE PINK		(NONE)
20572 INDIANA ROSE		(NONE)
20573 VICTORIA ROSE		(NONE)
20574 ENGLISH ROSE		(NONE)
20575 SANDSTONE		(NONE)
20576 TOFFEE		(NONE)
20577 BARN RED		(NONE)
20578 CHOCOLATE BAR		(NONE)
20579 IRON GREY		(NONE)
20580 PEWTER GREY		(NONE)
20581 FRESH APRICOT		(NONE)
20582 CREAMY PEACH		(NONE)
20583 VICTORIAN GREEN		(NONE)
20584 LEMON CHIFFON		(NONE)
20585 SATIN CREAM		(NONE)
20586 CANARY YELLOW		(NONE)
20587 SPRING GREEN		(NONE)
20588 PUMPKIN ORANGE		(NONE)
20589 HARVEST ORANGE		(NONE)
20590 CARDINAL CRIMSON		(NONE)
20591 BRIGHT MAGENTA		(NONE)
20592 TAPESTRY WINE		(NONE)
20593 WILD IRIS		(NONE)
20594 ROYAL VIOLET		(NONE)
20595 CONCORD GRAPE		(NONE)
20596 COBALT BLUE		(NONE)
20597 TRUE NAVY		(NONE)
20740 PARAKEET		(NONE)

Product Color	SKU	Hazardous Ingredient
20741 CLOUDLESS		(NONE)
20751 REGENCY BLUE		(NONE)
20752 MYSTIC TEAL		(NONE)
20753 VIRIDIAN GREEN		(NONE)
20754 HUNTER GREEN		(NONE)
20755 VINEYARD GREEN		(NONE)
20756 ENGLISH IVY GREEN		(NONE)
20757 MEADOW GREEN		(NONE)
20758 AZEALA BLUSH		(NONE)
20759 POPPY RED		(NONE)
20760 KING'S GOLD		(NONE)
20761 PURE GOLD		(NONE)
20762 PURE SILVER		(NONE)
20763 PURE BRONZE		(NONE)
20764 APRICOT		(NONE)
20765 CINNAMON APPLE		(NONE)
20766 CRANBERRY		(NONE)
20767 VALENTINE PINK		(NONE)
20768 PETAL PINK		(NONE)
20769 PERIWINKLE BLUE		(NONE)
20770 SKY BLUE		(NONE)
20771 TOO BLUE		(NONE)
20772 NIGHT SKY		(NONE)
20773 ENGLISH NAVY		(NONE)
20774 AQUAMARINE		(NONE)
20775 TRUE TEAL		(NONE)
20776 GREEN CLOVER		(NONE)
20777 GOOSE FEATHER		(NONE)
20778 COUNTRY TAN		(NONE)
20779 CARAMEL CANDY		(NONE)
20780 TWILL		(NONE)
20781 DOLPIN GRAY		(NONE)
20782 MISTY WHITE		(NONE)
20783 PASTEL PINK		(NONE)
20784 RED APPLE		(NONE)
20785 BURGUNDY		(NONE)
20786 LAVENDER LACE		(NONE)
20791 VICTORIAN RED		(NONE)
20881 MANDARIN ORANGE		(NONE)
20882 SUNLIGHT		(NONE)
20883 PRACTICALLY GREEN		(NONE)
20884 SPINNAKER BLUE		(NONE)
20885 LULLABY LAVENDER		(NONE)
21051 PAPA YA		(NONE)
21170 WHITE		(NONE)
21171 BLACK		(NONE)
21176 GRAPE JAM		(NONE)
21177 SUMMER SUNSET		(NONE)
21178 BLUEBERRY		(NONE)
21179 HAYSTACK		(NONE)
21180 STRAWBERRY		(NONE)
21181 ORANGE SHERBERT		(NONE)
21185 PARROT BLUE		(NONE)
21186 GOLDEN SUNSET		(NONE)
21337 PIGGY PINK		(NONE)
21337 SNOWFLAKE		(NONE)
21338 PUNK PINK		(NONE)
21339 PRETTY IN PINK		(NONE)
21340 CORAL		(NONE)
21341 TROPIC ORANGE		(NONE)
21342 CATERPILLAR		(NONE)
21343 LIGHT IVY GREEN		(NONE)
21344 CAMOUFLAGE		(NONE)
21345 DARK FOREST GREEN		(NONE)
21346 PALE GREEN		(NONE)
21347 WINTERGREEN		(NONE)

Product Color	SKU	Hazardous Ingredient
21348 REEF BLUE		(NONE)
21349 CRYSTAL BLUE		(NONE)
21376 DOGWOOD BLOSSOM		(NONE)
21377 SNOWFLAKE		(NONE)
21378 VANILLA ICE CREAM		(NONE)
21379 PINK POLISH		(NONE)
21380 CRANBERRY		(NONE)
21381 SWEET POTATO		(NONE)
21384 SUNNY DAY		(NONE)
21386 ARBOR GREEN		(NONE)
21388 LILAC MIST		(NONE)
21389 ECRU		(NONE)
21390 KHAKI		(NONE)
21391 CHESTNUT		(NONE)
21392 GRANITE GRAY		(NONE)
21463 ANTIQUE PARCHMENT		(NONE)
21464 CAMEO PINK		(NONE)
21465 CANDY PINK		(NONE)
21466 HONEYSUCKLE PINK		(NONE)
21467 TUSCAN RED		(NONE)
21468 FLAMENCO RED		(NONE)
21469 FLAG RED		(NONE)
21470 RIPE TOMATO		(NONE)
21471 SPICED CARROT		(NONE)
21472 JACK-O-LANTERN		(NONE)
21473 PALE DAFFODIL		(NONE)
21474 YELLOW FLAME		(NONE)
21475 LIME FLOAT		(NONE)
21476 LIME TREE		(NONE)
21477 PALM LEAF		(NONE)
21478 HOLLY BRANCH		(NONE)
21479 NEW SHAMROCK		(NONE)
21480 LIME SHERBERT		(NONE)
21481 KEY WEST		(NONE)
21482 BIMINI BLUE		(NONE)
21483 CHINA BLUE		(NONE)
21484 ADMIRAL BLUE		(NONE)
21485 BLUE BONNET		(NONE)
21486 PURPLE IRIS		(NONE)
21487 VELVET CRUSH		(NONE)
21488 PURPLE PANSY		(NONE)
21489 LITE MOCA		(NONE)
21490 PAVEMENT		(NONE)
21884 SNOW WHITE		(NONE)
21885 JET BLACK		(NONE)
21886 BLUE COTTON		(NONE)
21887 TUSCAN TEAL		(NONE)
21888 SUNKISSED PEACH		(NONE)
21889 PINK ERASER		(NONE)
21890 CRISP GREEN		(NONE)
21891 MARSH GREEN		(NONE)
21892 AWARD BLUE		(NONE)
21893 LAVENDER SACHET		(NONE)
21894 MOSAIC BLUE		(NONE)
2850 NEON PINK		(NONE)
2852 NEON ORANGE		(NONE)
2853 NEON YELLOW		(NONE)
2871 GLOW IN THE DARK PINK		(NONE)
2872 GLOW IN THE DARK ORANGE		(NONE)
2873 GLOW IN THE DARK YELLOW		(NONE)
2874 GLOW IN THE DARK GREEN		(NONE)
29884 SPINNAKER BLUE		(NONE)
29885 LULLABY LAVENDER		(NONE)
72004 BRIGHT MAGENTA		(NONE)
72035 GOLD		(NONE)
K20840 LT. YELLOW		(NONE)

Product Color**SKU****Hazardous Ingredient**

K20841 INDIAN ROSE		(NONE)
K20842 ENGLISH ROSE		(NONE)
K20843 POPPY RED		(NONE)
K20844 AZALEA BLUSH		(NONE)
K20845 TERRA COTTA		(NONE)
K20846 LT. LEAF GREEN		(NONE)
K20847 PIKE GREEN		(NONE)
K20848 BABY BLUE		(NONE)
K20849 NIGHT SKY		(NONE)

BRAND NAMES

THIS SDS APPLIES TO THE FOLLOWING BRAND NAMES

Brand Name	SKU
APPLE BARREL	



Sodium Bicarbonate

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 03/12/2015 Date of issue: 03/12/2015 Supersedes Date: 03/09/2012

Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Substance

Product Name: Sodium Bicarbonate

CAS No: 144-55-8

Formula: NaHCO₃

Synonyms: Baking Soda

Intended Use of the Product

Food Ingredient, Pharmaceutical, Household and Personal Care Product, Water Treatment, General Industrial Use.

Name, Address, and Telephone of the Responsible Party

Company

Church & Dwight

500 Charles Ewing Blvd

Ewing Township, NJ 08628

T 1-800-524-1328

www.churchdwight.com

Emergency Telephone Number

Emergency Number : For Medical Emergency: 1-888-234-1828, For Chemical Emergency: 1-800-424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

The consumer variant of this product is labeled in accordance with regulations administered by the Consumer Product Safety Commission (CPSC) and the Food and Drug Administration (FDA). The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this SDS differ from the labeling requirements of the CPSC and FDA, and as a result, this SDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

Classification of the Substance or Mixture

Classification (GHS-US) Not classified

Label Elements

GHS-US Labeling No labeling applicable

Other Hazards Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. Prolonged contact with dust can produce mechanical irritation.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Name : Sodium Bicarbonate

CAS No : 144-55-8

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Sodium bicarbonate	(CAS No) 144-55-8	100	Not classified

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.

Inhalation: When symptoms occur: go into open air and ventilate suspected area.

Skin Contact: Brush off loose particles from skin. Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.

Sodium Bicarbonate

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Ingestion: Rinse mouth. Do NOT induce vomiting. Seek medical attention if a large amount is swallowed.

Most Important Symptoms and Effects Both Acute and Delayed

General: None expected under normal conditions of use.

Inhalation: Prolonged inhalation of dust may cause respiratory irritation.

Skin Contact: Skin contact with large amounts of dust may cause mechanical irritation.

Eye Contact: Contact may cause irritation due to mechanical abrasion.

Ingestion: Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: For surrounding fire: Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: NOT FLAMMABLE . Under fire conditions, hazardous fumes will be present.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Firefighting Instructions: Exercise caution when fighting any chemical fire.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Sodium oxides.

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: Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust or fumes. Avoid skin and eye contact.

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: Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Avoid generation of dust during clean-up of spills. Keep in suitable, closed containers for disposal. Contact competent authorities after a spill.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: When heated, material emits irritating fumes.

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.

Incompatible Materials: Acids. Water. Lime.

Storage Temperature: < 65 °C (150 °F)

Sodium Bicarbonate

Safety Data Sheet

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Specific End Use(s) Food Ingredient, Pharmaceutical, Water Treatment, General Industrial Use

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Particulates not otherwise classified (PNOC)		
USA ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³ Respirable fraction 10 mg/m ³ Total Dust
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³ Respirable fraction 15 mg/m ³ Total Dust
Alberta	OEL TWA (mg/m ³)	10 mg/m ³ (total)
British Columbia	OEL TWA (mg/m ³)	10 mg/m ³ (total dust)
Manitoba	OEL TWA (mg/m ³)	10 mg/m ³ (inhalable particles, recommended)
New Brunswick	OEL TWA (mg/m ³)	3 mg/m ³ (particulate matter containing no Asbestos and <1% Crystalline silica, respirable fraction)
Newfoundland & Labrador	OEL TWA (mg/m ³)	10 mg/m ³ (inhalable particles, recommended)
Nova Scotia	OEL TWA (mg/m ³)	10 mg/m ³ (inhalable particles, recommended)
Nunavut	OEL TWA (mg/m ³)	5 mg/m ³ (respirable mass)
Northwest Territories	OEL TWA (mg/m ³)	5 mg/m ³ (respirable mass)
Ontario	OEL TWA (mg/m ³)	10 mg/m ³ (inhalable)
Prince Edward Island	OEL TWA (mg/m ³)	10 mg/m ³ (inhalable particles, recommended)
Québec	VEMP (mg/m ³)	10 mg/m ³ (including dust, inert or nuisance particulates; containing no Asbestos and <1% Crystalline silica-total dust)
Saskatchewan	OEL STEL (mg/m ³)	20 mg/m ³ (insoluble or poorly soluble-inhalable fraction) 6 mg/m ³ (insoluble or poorly soluble-respirable fraction)
Saskatchewan	OEL TWA (mg/m ³)	10 mg/m ³ (insoluble or poorly soluble-inhalable fraction) 3 mg/m ³ (insoluble or poorly soluble-respirable fraction)

Exposure Controls

Appropriate Engineering Controls: For occupational/workplace settings: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: For occupational or bulk quantities: Gloves. Safety glasses. Dust formation: dust mask.



Materials for Protective Clothing: For occupational or bulk quantities: Chemically resistant materials and fabrics.

Hand Protection: For occupational or bulk quantities: Wear chemically resistant protective gloves.

Eye Protection: For occupational or bulk quantities: Chemical goggles or safety glasses.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

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	: Solid
Appearance	: White, crystalline powder
Odor	: None
Odor Threshold	: Not available
pH	: 8.2 (1% Solution)
Evaporation Rate	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: Not available

Sodium Bicarbonate

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Upper/Lower Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Specific gravity / density	: 62 lb/ft ³
Specific Gravity	: Not available
Solubility	: Water: 8.6 g/100ml @ 20 °C (68 °F)
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.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Decomposes slowly on exposure to water (moisture).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Exposure to moisture or moist air. Temperatures above 150°F (65 °C).

Incompatible Materials: Acids. Water. Lime.

Hazardous Decomposition Products: None known. At high temperature may liberate toxic gases.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data:

Sodium Bicarbonate	
LD50 Oral Rat	7.3 g/kg
LC50 Inhalation Rat	> 4.7 mg/l/4h

Skin Corrosion/Irritation: Not classified [pH: 8.2 (1% Solution)]

Serious Eye Damage/Irritation: Not classified [pH: 8.2 (1% Solution)]

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged inhalation of dust may cause respiratory irritation.

Symptoms/Injuries After Skin Contact: Skin contact with large amounts of dust may cause mechanical irritation.

Symptoms/Injuries After Eye Contact: Contact may cause irritation due to mechanical abrasion.

Symptoms/Injuries After Ingestion: Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema.

Chronic Symptoms: None expected under normal conditions of use.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity No additional information available

Sodium Bicarbonate	
LC50 Fish 1	7100 mg/l Bluegill
EC50 Daphnia 1	4100 mg/l
LC 50 Fish 2	7700 mg/l Rainbow Trout
Sodium bicarbonate (144-55-8)	
LC50 Fish 1	8250 - 9000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	2350 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Sodium Bicarbonate

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Persistence and Degradability Not established

Bioaccumulative Potential Not established

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 & International Regulations

Sodium Bicarbonate (144-55-8)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Canadian DSL (Domestic Substances List)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

Neither this product nor its chemical components appear on any US state lists.

Canadian Regulations

Sodium bicarbonate (144-55-8)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification Uncontrolled product according to WHMIS classification criteria

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 : 03/12/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Party Responsible for the Preparation of This Document

Church & Dwight

500 Charles Ewing Blvd

Ewing Township, NJ 08628

T 1-800-524-1328

This Product Safety Data Sheet is offered solely for your information, consideration and investigation. Church & Dwight Co., Inc. provides no warranties; either expressed or implied, and assumes no responsibility for the accuracy or completeness of data contained herein. Church & Dwight Co., Inc. urges persons receiving this information to make their own determination as to the information suitability for their particular application.

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 80.10

Revision Date: January 26, 2016

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

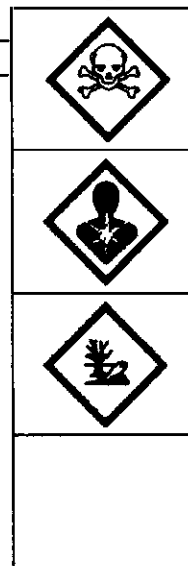
Arsenic

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 3). Toxic if swallowed (H301). Do not eat, drink or smoke when using this product (P270).

Hazard class: Acute toxicity, inhalation (Category 3). Toxic if inhaled (H331). Avoid breathing dust or fumes (P261).

Hazard class: Carcinogenicity (Category 1). May cause cancer (H350). 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).

Hazard class: Chronic hazards to the aquatic environment (Category 1). Very toxic to aquatic life with long lasting effects (H410).

Arsenic is classified as an IARC Group 1-Carcinogenic to Humans and NTP Known To Be Carcinogenic to Humans.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Arsenic	7440-38-2	As	74.92	

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). Take off contaminated clothing and wash before reuse (P362). **If swallowed:** Rinse mouth (P330). Immediately call a POISON CENTER or physician (P301+P310).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid. Flammable in the form of dust when exposed to heat or flame or by chemical reactions. 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. Wipe up dust with a damp paper towel to avoid generating dust. 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.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #10. Store with sulfur and phosphorus.
Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271). Store in a locked poison cabinet.

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). Use personal protective equipment as required.
Exposure guidelines: PEL/TLV 0.01 mg/m³ (OSHA/ACGIH); IDLH 5 mg/m³

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Gray powder. Odorless.	Boiling point: 613 °C (Sublimes)
Soluble; Nitric acid. Insoluble in water.	Melting point: 817 °C
	Specific gravity: 5.72

SECTION 10 — STABILITY AND REACTIVITY

When heated or on contact with acid or acid fumes, it emits highly toxic fumes. Can react vigorously on contact with oxidizing materials. Hydrogen gas can react with inorganic arsenic to form the highly toxic gas arsine.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Moderately toxic.	ORL-RAT LD ₅₀ : 763 mg/kg
Chronic effects: Carcinogen (IARC-1, NTP-known)	IHL-RAT LC ₅₀ : N.A.
Target organs: Skin, lungs.	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

Very toxic to aquatic life with long lasting effects.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #27d is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Arsenic; Hazard class: 6.1, Poison; UN number: UN1558.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-148-6). RCRA code D004.

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: January 26, 2016

Safety data sheet

Section 1 – Chemical Product and Company Identification

1.1 Procuct identifier

Hand Sanitizer

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses:HAND SANITIZER ADVANCED

1.3. Details of the supplier of the safety data sheet

Company:

NINGBO OCEANSTAR CHEMICAL PRODUCTS CO.,LTD

No 38,LVYUAN RAOD, TENGTUO INDUSTRIAL ZONE, FENGHUA, NINGBO,
ZHEJIANG 315000, China (CHN)

Telephone: 0086-574-87659817

Fax:0086-574-87659815

E-mail address: INFO@OCEANSTAR-INC.COM

1.4. Emergency telephone number

International emergency number:

Telephone: +86-13567432010

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

Flam. Liq. 2

2.2.Label elements

According to Regulation (EC) No 1272/2008 [CLP]

Pictogram:



Signal Word:

Danger

Hazard Statement:

H225 Highly flammable liquid and vapour

Precautionary Statements (Prevention):

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P280 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements (Response):

Precautionary Statements (Response):

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.

P370 + P378 In case of fire: Use foam extinguisher or carbon dioxide to extinguish.

Precautionary Statements (Storage):

P403 + P235 Store in a well-ventilated place. Keep cool.

Precautionary Statements (Disposal):

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

No specific dangers known, if the regulations/notes for storage and handling are considered.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

not applicable

3.2. Mixtures

Registration Numbffer	Classification according to Directive 67/548/EEC	Classification according to Regulation (EU) 1272/2008(CLP)	Concentration
Ethyl alcohol(CAS-No.64-17-5)(EC-No.200-578-6)			
		Flam. Liq. 2,H225	60.0-70.0%
Water(CAS-No.7732-18-5)(EC-No. 231-791-2)			
			10.0-25.0%
2-Propenoic acid, homopolymer (CAS-No.9003-01-4)(EC-No.618-347-7)			
			5.0-15.0%
2,2',2"-nitrilotriethanol(CAS-No.102-71-6)(EC-No. 203-049-8)			
			1.0-5.0%
Glycerol(CAS-No.56-81-5)(EC-No.200-289-5)			
			1.0-5.0%
Aloe vera, ext.(CAS-No.85507-69-3)(EC-No.287-390-8)			
			0.1-1.0%

SECTION 4: First-Aid Measuresf**4.1. Description of first aid measures**

If inhaled:

Keep patient calm, remove to fresh air.

On skin contact:

Remove contaminated clothing. Wash thoroughly with soap and water. If irritation develops, seek medical attention.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open. If irritation develops,seek medical attention.

On ingestion:

Rinse mouth and then drink plenty of water. Do not induce vomiting. Seek medical attention if necessary.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:

Foam,carbon dioxide, dry powder

5.2. Special hazards arising from the substance or mixture

Vapors may form explosive mixture with air..

5.3. Advice for fire-fighters

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with the skin, eyes and clothing. Use personal protective clothing.

Information regarding personal protective measures see, section 8.

6.2. Environmental precautions

Do not discharge into drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

Sweep/shovel up. Correctly dispose of recovered product immediately. Do not discharge into drains/surface waters/groundwater.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7:Handling and Storage

7.1. Precautions for safe handling

Avoid contact with the skin, eyes and clothing. Wear suitable protective clothing and gloves. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

Segregate from flammable substances. Segregate from peroxides. Segregate from strong oxidizing agents.Segregate from self-heating sub./././stances.

SECTION 8:Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

No data available

8.2. Exposure controls

Respiratory protection:

Respiratory protection in case of vapor/aerosol release.

Hand protection:

Chemical resistant protective gloves (EN 374)

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

General safety and hygiene measures

Hands and/or face should be washed after work.

SECTION 9:Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form:	gel
Color:	colorless,clear
Odor:	perfumed
Flashpoint:	no data available
pH value:	no data available
Melting temperature:	no data available
Boiling temperature:	no data available
Evaporation rate:	no data available
Lower explosion limit:	no data available
Upper explosion limit:	no data available
Ignition temperature:	no data available
Density:	no data available
Relative density:	no data available
Relative vapor density (air):	no data available
Partitioning coefficient n-octanol/water (log Kow):	no data available
Self ignition:	no data available
Viscosity, dynamic:	no data available
Explosion hazard:	no data available
Fire promoting properties:	no data available

SECTION 10:Stability and Reactivity

10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

10.2. Chemical stability

The product is chemically stable.

10.3. Possibility of hazardous reactions

The product is chemically stable.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials

Substances to avoid:

oxidizing agents

10.6. Hazardous decomposition products

Possible thermal decomposition products:

carbon oxides, sulfur dioxide, nitrogen oxides

11. Toxicological information

Acute toxicity

Oral:

Harmful if swallowed

Inhalation:

No data available

Dermal:

No data available

Skin Irritation

Assessment of irritating effects:

No data available

Eye irritation

Assessment of irritating effects:

No data available

Respiratory/Skin sensitization

Assessment of sensitization:

No data available.

Germ cell mutagenicity

Assessment of mutagenicity:

No data available

Carcinogenicity

Assessment of carcinogenicity:

No data available

Reproductive toxicity

Assessment of reproduction toxicity:

No data available

Developmental toxicity

Assessment of teratogenicity:

No data available.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

No data available.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

No data available

Aspiration hazard

No data available.

Other relevant toxicity information

According to our present knowledge and experience dangers which are not covered by the current labeling are not to be expected.

SECTION 12:Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:

Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H₂O):

No data available.

Assessment of stability in water:

No data available.

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:

Discharge into the environment must be avoided.

12.4. Mobility in soil

Assessment transport between environmental compartments:

No data available.

12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation,Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT(Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).Self classification

12.6. Other adverse effects

The product does not contain substances that are listed in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

12.7. Additional information

Other ecotoxicological advice:

According to our present knowledge and experience dangers which are not covered by the current labeling are not to be expected.

SECTION 13:Disposal considerations

Waste disposal of substance:

Dispose of in accordance with national, state and local regulations.

Contaminated packaging:

Dispose of in accordance with national, state and local regulations.

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

SECTION 14:Transport Information

Land transport

ADR **Not classified as a dangerous good under transport regulations**

UN number: UN1266
UN proper shipping name: FLAMMABLE LIQUID PLACARD -- ETHANOL (ETHYL ALCOHOL)
Transport hazard class(es): 3
Packing group: II
Environmental hazards: No

RID **Not classified as a dangerous good under transport regulations**

UN number: UN1266
UN proper shipping name: FLAMMABLE LIQUID PLACARD -- ETHANOL (ETHYL ALCOHOL)
Transport hazard class(es): 3
Packing group: II
Environmental hazards: No

Inland waterway transport

ADN **Not classified as a dangerous good under transport regulations**

UN number: UN1266
UN proper shipping name: FLAMMABLE LIQUID PLACARD -- ETHANOL (ETHYL ALCOHOL)
Transport hazard class(es): 3
Packing group: II
Environmental hazards: No

Sea transport

IMDG **Not classified as a dangerous good under transport regulations**

UN number: UN1266
UN proper shipping name: FLAMMABLE LIQUID PLACARD -- ETHANOL (ETHYL ALCOHOL)
Transport hazard class(es): 3
Packing group: II
Environmental hazards: No

Air transport

IATA/ICAO **Not classified as a dangerous good under transport regulations**

UN number: UN1266

UN proper shipping name: FLAMMABLE LIQUID PLACARD -- ETHANOL (ETHYL ALCOHOL)
Transport hazard class(es): 3
Packing group: II
Environmental hazards: No

14.1. UN number

See corresponding entries for “UN number” for the respective regulations in the tables above.

14.2. UN proper shipping name

See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

14.3. Transport hazard class(es)

See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Regulation: Not evaluated
Shipment approved: Not evaluated
Pollution name: Not evaluated
Pollution category: Not evaluated
Ship Type: Not evaluated

SECTION 15:Regulatory Information

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

Product Name:HAND SANITIZER ADVANCED

Issue Date:Sep.15th,2019

Date of revision:Sep,15th,2019

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

15.2. Chemical Safety Assessment

Chemical Safety Assessment not yet performed due to registration timelines. Exposure scenarios for the mixture can not be provided at the moment because exposure scenarios are not yet available for all relevant substances due to registration timelines. For advice on essential measures see sections 7 and 8 of this safety data sheet.

SECTION 16: Other Information

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Safety Data Sheet
Fiches Signalétiques
Hoja de Datos de Seguridad
Sicherheitsdatenblatt
Scheda Dati Di Sicurezza
Veiligheidsinformatieblad

ART  **RESIN™**

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ENGLISH

EFFECTIVE DATE: 01/2020

1. IDENTIFICATION

Trade Name: ArtResin™

Contact Information: 2300 Apollo Circle
Carrollton, Texas 75006 USA

Emergency Contact: 1-877-401-4001

Recommended Use: Decorative and protective epoxy coating for artwork/creative applications

Chemical family: Two part epoxy resin

2. HAZARD(S) IDENTIFICATION

Hazard Classification: Skin Irritant - Category 2
Eye Irritant - Category 2

Signal Word: CAUTION

Hazard Statement(s): H317 Repeated and prolonged exposure may cause skin sensitization

Pictogram:



Precautionary Statements:

P101: If medical advice is needed, have product container or label at hand

P102: Keep out of reach of children

P103: Read label before use

P262: Do not get in eyes, on skin, or on clothing

P271: Use only in a well-ventilated area

P280: Wear protective gloves/protective clothing/eye and face protection

P285: In case of inadequate ventilation, wear respiratory protection

P333+P313: If skin irritation/rash occurs: Get medical attention

P337+P313: If eye irritation persists: Get medical advice/attention

P501: Dispose of contents/container in accordance with local/regional/national and international regulations

NFPA Rating:



Health: 1
Flammability: 1
Instability: 0
Specific Hazard: N/A

HMIS® Rating:



Health: 1
Flammability: 1
Physical Hazard: 0
Personal Protection Index: C

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name/Family:	Epoxy
Common Names/Synonyms:	Epoxy Resin, Epoxy Coating, Novolac Epoxy, Two-part Epoxy
CAS Numbers and other Identifiers:	Resin: DGEBA-Epoxy Resin: CAS# 25068-38-6 80%-90% Trade Secret: 10%-20%
	Hardener: Modified Amine Adduct: CAS# Mixture >90% Trade Secret <10%



Trade Secret Claim: Please note: The exact concentration of each chemical contained in the product has been withheld to ensure the formula remains a trade secret.

4. FIRST AID MEASURES

First Aid measures are listed in the event the product is not used as intended. Following the usage instructions provided will ensure first aid measures are not likely needed.

Ingestion	If swallowed, call a Poison Control Centre or doctor immediately
Skin	If on skin rinse well with water
Inhalation	If irritating, remove to fresh air
Eyes	If in eyes, rinse with water
Overexposure Effects	Prolonged overexposure to this material can cause irritation to the skin and eyes, and respiratory irritation. Though unlikely, can cause allergic skin and/or respiratory reactions and/or headache.
Medical conditions aggravated by exposure:	Allergy or skin conditions including eczema
Additional Information	Promptly remove wet clothing

5. FIRE FIGHTING MEASURES

Flash Point	Resin	>300° F (149° C)
	Hardener	>200° F (93° C)
Flash Point Method Used	Closed cup	
Fire Fighting Extinguishing Media	Carbon dioxide, foam, dry chemical	
Fire Fighting Equipment	Use a self-contained breathing apparatus	
Fire and Explosion Hazards	Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxide, and/or carbon oxide	

6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures:

Steps to be taken if material is spilled:

Resin: Shovel into closeable container for disposal.**Hardener:** Absorb into sand or other absorbent material. Shovel into closeable container and dispose of in professional manner.**7. HANDLING AND STORAGE**

Precautions:

Do not get in eyes, on skin, or on clothing. Wear gloves. Do not ingest.
Work in a well ventilated area.

Storage Information:

Store at temperatures between 2° C and 40° C in tightly closed containers in dry area to prevent moisture and carbon dioxide contamination. If product becomes frozen, warm to room temperature before use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA PELs	N/A
ACGIH TLVs	N/A
Personal Protective Equipment	Wear protective equipment
Skin Protection	Impervious gloves
Respiratory Protection	Organic chemical cartridge respirator in non-ventilated area
Eye Protection	Splash-proof chemical goggles
Engineering Controls	Good general ventilation

9. PHYSICAL AND CHEMICAL PROPERTIES

	Resin	Hardener
Appearance	Clear	Clear
Odor	None	Slight ammonia odor
Physical State	Liquid	Liquid
Solubility in Water (% by weight)	Negligible	Negligible
Melting Point	<0° F (-18° C)	<0° F (-18° C)
Density	1.14	0.96
PH	ca 5	ca 8

10. STABILITY AND REACTIVITY

Reactivity	Non-reactive	
Stability	Stable	
Incompatible Materials	Strong acids, oxidizers and bases	
Hazardous Decomposition Products	Resin	Carbon Monoxide, Carbon Dioxide and Phenolics.
	Hardener	Carbon Monoxide, Carbon Dioxide, Phenolic Nitrogen Oxides and Compounds.
Hazardous Polymerization	Will not occur	

11. TOXICOLOGICAL INFORMATION

Acute Oral Effects (Ingestion)	Resin	LD ₅₀ (rabbits simulation): 4000 mg/kg
	Hardener	- LD ₅₀ (rabbits simulation): 3000 mg/kg
Sensitization	Can cause skin and respiratory sensitization	
Skin Irritation	Irritant	
Eye Irritation	Irritant	

12. ECOLOGICAL INFORMATION

Additional Information:	Amines in general may be harmful to aquatic organisms
Aquatic Toxicity:	No further relevant information available
Persistence and Degradability:	No further relevant information available
Biocumulative Potential:	No further relevant information available
Mobility in Soil:	No further relevant information available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:	Dispose of in accordance with federal, state and/or local regulations
Recommendations:	Cured product may be disposed of together with household garbage

14. TRANSPORT INFORMATION

DOT' ADR' AND IMDG' IATA:	Non-hazardous for transport
Hazard Class under: DOT' ADR' AND IMDG' IATA:	Non-hazardous for transport
Marine Pollutant:	Non-hazardous for transport
Class:	55
UN:	3907.30.0000
Notes:	Not regulated under DOT, ADR, AND, IMDG, IATA

15. REGULATORY INFORMATION**Occupational Safety and Health Act (OSHA):**

This Safety Data Sheet (SDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200(g). This product is not considered to be a hazardous chemical under that standard.

TRALHAMA:

This Safety Data Sheet (SDS) has been prepared in compliance with Toxicological Risk Assessment report # 5118-334-0103A/B which determined that: "the product is not considered to be toxic (acute/chronic), corrosive, and/or a strong sensitizer when used as intended or under circumstances involving reasonably foreseeable misuse. The classification of hazards are as defined in the 16 CFR 1500.3 (b) (5) , (7)-(9) (FHSA regulations)."

**Resource Conservation and Recovery Act (RCRA):**

Not a hazardous waste under RCRA (40 CFR 261).

Toxic Substances Control Act (TSCA): All ingredients are on the TSCA inventory and are exempt as per 40CFR723.50 Low Volume Exemption(LVE) and Low Environmental Release and Low Human Exposure Exemption (LoREX).

SARA Title III: Section 304 - CERCLA: Not listed.

SARA Title III: Section 313 Toxic Chemical List (TCL): This product does NOT contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Sec. 313 (40 CFR 372). This information must be included in all SDSs that are copied and distributed for this material.

Proposition 65 (Safe Drinking Water and Toxic Chemicals Act): None of the components of this formula are known to the state of California to cause cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION

This SDS was prepared in accordance with the new OSHA HCS requirements for manufacturers of chemicals that went into effect in June 2015. This SDS replaces all preceding versions of MSDS and complies with all current regulations.

This product passed Food Simulating Solvents Extractions (FSSE) testing.


This product conforms to ASTM D4236.

Revision: January 2020 - All rights reserved

1. IDENTIFICATION

Nom commercial:	ArtResin™
Informations de contact:	2300 Apollo Circle Carrollton, Texas 75006 USA
En cas d'urgence:	1-877-401-4001
Usage recommandé:	Revêtement époxy décoratif et protecteur pour applications artistiques/créatives
Famille chimique:	Résine époxy en deux parties


2. IDENTIFICATION DES DANGERS

Classification des dangers:	Irritant cutané - Catégorie 2 Irritant oculaire - Catégorie 2
Mot indicateur:	Irritant
Hazard Statement(s):	H317 L'exposition répétée et prolongée peut provoquer une sensibilisation cutanée
Pictogramme:	
Déclaration de précautions:	P101: Si un avis médical est nécessaire, et avoir en main l'emballage ou l'étiquette. P102: Conserver hors de la portée des enfants. P103: Lire l'étiquette avant l'utilisation. P262: Ne pas mettre dans les yeux, sur la peau ou sur les vêtements P271: Utiliser uniquement dans une zone bien ventilée P280: Porter des gants de protection/des vêtements de protection/protection pour les yeux et le visage P285: En cas de ventilation insuffisante, porter une protection respiratoire P333+P313: En cas d'irritation de la peau/éruption cutanée, consulter un médecin P337+P313: En cas d'irritation des yeux persiste, consulter un médecin P501: Contenu/contenant/emballage peuvent être éliminés conformément aux prescriptions locales, régionales, nationales, et internationales.

Classement NFPA: Santé: 1
Inflammabilité: 1
Réactivité: 0
Danger spécifique: N/A



Classement HMIS®: Santé: 1
Inflammabilité: 1
Risque physique: 0
Indice de protection individuelle: C



3. COMPOSITION/RENSEIGNEMENTS SUR LES INGRÉDIENTS

Nom chimique/famille: Époxy

Noms communs/Synonymes: Époxy résine, enduis d'époxy, Novolac époxy, époxyde en deux parties

Numéros d'inscription CAS (Chemical Abstracts) et autres identificateurs:

Résine: DGEBA-résine époxy: CAS # 25068-38-6 80% -90%
Secret commercial: 10% -20%

Durcisseur: Produits d'addition époxyde-amine modifiés:
CAS Mélange > 90%
Secret commercial <10%



Attestation de secret commercial:

Veillez prendre note que la concentration exact de chaque produit chimique contenu dans la formule a été préservée afin de demeurer confidentielle.

4. MESURES DE PREMIER SECOURS

Les mesures de premiers secours sont énumérées dans le cas où le produit n'est pas utilisé comme prévu. En suivant les instructions d'utilisation fournies, vous vous assurez que les mesures de premiers soins ne sont probablement pas nécessaires.

Ingestion	En cas d'ingestion, appeler immédiatement un centre antipoison ou un médecin
Peau	En cas de contact avec la peau, bien rincer avec de l'eau
Inhalation	En cas d'irritation, retirer à l'air frais.
Yeux	En cas de contact avec les yeux, rincer avec l'eau.
Effets d'une Surexposition	Une surexposition prolongée à ce matériau peut provoquer une irritation de la peau et des yeux et une irritation des voies respiratoires. Bien que peu probable, peut causer des réactions allergiques de la peau et/ou des voies respiratoires et/ou des maux de tête.
Conditions médicales existantes pouvant être aggravées par l'exposition	Allergie, eczéma ou problème de peau
Informations supplémentaires	Enlever rapidement les vêtements humides

5. MESURES DE LUTTE CONTRE

Point d'éclair	Résine	>300° F (149° C)
	Durcisseur	>200° F (93° C)
Point d'inflammation (méthode employée)	Coupe fermée	
Mesures de lutte contre l'incendie et moyens d'extinction	Dioxyde de carbone, mousse, produit chimique sec	
Équipement de lutte contre l'incendie	Utiliser un Appareil de Protection Respiratoire Autonome (APPA)	
Risques d'incendie et d'explosion	Les produits de décomposition peuvent inclure les matériaux suivants: dioxyde de carbone, monoxyde de carbone, oxyde d'azote et/ou oxyde de carbone	

6. MESURES EN CAS DE DISPERSION ACCIDENTELLE

En cas de dispersion accidentelle:

Procédure à suivre en cas de déversement du produit:

Résine: Recueillir le produit déversé et le mettre dans un récipient approprié pour élimination.

Durcisseur: Absorber avec du sable ou un autre absorbant. Recueillir le produit déversé et le mettre dans un récipient approprié pour élimination professionnelle.

7. MANUTENTION ET ENTREPOSAGE

Précautions: Ne pas mettre dans les yeux, sur la peau ou sur les vêtements. Porter des gants. Ne pas ingérer. Travailler dans un endroit bien ventilé.

Entreposage: Stocker à des températures comprises entre 2 ° C et 40 ° C dans des récipients hermétiquement fermés dans une zone sèche pour prévenir la contamination par l'humidité et le dioxyde de carbone. Si le produit est congelé, réchauffer à température ambiante avant utilisation.

8. CONTRÔLE DE L'EXPOSITION / PROTECTION INDIVIDUELLE

OSHA PELs	N/A
ACGIH TLVs	N/A
Équipement de protection personnel:	Portez un équipement de protection
Protection de la peau	Gants imperméables
Protection respiratoire	Respirateur à cartouche de produits chimiques organiques dans une zone non ventilée
Protection des yeux	Des lunettes contre les anti-éclaboussures de produits chimiques
Mesures d'ingénierie	Une bonne ventilation

9. PROPRIETES PHYSIQUES ET CHIMIQUES

	Résine	Durcisseur
Apparence	Transparente	Transparente
Odeur:	Aucune	Odeur d'ammoniaque insignifiante
État physique	Liquide	Liquide
Solubilité dans l'eau (% en poids)	Négligeable	Négligeable
Point de fusion	<0° F (-18° C)	<0° F (-18° C)
Densité	1.14	0.96
PH	ca 5	ca 8

10. STABILITÉ ET RÉACTIVITÉ

Réactivité	Non-réactif	
Stabilité	Stable	
Matériaux incompatibles	Acides, bases et oxydants forts.	
Produits de décomposition dangereux	Résine	Monoxyde de carbone, dioxyde de carbone et des composés phénoliques.
	Durcisseur	Monoxyde de carbone, dioxyde de carbone, d'oxydes d'azote, des composés d'azote et phénolique
Polymérisation hasardeuse	Ne se produira pas	

11. RENSEIGNEMENTS TOXICOLOGIQUES

Effets aiguë par voie orale (ingestion)	Résine	DL ₅₀ (simulation de lapins): 4000 mg/kg
	Durcisseur	- DL ₅₀ (simulation de lapins): 3000 mg/kg
Sensibilisation	Ce produit peut causer une sensibilisation respiratoire ou cutanée	
Irritation cutané	Irritant	
Irritation oculaire	Irritant	

12. INFORMATIONS ÉCOLOGIQUES

Informations complémentaires:

En général, amines peuvent être nocif pour les organismes aquatiques.

Toxicité aquatique:

Pas d'autres informations importantes disponibles.

Persistance et dégradabilité:

Pas d'autres informations importantes disponibles.

Potentiel bio accumulatives:

Pas d'autres informations importantes disponibles.

Mobilité dans le sol:

Pas d'autres informations importantes disponibles.

13. CONSIDÉRATIONS RELATIVES À L'ÉLIMINATION

Méthode d'évacuation des déchets:	Éliminer conformément aux règlements fédéraux, provinciaux et locaux.
Recommandations:	Le produit durci peut être éliminé avec les ordures ménagères.

14. INFORMATIONS RELATIVES AU TRANSPORT

DOT' ADR' AND IMDG' IATA:	Non dangereux pour le transport
Classe de risques sous: DOT' ADR' AND IMDG' IATA:	Non dangereux pour le transport
Polluant marin:	Non dangereux pour le transport
Classe:	55
ONU:	3907.30.0000
Notes:	Ne sont pas régis par le DOT, ADR, ET, IMDG, IATA

15. RIFORMATIONS RÉGLEMENTAIRES

Loi sur la santé et sécurité au travail (OSHA): Cette fiche de sécurité (FDS) a été préparée conformément selon la norme sur la communication des renseignements à l'égard des matières dangereuses (29 CFR 1910.1200) de l'OSHA. Ce produit n'est pas considéré comme un produit dangereux en vertu de cette norme.

TRALHAMA: Cette fiche de données de sécurité (FDS) a été préparée conformément à l'évaluation des risques toxicologiques. rapport n ° 5118-334-0103A / B dans lequel il était déterminé que: «le produit n'est pas considéré comme toxique corrosif et / ou un sensibilisant puissant lorsqu'il est utilisé comme prévu ou dans des circonstances impliquant raisonnablement mauvaise utilisation prévisible. La classification des dangers est telle que définie dans le 16 CFR 1500.3 (b) (5), (7) - (9) (Réglementation de la FHSA).»



Loi sur la conservation et la récupération des ressources (RCRA): Ne constitue pas un déchet nocif en vertu de la loi RCRA (40 CFR 261).

Loi sur le contrôle des substances toxiques (TSCA): Tous les ingrédients de ce produit figurent sur l'inventaire du Toxic Substances Control Act (TSCA) et sont exemptés pour faible volume accordée en conformité avec 40 CFR 723.50. Et à titre d'exemption pour faible dissémination dans l'environnement et faible exposition humaine (LoREX).

SARA Titre III: Section 304 - CERCLA: Non inscrit.

SARA Titre III: Section 313 Liste de produits chimiques toxiques (TCL): Ce produit ne contient aucun produit chimique mentionné dans la liste de produits chimiques toxiques sujette à la vérification annuelle soit le "rapports de produits chimiques toxiques" sous Sec. 313 (40 CFR 372). Cette information doit être incluse dans toutes les FDS qui sont copiés et distribués pour ce matériau.

Proposition 65 (Loi sur la salubrité de l'eau potable et les produits chimiques toxiques): Aucun des composants de cette formulation n'est connu par l'État de Californie pour provoquer le cancer, des anomalies congénitales ou d'autres troubles de la reproduction.

16. AUTRES INFORMATIONS

Cette SDS a été préparée conformément aux nouvelles exigences de l'OSHA HCS pour les fabricants de produits chimiques qui sont entrés en vigueur en juin 2015. Cette FDS remplace toutes les versions précédentes de FS, et conforme aux réglementations actuelles.

Ce produit a passé avec succès le test FSSE (Extraction des solvants de simulation d'aliments).

Ce produit est conforme à la norme ASTM D4236.

Révision: Janvier 2020 - Tous droits réservés


ESPAÑOL

FECHA DE VIGENCIA: 01/2020

1. IDENTIFICACIÓN

Nombre Comercial:	ArtResin™
Información de Contacto:	2300 Apollo Circle Carrollton, Texas 75006 USA
Contacto de Emergencia:	1-877-401-4001
Uso recomendado:	Revestimiento epoxi decorativo y protector para aplicaciones artísticas/creativas
Familia química:	Resina epoxi de dos partes

2. IDENTIFICACIÓN DE PELIGROS

Clasificación de Peligros:	Irritante para la piel - Categoría 2 Irritante para los ojos - Categoría 2
Palabra Clave:	Irritant
Declaraciones de Peligro:	H317 La exposición repetida y prolongada puede causar sensibilización de la piel
Pictograma:	
Consejos de Prudencia:	P101: Si se necesita consejo médico, tener el envase o la etiqueta en mano P102: Mantener fuera del alcance de los niños P103: Leer la etiqueta antes de su uso P262: Usar guantes de protección / indumentaria de protección / ojo y protección facial P271: Usar solo en un área bien ventilada P280: Llevar guantes protectores/prendas/protección para los ojos y la cara P285: En caso de ventilación inadecuada, usar protección respiratoria P333+P313: En caso de irritación de la piel/sarpullido, conseguir atención médica P337 + P313: Si persiste la irritación de los ojos: obtenga asesoramiento / atención médica P501: Desechar contenidos/recipiente de acuerdo con las normativas locales/regionales/nacionales e internacionales

Clasificación NFPA: Salud: 1
Inflamabilidad: 1
Inestabilidad: 0
Peligro Específico: N/A



Clasificación HMIS®: Salud: 1
Inflamabilidad: 1
Peligro Físico: 0
Índice de Protección Personal: C



3. COMPOSICIÓN/INFORMACIÓN SOBRE LOS INGREDIENTES

Nombre Químico/Familia: Epoxi

Nombres Comunes/Sinónimos: Resina Epoxi, Revestimiento Epoxi, Epoxi Novolaca, Epoxi de Dos Componentes

Números CAS y otros Identificadores: Resina: DGEBA-Resina de Epoxi: CAS#25068-38-6 80%-90%
Secreto Comercial: 10%-20%

Endurecedor: Aducto-Amina Modificado: CAS#Mezcla > 90%
Secreto Comercial <10%



Reclamación Secreto Comercial: Tenga en cuenta que la concentración exacta de cada sustancia química contenida en el producto se ha retenido por que la fórmula exacta tiene que seguir siendo un secreto comercial.

4. MEDIDAS DE PRIMEROS AUXILIOS

Las medidas de primeros auxilios se enumeran en el caso de que el producto no se utilice según lo previsto. Seguir las instrucciones de uso proporcionadas asegurará que las medidas de primeros auxilios no sean necesarias.

Ingestión	En caso de ingestión, llame a un centro de control de intoxicaciones o al médico inmediatamente
Piel	Si en la piel enjuagar bien con agua
Inhalación	Si es irritante, trasladar al aire fresco
Ojos	Si está en los ojos, enjuague con agua
Efectos de sobreexposición	Prolongada sobreexposición a este material puede causar irritación en la piel y los ojos, e irritación respiratoria. Aunque es improbable, puede causar reacciones alérgicas de la piel y/o respiratorias y/o dolor de cabeza.
Condiciones médicas agravadas por la exposición	Alergia, eccema o condiciones de la piel
Información Adicional	Quita inmediatamente la ropa mojada

5. MEDIDAS CONTRA INCENDIOS

Punto de Inflamación	Resina	>300° F (149° C)
	Endurecedor	>200° F (93° C)
Punto de Inflamación (Método Usado)	Vaso cerrado	
Medidas Contra Incendios Medios de Extinción	Dióxido de carbono, espuma, productos químicos secos	
Equipo Contra Incendios	Use un aparato de respiración autónomo	
Peligros de Incendios u Explosión	Los productos de descomposición pueden incluir los siguientes materiales: dióxido de carbono, monóxido de carbono, óxido de nitrógeno y/o óxido de carbono	

6. MEDIDAS EN CASO DE LIBERACIÓN ACCIDENTAL

Medidas En Caso De Liberación Accidental: Pasos que deben tomarse si se derrama el material:

Resina: Traspalar a un contenedor para su eliminación.

Endurecedor: Absorber en arena u otro material absorbente. Traspalar a un contenedor recerrable y eliminar de manera profesional.

7. MANIPULACIÓN Y ALMACENAMIENTO

Precauciones: No entrar en contacto con los ojos, la piel o la ropa. Usar guantes. No ingerir. Trabaje en un área bien ventilada.

Información de Almacenamiento: Almacenar a temperaturas entre 20°C y 40°C en recipientes herméticamente cerrados en área seca para evitar la contaminación de humedad y dióxido de carbono. Si el producto se congela, caliente a temperatura ambiente antes de usarlo.

8. CONTROLES DE EXPOSICIÓN/PROTECCIÓN PERSONAL

OSHA PELs	N/A
ACGIH TLVs	N/A
Equipo de Protección Personal	Use equipo protector
Protección de Piel	Guantes impermeables
Protección Respiratoria	Cartucho químico orgánico de respirador en zona no ventilada
Protección de Ojos	Anteojos con protección resistentes a las salpicaduras
Controles de Ingeniería	Una buena ventilación

9. PROPIEDADES FÍSICAS Y QUÍMICAS

	Resina	Endurecedor
Apariencia	Claro	Claro
Olor:	Ninguno	Olor ligero a amoníaco
Estado Físico	Líquido	Líquido
Solubilidad en Agua (% por peso)	Despreciable	Despreciable
Punto de Fusión	<0° F (-18° C)	<0° F (-18° C)
Densidad	1.14	0.96
PH	ca 5	ca 8

10. ESTABILIDAD Y REACTIVIDAD

Reactividad	No-reactivo	
Estabilidad	Estable	
Materiales Incompatibles	Ácidos fuertes, oxidantes y bases.	
Productos de Descomposición Peligrosos	Resina	Monóxido de Carbono, Dióxido de Carbono y Fenólicos.
	Endurecedor	Monóxido de Carbono, Dióxido de Carbono, Óxidos de Nitrógeno Fenólicos y Compuestos.
Peligros de Polimerización	No ocurrirá	

11. INFORMACIÓN TOXICOLÓGICA

Efectos Orales Agudos (Ingestión)	Resina	LD ₅₀ (simulación de conejos): 4000 mg/kg
	Endurecedor	- LD ₅₀ (simulación de conejos): 3000 mg/kg
Sensibilización	Puede causar sensibilización cutánea y respiratoria	
Irritación de Piel	Irritante	
Irritación de Ojo	Irritante	

12. INFORMACIÓN ECOLÓGICA

Información Adicional:	En general, aminas pueden ser perjudicial para los organismos acuáticos.
Toxicidad Acuática:	No hay más información relevante disponible.
Persistencia y Degradabilidad:	No hay más información relevante disponible.
Potencial Bioacumulativo:	No hay más información relevante disponible.
Movilidad en el Suelo:	No hay más información relevante disponible.

13. CONSIDERACIONES DE DESECHO

Método de Disposición de los Residuos:	Desechar de acuerdo con las regulaciones federales, estatales y locales.
Recomendaciones:	El producto curado puede eliminarse junto con la basura doméstica.

14. INFORMACIÓN DE TRANSPORTE

DOT" ADR" AND IMDG" IATA:	No peligroso para el transporte
Clase de Riesgo en: DOT" ADR" AND IMDG" IATA:	No peligroso para el transporte
Contaminante marino:	No peligroso para el transporte
Clase:	55
UN:	3907.30.0000
Notas:	No regulado bajo DOT, ADR, ET, IMDG, IATA

15. INFORMACIÓN REGLAMENTARIA**Ley sobre Salud y Seguridad Ocupacional (OSHA):**

Esta Hoja de Datos de Seguridad ha sido preparado de conformidad con la ley federal OSHA Hazard Communication Standard 29 CFR 1910.1200 (g). Este producto no es considerado como un producto químico peligroso bajo ese estándar.

TRALHAMA:

Esta Hoja de Datos de Seguridad (SDS) ha sido preparada de acuerdo con la Evaluación de Riesgos Toxicológicos el informe # 5118-334-0103A / B que determinó que: "el producto no se considera tóxico (agudo / crónico), corrosivo, y / o un sensibilizador fuerte cuando se usa según lo previsto o en circunstancias que impliquen razonablemente mal uso previsible La clasificación de peligros es como se define en el 16 CFR 1500.3 (b) (5), (7) - (9) (Regulaciones FHSA).



Ley de Conservación y Recuperación de Recursos (RCRA): No es un desecho peligroso según la RCRA (40 CFR 261).

Ley de Control de Sustancias Tóxicas (TSCA): Todos los ingredientes están en el inventario TSCA y están exentos de acuerdo con 40CFR723.50 por Bajo Volumen Conforme y Bajo Liberación en el Medio Ambiental y Bajo Exención Exposición Humana.

SARA Título III Sección 304 - CERCLA: No se incluye.

SARA Título III: Sección 313 Lista de Sustancias Químicas Tóxicas: Este producto no contiene una sustancia química tóxica para el "Informe de liberación de sustancias químicas tóxicas" de rutina anual bajo la Sec. 313 (40 CFR 372). Esta información debe ser incluida en todas los SDS que son copiados y distribuidos de este material.

Proposición 65 (Ley de productos químicos tóxicos y de agua potable segura): El estado de California no conoce ninguno de los componentes de esta fórmula que cause cáncer, defectos de nacimiento u otros daños reproductivos.

16. OTRA INFORMACIÓN

Esta FDS se preparó de acuerdo con los nuevos requisitos de HCS de OSHA para los fabricantes de productos químicos que entraron en vigor en junio de 2015. Este SDS reemplaza todas las versiones anteriores del MSDS y cumple con todas las normas vigentes.

Este producto pasó las pruebas de Extracción de disolventes de simulación de alimentos (FSSE).

Este producto cumple con la norma ASTM D4236.

Revisión: Enero 2020 - Todos los derechos reservados


DEUTSCHE

WIRKSAMKEITSDATUM: 01/2020

1. IDENTIFIZIERUNG

Handelsname:	ArtResin™
Kontaktdaten:	2300 Apollo Circle Carrollton, Texas 75006 USA
Notfallrufnummer:	1-877-401-4001
Empfohlene Anwendung:	Dekorative und schützende Epoxidbeschichtung für Kunstwerke / kreative Anwendungen
Chemische Familie:	Zweikomponentiges Epoxidharz

2. HAZARD(S) IDENTIFICATION

Gefahrenklassifizierung:	Hautreizende Wirkung - Kategorie 2 Augenreizung - Kategorie 2
Signalwort:	Reizend
Hazard Statement(s):	H317 Wiederholter und länger andauernder Hautkontakt kann zur Sensibilisierung der Haut führen
Piktogramm:	
Sicherheitshinweise:	P101: Ist ärztlicher Rat erforderlich, Produktverpackung oder Etikett bereithalten P102: Außer Reichweite von Kindern aufbewahren P103: Vor Gebrauch das Etikett lesen P262: Nicht in die Augen, auf die Haut oder auf die Kleidung gelangen lassen P271: Nur in gut gelüfteten Bereichen verwenden P280: Schutzhandschuhe/Schutzkleidung/Augen- und Gesichtsschutz tragen P285: Bei unzureichender Belüftung Atemschutz tragen P333+P313: Falls Hautreizung/Ausschlag auftritt, ärztlichen Rat einholen P337 + 313: Bei anhaltender Augenreizung ärztlichen Rat einholen / ärztliche Hilfe hinzuziehen P501: Inhalt/Verpackung ist unter Einhaltung der lokalen/regionalen/Lan des- und internationalen Vorschriften zu entsorgen

NFPA-Bewertung: Gesundheit: 1
Entflammbarkeit: 1
Instabilität: 0
Spezifische Gefahr: k. A.



HMIS®-Bewertung: Gesundheit: 1
Entflammbarkeit: 1
Objektive Gefahr: 0
Persönlicher Schutzindex: C



3. ZUSAMMENSETZUNG/INFORMATIONEN ÜBER INHALTSSTOFFE

Chemische Bezeichnung/Familie:	Epoxid
Gebräuchliche Bezeichnungen/Synonyme:	Epoxidharz, Epoxidbeschichtung, Novolac-Epoxid, Zweikomponentiges Epoxid
CAS-Nummern und sonstige Identifikatoren:	Harz: DGEBA-Epoxidharz: CAS-Nr. 25068-38-6 80-90 % Betriebsgeheimnis: 10-20 % Härtungsmittel: Modifiziertes Aminaddukt: CAS-Nr. Gemisch >90 % Betriebsgeheimnis <10 %



(PEL/STEL) NE



(TWA/STEL) NE

Betriebsgeheimnisanspruch: Bitte beachten: Die exakte Konzentration jeder einzelnen in dem Produkt enthaltenen Chemikalie wurde vorenthalten, da die exakte Formel ein Betriebsgeheimnis bleiben muss.

4. ERSTE-HILFE-MASSNAHMEN

Die Erste-Hilfe-Maßnahmen werden für den Fall angeführt, dass das Produkt nicht wie vorgesehen verwendet wird. Das Befolgen der Gebrauchsanweisung stellt sicher, dass keine Erste-Hilfe-Maßnahmen erforderlich sind.

Ingestion	Bei Verschlucken sofort Giftinformationszentrum oder Arzt anrufen
Haut	Wenn auf der Haut mit Wasser spülen
Einatmen	Falls Reizungen auftreten, die betroffene Person an die frische Luft bringen
Augen	Bei Augenkontakt mit Wasser spülen.
Auswirkungen übermäßigen Kontakts	Ein zu langer Kontakt mit diesem Material kann Haut, Augen und Atmungsorgane reizen. Obwohl weniger wahrscheinlich, können auch allergische Reaktionen der Haut und / oder der Atemwege und / oder Kopfschmerzen auftreten.
Erkrankungen, die durch den Kontakt verschlimmert werden:	Allergien, Ekzeme oder Hautkrankheiten
Zusätzliche Informationen	Nasse Kleidung sofort ausziehen

5. BRANDBEKÄMPFENDE MASSNAHMEN

Flammpunkt	Harz	> 149° C (300° F)
	Härtungsmittel	> 93° C (200° F)
Verwendete Flammpunktmethode	Geschlossener Tiegel	
Brandbekämpfungs-Löschmedien	Kohlendioxid, Schaum, Pulver	
Brandbekämpfungsausrüstung	Umluftunabhängiges Atemschutzgerät verwenden	
Brand- und Explosions- gefahren	Zu den Zerfallprodukten gehören möglicherweise folgende Materialien: Kohlendioxid, Kohlenmonoxid, Stickstoffoxid und/oder Kohlenoxid	

6. MASSNAHMEN BEI UNBEABSICHTIGTER FREISETZUNG

Maßnahmen bei unbeabsichtigter Freisetzung: Maßnahmen bei Verschütten des Materials:

Harz: Zwecks Entsorgung in einen verschließbaren Behälter schaufeln.

Härtungsmittel: In Sand oder einem sonstigen absorbierenden Material absorbieren. In einen verschließbaren Behälter schaufeln und sachgemäß entsorgen.

7. LAGERUNG UND HANDHABUNG

Vorsichtsmaßnahmen:

Kontakt mit Augen, Haut und Bekleidung vermeiden. In einem gut belüfteten Bereich arbeiten. Nach der Handhabung Hände waschen.

Lagerungsinformationen:

Bei Temperaturen zwischen 20 C und 40o C in gut verschlossenen Behältern an einem trockenen Ort aufbewahren, um Kontaminierung durch Feuchtigkeit und Kohlendioxid zu vermeiden. Falls das Produkt einfriert, vor der Anwendung auf Raumtemperatur aufwärmen.

8. EXPOSITIONSBEGRENZUNG/PERSÖNLICHE SCHUTZAUSRÜSTUNG

OSHA PELs	nicht zutreffend
ACGIH TLVs	nicht zutreffend
Persönliche Schutzausrüstung	Schutzausrüstung tragen, um Exposition und persönlichen Kontakt zu vermeiden
Hautschutz	Undurchlässige Handschuhe
Atemschutz	Atemschutzmaske für organische Chemikalien in nicht belüfteten Bereichen
Augenschutz	Spritzwasserdichte Chemie-Schutzbrille
Technische Maßnahmen	Gute allgemeine Belüftung

9. PHYSIKALISCHE UND CHEMISCHE EIGENSCHAFTEN

	Harz	Härtungsmittel
Aussehen	Durchsichtig	Durchsichtig
Geruch	Keiner	Leichter Ammoniak-Geruch
Aggregatzustand	Flüssigkeit	Flüssigkeit
Wasserlöslichkeit (Gewichtsprozent)	Geringfügig	Geringfügig
Schmelzpunkt	< -18° C (0° F)	< -18° C (0° F)
Dichte	1,14	0,96
pH	ca. 5	ca. 8

10. STABILITÄT UND REAKTIVITÄT

Reaktivität	Nicht reaktiv	
Stabilität	Stabil	
Inkompatible Materialien	Starke Säuren, Oxidationsmittel und Basen	
Gefährliche Zerfallprodukte	Harz	Kohlenmonoxid, Kohlendioxid und Phenolharze
	Härtungsmittel	Kohlenmonoxid, Kohlendioxid, phenolische Stickstoffoxide und Verbindungen.
Gefährliche Polymerisation	Wird nicht auftreten	

11. TOXIKOLOGISCHE ANGABEN

Akute Auswirkungen oraler Einnahme (Ingestion)	Harz	LD ₅₀ (Simulation an Kaninchen): 4000 mg/kg
	Härtungsmittel	- LD ₅₀ (Simulation an Kaninchen): 3000 mg/kg
Sensibilisierung	Kann zu Sensibilisierung der Haut und Atemwege führen	
Hautreizung	Reizstoff	
Augenreizung	Reizstoff	

12. UMWELTBEZOGENE ANGABEN

Zusätzliche Informationen:	Im Allgemeinen können Amine schädigend für Wasserorganismen sein
Aquatische Toxizität:	Keine weiteren relevanten Informationen verfügbar
Persistenz und Abbaubarkeit:	Keine weiteren relevanten Informationen verfügbar
Bioakkumulationspotenzial:	Keine weiteren relevanten Informationen verfügbar
Mobilität im Boden:	Keine weiteren relevanten Informationen verfügbar

13. HINWEISE ZUR ENTSORGUNG

Methode der Abfallentsorgung:	Entsorgung gemäß Bundes-, Staats- und Ortsvorschriften.
Empfehlungen:	Ausgehärtetes Produkt kann zusammen mit dem Haushaltsmüll entsorgt werden.

14. TRANSPORT INFORMATION

DOT' ADR' AND IMDG' IATA:	Ungefährlich für den Transport
Gefahrenklasse gemäß: DOT' ADR' AND IMDG' IATA:	Ungefährlich für den Transport
Meeresschadstoff:	Ungefährlich für den Transport
Klasse:	55
UN:	3907.30.0000
Hinweise:	Nicht gemäß DOT, ADR UND IMDG, IATA geregelt

15. RECHTSVORSCHRIFTEN

Occupational Safety and Health Act (OSHA – Arbeitsschutzgesetz): Dieses Sicherheitsdatenblatt (SDB) wurde unter Einhaltung des bundesweiten OSHA Hazard Communication Standard 29 CFR 1910.1200(g) erstellt. Dieses Produkt gilt laut diesem Standard nicht als gefährliche Chemikalie.

TRALHAMA: Dieses Sicherheitsdatenblatt (SDB) wurde gemäß der toxikologischen Risikobewertung erstellt Bericht # 5118-334-0103A / B, in dem Folgendes festgestellt wurde: „Das Produkt wird nicht als toxisch (akut / chronisch) betrachtet. ätzend und / oder ein starkes Sensibilisierungsmittel bei bestimmungsgemäßer Verwendung oder unter angemessenen Umständen vorhersehbarer Missbrauch. Die Gefahreinstufung ist wie in 16 CFR 1500.3 (b) (5), (7) - (9) definiert. (FHSA-Vorschriften).“



Resource Conservation and Recovery Act ((RCRA – Gesetz über die Erhaltung und Wiederherstellung von Ressourcen): Gemäß dem RCRA (40 CFR 261) kein Sondermüll.

Toxic Substances Control Act (TSCA – Gesetz zur Kontrolle giftiger Stoffe): Alle Inhaltsstoffe sind im TSCA-Verzeichnis angeführt und sind gemäß der 40CFR723.50 Low Volume Exemption (LVE – Ausnahme für geringes Volumen) sowie der Low Environmental Release and Low Human Exposure Exemption (LoREX – Ausnahme für geringe Freisetzung an die Umwelt und geringe Exposition für Menschen) ausgenommen.

SARA Title III: Abschnitt 304 - CERCLA: Nicht angeführt.

SARA Title III: Section 313 Toxic Chemical List (TCL – Liste giftiger Chemikalien): Dieses Produkt enthält keine giftige Chemikalie für die routinemäßige jährliche Berichterstattung über die Freisetzung giftiger Chemikalien („Toxic Chemical Release Reporting“) gemäß Abs. 313 (40 CFR 372). Diese Informationen müssen in allen Sicherheitsdatenblättern, die für dieses Material kopiert und verteilt werden, enthalten sein.

Proposition 65 (Gesetz für sicheres Trinkwasser und toxische Chemikalien): Dem kalifornischen Bundesstaat Kalifornien ist bekannt, dass keine der Komponenten dieser Formel Krebs, Geburtsfehler oder andere Fortpflanzungsschäden verursacht.

16. SONSTIGE ANGABEN

Dieses Sicherheitsdatenblatt wurde in Übereinstimmung mit den neuen, ab Juni 2015 wirksamen OSHA HCS-Anforderungen für Hersteller von Chemikalien erstellt. Dieses Sicherheitsdatenblatt ersetzt alle vorhergehenden Versionen von Material-Sicherheitsdatenblättern und entspricht sämtlichen aktuellen Vorschriften.

Dieses Produkt hat die Tests der FSSE (Food Simulating Solvents Extractions) bestanden.

Dieses Produkt entspricht ASTM D4236.

Überarbeitet: Januar 2020 - Alle Rechte vorbehalten

1. IDENTIFICAZIONE

Nome commerciale:	ArtResin™
Informazioni di contatto:	2300 Apollo Circle Carrollton, Texas 75006 USA
Contatto di emergenza:	1-877-401-4001
Uso consigliato:	Rivestimento epossidico decorativo e protettivo per opere d'arte/applicazioni creative
Famiglia chimica:	Resina epossidica in due parti

2. IDENTIFICAZIONE DEL O DEI RISCHI

Classificazione dei rischi:	Irritante per la pelle - Categoria 2 Irritante per gli occhi - Categoria 2
Segnale di avvertimento:	Attenzione
Indicazioni di pericolo:	H317 L'esposizione ripetuta e prolungata può provocare sensibilizzazione cutanea.
Pittogramma:	
Consigli di prudenza:	P101: Se è necessaria una consulenza medica, tenere a portata di mano il contenitore o l'etichetta del prodotto. P102: Conservare fuori dalla portata dei bambini. P103: Leggere l'etichetta prima dell'uso P262: Non immettere negli occhi, sulla pelle o sugli indumenti. P271: Utilizzare solo in un'area ben ventilata. P280: Indossare guanti protettivi/indumenti protettivi/protettivi per occhi e viso. P285: In caso di ventilazione insufficiente, indossare una protezione respiratoria. P333+P313: In caso di irritazione cutanea/irritazione cutanea: Richiedere assistenza medica P337+P313: Se l'irritazione oculare persiste: Consulenza medica / attenzione P501: Smaltire il contenuto/contenitore in conformità alle normative locali, regionali, nazionali e internazionali.

Valutazione NFPA: Salute: 1
Inflammabilità: 1
Instabilità: 0
Rischio Specifico: N/A



Valutazione HMIS®: Salute: 1
Inflammabilità: 1
Rischio Fisico: 0
Indice di protezione personale: C



3. COMPOSIZIONE/INFORMAZIONI SUI COMPONENTI

Nome Chimico/Famiglia:	Epossidico
Nomi comuni/Sinonimi:	Resina epossidica, rivestimento epossidico, epossidica Novolac, epossidica bicomponente
Numeri CAS e altri identificatori:	<p>Resina: DGEBA Resina epossidica: CAS# 25068-38-6 80%-90% Segreto commerciale: 10%-20%</p> <p>Indurente: Addotto amminico modificato: CAS# Miscela >90%. Segreto commerciale <10%</p>



Affermazione del segreto commerciale: Si prega di notare che l'esatta concentrazione di ciascuna sostanza chimica contenuta nel prodotto è stata trattenuta per garantire che la formula rimanga un segreto commerciale.

4. MISURE DI PRIMO SOCCORSO

Le misure di primo soccorso sono elencate nel caso in cui il prodotto non venga utilizzato come previsto. Seguendo le istruzioni per l'uso fornite ci si assicurerà che le misure di primo soccorso non siano probabilmente necessarie.

Ingestione	In caso di ingestione, chiamare immediatamente un centro antiveneni o un medico.
Pelle	Se sulla pelle sciacquare bene con acqua.
Inalazione	Se irritante, portare all'aria aperta.
Occhi	Se negli occhi, risciacquare con acqua.
Effetti di sovraesposizione	La sovraesposizione prolungata a questo materiale può causare irritazione alla pelle e agli occhi e irritazione respiratoria. Anche se improbabile, può causare reazioni allergiche cutanee e/o respiratorie e/o cefalea.
Condizioni mediche aggravate dall'esposizione:	Allergia o condizioni della pelle, compreso l'eczema.
Ulteriori informazioni	Togliere prontamente gli indumenti bagnati.

5. MISURE ANTINCENDIO

Punto di infiammabilità	Resina	>300° F (149° C)
	Indurente	>200° F (93° C)
Metodo del punto di infiammabilità utilizzato	Serbatoio chiuso	
Vigili del fuoco Mezzi di estinzione	Anidride carbonica, schiuma, sostanza chimica secca	
Attrezzatura antincendio	Utilizzare un respiratore autonomo	
Rischi di incendio e di esplosione	I prodotti di decomposizione possono comprendere i seguenti materiali: anidride carbonica, monossido di carbonio, ossido di azoto e/o ossido di carbonio.	

6. MISURE IN CASO DI RILASCIO ACCIDENTALE

Misure in caso di fuoriuscita accidentale:

Misure da adottare in caso di fuoriuscita di materiale:

Resina: Pala in contenitore richiudibile per lo smaltimento.

Indurente: Assorbire in sabbia o altro materiale assorbente. Spalare in contenitori chiudibili e smaltire in modo professionale.

7. MANIPOLAZIONE E STOCCAGGIO

Precauzioni:

Non introdurre negli occhi, sulla pelle o sugli indumenti. Indossare guanti. Non ingerire. Lavorare in un'area ben ventilata.

Informazioni sulla conservazione:

Conservare a temperature comprese tra 2° C e 40° C in contenitori ermeticamente chiusi in luogo asciutto per evitare la contaminazione da umidità e anidride carbonica. In caso di congelamento del prodotto, prima dell'uso riscaldare a temperatura ambiente.

8. CONTROLLI DELL'ESPOSIZIONE/PROTEZIONE PERSONALE

OSHA PELs	N/A
ACGIH TLVs	N/A
Dispositivi di protezione personale	Indossare dispositivi di protezione
Protezione della pelle	Guanti impermeabili
Protezione delle vie respiratorie	Respiratore a cartuccia chimica organica se necessario in aree non ventilate
Protezione degli occhi	Occhiali per prodotti chimici a prova di spruzzi d'acqua
Controlli tecnici	Buona ventilazione generale

9. PROPRIETÀ FISICHE E CHIMICHE

	Resina	Indurente
Aspetto	Chiaro	Chiaro
Odore	Nessuno	Leggero odore di ammoniaca
Stato Fisico	Liquido	Liquido
Solubilità in Acqua (% di peso)	Trascurabile	Trascurabile
Punto di fusione	<0° F (-18° C)	<0° F (-18° C)
Densità	1.14	0.96
PH	ca 5	ca 8

10. STABILITÀ E REATTIVITÀ

Reattività	Non reattivo	
Stabilità	Stabilità	
Materiali incompatibili	Acidi, ossidanti e basi forti	
Hazardous Decomposition Products	Resina	Monossido di carbonio, anidride carbonica e fenolica.
	Indurente	Monossido di carbonio, anidride carbonica, ossidi di azoto fenolico e composti.
Polimerizzazione pericolosa	Non si verificherà	

11. INFORMAZIONI TOSSICOLOGICHE

Effetti Orali Acuti (Ingestione)	Resina	LD ₅₀ (rabbits simulation): 4000 mg/kg
	Indurente	- LD ₅₀ (rabbits simulation): 3000 mg/kg
Sensibilizzazione	Può causare sensibilizzazione cutanea e respiratoria	
Irritazione della pelle	Irritante	
Irritazione oculare	Irritante	

12. INFORMAZIONI ECOLOGICHE

Ulteriori informazioni:	Le ammine in generale possono essere dannose per gli organismi acquatici.
Tossicità acquatica:	Non sono disponibili altre informazioni pertinenti.
Persistenza e degradabilità:	Non sono disponibili altre informazioni pertinenti.
Potenziale biocumulativo:	Non sono disponibili altre informazioni pertinenti.
Mobilità nel suolo:	Non sono disponibili altre informazioni pertinenti.

13. CONSIDERAZIONI SULLO SMALTIMENTO

Metodo di smaltimento dei rifiuti:	Smaltimento in conformità con le normative federali, statali e/o locali.
Raccomandazioni:	Il prodotto polimerizzato può essere smaltito insieme ai rifiuti domestici.

14. INFORMAZIONI SUL TRASPORTO

DOT" ADR" E IMDG" IATA:	Non pericoloso per il trasporto
Classe di pericolo sotto: DOT" ADR" E IMDG" IATA:	Non pericoloso per il trasporto
Inquinante marino:	Non pericoloso per il trasporto
Classe:	55
UN:	3907.30.0000
Notes:	Non regolamentato ai sensi di DOT, ADR, AND, IMDG, IATA

15. INFORMAZIONI SULLA REGOLAMENTAZIONE

Legge sulla sicurezza e la salute sul lavoro (OSHA):

La presente scheda di sicurezza (SDS) è stata redatta in conformità alla norma federale OSHA Hazard Communication Standard 29 CFR 1910.1200(g). Questo prodotto non è considerato una sostanza chimica pericolosa ai sensi di tale norma.

TRALHAMA: La presente scheda di sicurezza (SDS) è stata preparata in conformità con il rapporto di valutazione del rischio tossicologico n. 5118-334-0103A/B che lo ha determinato: "il prodotto non è considerato tossico (acuto/cronico), corrosivo e/o un forte sensibilizzante se usato come previsto o in circostanze che comportano un uso improprio ragionevolmente prevedibile. La classificazione dei pericoli è definita nel 16 CFR 1500.3 (b) (5) , (7)-(9) (regolamenti FHSA)".



Resource Conservation and Recovery Act (RCRA):

Non è un rifiuto pericoloso ai sensi dell'RCRA (40 CFR 261).

Legge sul controllo delle sostanze tossiche (TSCA): Tutti gli elementi sono presenti nell'inventario TSCA e sono esenti secondo 40CFR723.50 Low Volume Exemption (LVE) e Low Environmental Release and Low Human Exposure Exemption (LoREX).

SARA Titolo III: Sezione 304 - CERCLA: Non presente nell'elenco.

SARA Titolo III: Sezione 313 Toxic Chemical List (TCL): Questo prodotto NON contiene sostanze chimiche tossiche per l'annuale "Toxic Chemical Release Reporting" secondo la Sezione 313 (40 CFR 372). Queste informazioni devono essere incluse in tutte le SDS copiate e distribuite per questo materiale.

Proposizione 65 (Safe Drinking Water and Toxic Chemicals Act): Nessuno dei componenti di questa formula è noto allo stato della California per causare cancro, difetti congeniti o altri danni riproduttivi.

16. ALTRE INFORMAZIONI

Questa SDS è stata preparata in conformità con i nuovi requisiti OSHA HCS per i produttori di sostanze chimiche, entrati in vigore nel giugno 2015. Questa SDS sostituisce tutte le precedenti versioni di MSDS ed è conforme a tutte le normative vigenti.

Questo prodotto ha superato il test FSSE (Food Simulating Solvents Extractions).

Questo prodotto è conforme alla norma ASTM D4236.

Revisione: Gennaio 2020 - Tutti i diritti riservati

NEDERLANDS

DATUM VAN INWERKTREDING: 01/2020

1. IDENTIFICATIE

Handelsnaam:	ArtResin™
Contactgegevens:	2300 Apollo Circle Carrollton, Texas 75006 USA
Noodcontact:	1-877-401-4001
Aanbevolen Gebruik:	Decoratieve en beschermende epoxylaag Voor kunst/creatieve toepassingen
Chemische familie:	Tweedelige epoxyhars

2. IDENTIFICATIE VAN HET GEVAAR OF DE GEVAREN

Gevarenclassificatie:	Huidirritant - Categorie 2 Oogirritant - Categorie 2
Signaalwoord:	VOORZICHTIG
Gevarenaanduiding(en):	H317 Herhaalde en langdurige blootstelling kan overgevoeligheid van de huid veroorzaken

Pictogram:	
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Voorzorgsmaatregelen:	<p>P101:P101: Indien medisch advies nodig is, moet u de verpakking of het etiket van het product bij de hand hebben.</p> <p>P102: Buiten het bereik van kinderen houden.</p> <p>P103: Etiket lezen voor gebruik</p> <p>P262: Mag niet in de ogen, op de huid of op kleding komen.</p> <p>P271: Alleen te gebruiken in een goed geventileerde ruimte</p> <p>P280: Draag beschermende handschoenen/beschermende kleding/oog-en gezichtsbescherming.</p> <p>P285: In geval van onvoldoende ventilatie, draag ademhalingsbescherming.</p> <p>P333+P313: Als er huidirritatie/huiduitslag optreedt: Medische hulp invoeren</p> <p>P337+P313: Als de oogirritatie aanhoudt: Medisch advies / aandacht invoeren</p> <p>P501: Gooi de inhoud/verpakking weg in overeenstemming met de lokale/regionale/nationale en internationale voorschriften.</p>
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NFPA Beoordeling: Gezondheid: 1
Ontvlambaarheid: 1
Instabiliteit: 0
Specifiek Gevaar: N/A



HMIS® Beoordeling: Gezondheid: 1
Ontvlambaarheid: 1
Instabiliteit: 0
Persoonlijke Beschermingsindex: C



3. SAMENSTELLING/INFORMATIE OVER DE INGREDIENTEN

Chemische Naam/Familie: Epoxy

Gemeenschappelijke Namen/Synoniemen: Epoxyhars, Epoxydeklaag, Novolac Epoxy, Tweedelige Epoxy

CAS-Nummers en andere Aanduidingen ter identificatie: **Hars:** DGEBA-Epoxyhars: CAS# 25068-38-6 80%-90%
Handelsgeheim: 10%-20%

Verharder: Gewijzigde Amine Adduct: CAS# Mengsel >90%
Handelsgeheim <10%



Handelsgeheimstelling: Merk aub op: De juist concentratie van ieder chemisch bestanddeel in het product is achtergehouden om ervoor te zorgen dat de formule een handelsgeheim blijft.

4. EERSTE HULPMAATREGELEN

Voor het geval dat het product niet wordt gebruikt zoals de bedoeling was, worden eerstehulpmaatregelen opgesomd. Het opvolgen van de verstrekte gebruiksinstructies zal ervoor zorgen dat de eerstehulpmaatregelen waarschijnlijk niet nodig zijn.

Inname	Bij inslikken onmiddellijk een Antigifcentrum of dokter contacteren.
Huid	Indien op de huid, goed afspoelen met water
Inademing	Indien irriterend, naar de frisse lucht verplaatsen
Ogen	Indien in de ogen, spoelen met water
Overmatige blootstelling	Langdurige overmatige blootstelling aan dit materiaal kan leiden tot irritatie van de huid en de ogen, en ademhalingsirritatie. Hoewel dit onwaarschijnlijk is, kan het allergische reacties van de huid en/of ademhalingsreacties en/of hoofdpijn veroorzaken.
Medische aandoeningen verergerd door blootstelling:	Allergie of huidaandoeningen, inclusief eczeem
Aanvullende informatie	Verwijder natte kleding onmiddellijk

5. BRANDBESTRIJDINGSMAATREGELEN

Vlampunt	Hars	>300° F (149° C)
	Verharder	>200° F (93° C)
Gebruikte Vlampuntmethode	Gesloten kop	
Brandbestrijdingsblusmiddelen	Koolstofdioxide, schuim, droge chemische stof	
Brandblusapparatuur	Gebruik een zelfstandig ademhalingsapparaat	
Brand- en Ontploffingsgevaaren	Ontbindingsproducten kunnen de volgende materialen omvatten: koolstofdioxide, koolstofmonoxide, stikstofoxide en/of koolstofoxide	

6. MAATREGELEN BIJ ACCIDENTEEL VRIJKOMEN

Maatregelen bij het Accidenteel Vrijkomen: Stappen die genomen moeten worden indien materiaal wordt gemorst:

Hars: Schop in een afsluitbare container voor verwijdering.

Verharder: In zand of een ander absorberend materiaal opnemen. Schop in een afsluitbare container en gooi deze op een professionele wijze weg.

7. VERWERKING EN OPSLAG

Voorzorgsmaatregelen: Niet in de ogen krijgen, op huid, of op kledij. Handschoenen dragen. Niet innemen. In een goed geventileerde ruimte werken.

Informatie over opslag: Bewaren bij temperaturen tussen 20 C en 40o C in goed gesloten verpakkingen op een droge plaats om vocht en koolstofdioxideverontreiniging te voorkomen. Als het product bevroest, voor gebruik opwarmen tot kamertemperatuur.

8. CONTROLE OP DE BLOOTSTELLING/PERSOONLIJKE BESCHERMING

OSHA PELs	N/A
ACGIH TLVs	N/A
Persoonlijke beschermingsapparatuur	Draag beschermende uitrusting
Huidbescherming	Ondoordringbare handschoenen
Ademhalingsbescherming	Indien nodig in een niet-geventileerde ruimte, een organisch-chemisch ademhalingsstelsel met een cartridge.
Oogbescherming	Spatwaterdichte chemische stofbril
Engineering Controls	Goede algemene ventilatie

9. FYSISCHE EN CHEMISCHE EIGENSCHAPPEN

	Hars	Verharder
Verschijsing	Doorzichtig	Doorzichtig
Geur	Geen	Lichte ammoniakgeur
Fysieke staat	Vloeistof	Vloeistof
Oplosbaarheid in Water (% van het gewicht)	Verwaarloosbaar	Verwaarloosbaar
Smeltpunt	<0° F (-18° C)	<0° F (-18° C)
Dichtheid	1.14	0.96
PH	ca 5	ca 8

10. STABILITEIT EN REACTIVITEIT

Reactiviteit	Niet-reagerend	
Stabiliteit	Stabiel	
Onverenigbare materialen	Sterke zuren, oxidatiemiddelen en basen	
Gevaarlijke ontbindingsproducten	Hars	Koolstofmonoxide, Koolstofdioxide en Fenolen
	Verharder	Koolstofmonoxide, Koolstofdioxide, Fenolische Stikstofoxiden en Verbindingen.
Gevaarlijke Polymerisatie	Zal niet optreden	

11. TOXICOLOGISCHE INFORMATIE

Acute Orale Effecten (Inname)	Hars	LD ₅₀ (simulatie bij konijnen): 4000 mg/kg
	Verharder	- LD ₅₀ (simulatie bij konijnen): 3000 mg/kg
Sensibilisatie	Kan overgevoeligheid van de huid en de luchtwegen veroorzaken	
Huidirritatie	Irriterend	
Oogirritatie	Irriterend	

12. ECOLOGISCHE INFORMATIE

Aanvullende informatie:	Aminen in het algemeen kunnen schadelijk zijn voor in het water levende organismen
Aquatische toxiciteit:	Geen verdere relevante informatie beschikbaar
Persistentie en afbreekbaarheid:	Geen verdere relevante informatie beschikbaar
Biologisch potentieel:	Geen verdere relevante informatie beschikbaar
Mobiliteit in de Bodem:	Geen verdere relevante informatie beschikbaar.

13. OVERWEGINGEN IN VERBAND MET DE VERWIJDERING

Afvalverwijderingsmethode:	Verwijderen in overeenstemming met de federale, staats- en/of lokale regelgeving.
Aanbevelingen:	Het uitgeharde product mag samen met het huisvuil worden verwijderd.

14. TRANSPORTINFORMATIE

DOT' ADR' EN IMDG' IATA:	Ongevaarlijk voor transport
Gevarenklasse onder: DOT' ADR' AND IMDG' IATA:	Ongevaarlijk voor transport
Verontreinigende Stof:	Ongevaarlijk voor transport
Klasse:	55
UN:	3907.30.0000
Opmerkingen:	Niet gereguleerd onder DOT, ADR, AND, IMDG, IATA

15. INFORMATIE OMTRENT REGELGEVING

Wet op de Veiligheid en Gezondheid op het Werk (OSHA): Dit Veiligheidsinformatieblad (SDS) is opgesteld in overeenstemming met de federale OSHA-Gevarencommunicatienorm 29 CFR 1910.1200(g). Dit product wordt onder die norm niet beschouwd als een gevaarlijke chemische stof.

TRALHAMA: Dit Veiligheidsinformatieblad (SDS) is opgesteld in overeenstemming met het Toxicologische Risicobedoelingsrapport # 5118-334-0103A/B, waarin is vastgesteld dat: "het product niet als giftig (acuut/chronisch), corrosief en/of sterk sensibiliserend wordt beschouwd bij gebruik overeenkomstig de bestemming of onder redelijkerwijs te voorzien omstandigheden van verkeerd gebruik. De classificatie van de gevaren is zoals gedefinieerd in de 16 CFR 1500.3 (b) (5) , (7)-(9) (FHSA-voorschriften).".



Wet op het Behoud en de Terugwinning van Hulpbronnen (RCRA): Geen gevaarlijk afval onder RCRA (40 CFR 261).

Wet op de controle op giftige stoffen (TSCA): Alle ingrediënten staan op de TSCA-inventaris en zijn vrijgesteld volgens 40CFR723.50 Vrijstelling voor Laag Volume (LVE) en Vrijstelling voor Laag Vrijkomen in het Milieu en Vrijstelling voor Lage Blootstelling van de Mens (LoREX).

SARA Titel III: Sectie 304 - CERCLA: Niet vermeld.

SARA Titel III: Sectie 313 Giftige chemische lijst (TCL): Dit product bevat GEEN giftige chemische stof voor de routinematige jaarlijkse "Giftige Chemische Vrijkomingsrapportage" onder Sec. 313 (40 CFR 372). Deze informatie moet worden opgenomen in alle SDS'en die voor dit materiaal worden gekopieerd en gedistribueerd.

Voorstel 65 (Wet veilig drinkwater en giftige chemicaliën): Geen van de componenten van deze formule is gekend aan de staat van Californië om kanker, geboortetekorten of ander reproductief kwaad te veroorzaken.

16. OVERIGE INFORMATIE

Deze SDS is opgesteld in overeenstemming met de nieuwe OSHA HCS-eisen voor fabrikanten van chemicaliën die in juni 2015 van kracht zijn geworden. Dit SDS vervangt alle voorgaande versies van MSDS en voldoet aan alle geldende voorschriften.

Dit product is geslaagd voor de Food Simulating Solvents Extractions (FSSE)-test.

Dit product voldoet aan ASTM D4236.

Herziening: Januari 2020 - Alle rechten voorbehouden

MATERIAL SAFETY DATA SHEET
*** GLITTER PLASTIC**

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER / SUPPLIER

GLITTEREX Corporation
7 Commerce Drive
Cranford, NJ 07016

Telephone: (908) 272-9121

PRODUCT NAME: ARTS AND CRAFTS GLITTER
PRODUCT DESCRIPTION: PVC GLITTER
PRODUCT USE: DECORATIVE APPLICATIONS

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPOSITION	APPROX. WT. %	CAS REG. NO.
Metallized polyvinyl chloride film Rigid film – contains no Phthalates	(Proprietary)	25085-82-9

3. HAZARDS

FLAMMABILITY -FLASH POINT ABOVE 200 DEGREES F
HEALTH – NON TOXIC ACMI/AP CERTIFIED
CHEMICAL REACTIVITY – SEE SECTION 10

4. FIRST AID MEASURES

INHALATION: Not usual route of entry.

EYES: Any material that contacts the eye should be washed out with water. Get medical attention if symptoms persist.

SKIN: Wash with soap and water.

INGESTION: Material is not expected to be absorbed from the gastrointestinal tract, so that induction of vomiting should not be necessary.

5. FIRE FIGHTING MEASURES

FIRE FIGHTING: Approved self-contained breathing apparatus and protective clothing should be used for all fires.

EXTINGUISHING MEDIA: Water, fog, carbon dioxide, dry chemical.

HAZARDOUS COMBUSTION PRODUCTS: Heated to decomposition, normal products of combustion will be formed.

FLASH POINT:	ABOVE 200 DEGREES F
LOWER FLAMMABLE LIMIT:	NOT ESTABLISHED
UPPER FLAMMABLE LIMIT:	NOT ESTABLISHED
AUTO IGNITION TEMPERATURE:	NOT AVAILABLE

EXPLOSION DATA:
IMPACT SENSITIVITY: NOT SENSITIVE TO MECHANICAL IMPACT
STATIC DISCHARGE: NOT SENSITIVE TO STATIC DISCHARGE

6. ACCIDENTAL RELEASE MEASURES

Sweep or gather up material and place in proper container.

7. HANDLING AND STORAGE

HANDLING: No special precautionary measures should be needed under anticipated conditions of use. Minimize dust generation and accumulation. Refer to NFPA Pamphlet No. 654, "Prevention of fire and dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries."

STORAGE: Store away from excessive heat and sources of ignition. No other precautionary measures should be needed under anticipated conditions of use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT INFORMATION:

VENTILATION: Good general ventilation should be used.

EYE PROTECTION: Use safety glasses.

SKIN PROTECTION: Wear cotton, canvas or leather gloves.

RESPIRATORY: When dust or powder from secondary operations are not adequately controlled, use respirator approved for protection from dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	GLITTER
COLOR:	VARIOUS COLORS
ODOR:	MILD
MELTING POINT:	ABOVE 180 DEGREES F
VAPOR PRESSURE:	NEGLIGIBLE
VAPOR DENSITY (AIR=1):	NOT APPLICABLE
SPECIFIC GRAVITY (WATER=1):	1.35 TO 1.45
WATER SOLUBILITY:	INSOLUBLE
% VOLATILES:	NEGLIGIBLE
pH:	NOT APPLICABLE
EVAPORATION RATE:	NOT APPLICABLE

10. STABILITY AND REACTIVITY

STABILITY: Stable under recommended conditions of storage and handling.

REACTIVITY: Avoid contact with acids, alkalis and strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

EYES: Product not considered primary eye irritant, and expected to be a low hazard for usual industrial or commercial handling by trained personnel.

SKIN: Product not considered to be primary skin irritant.

INGESTION: Expected to be a low ingestion hazard.

INHALATION: Product not considered a hazard for usual handling by trained personnel.

12. ECOLOGICAL INFORMATION

Not expected to present any adverse environmental effects.

13. DISPOSAL INFORMATION

Product is not a RCRA hazardous waste. Landfill or incinerate in accordance with federal, state or local requirements.

14. TRANSPORTATION INFORMATION

US DOT HAZARD CLASSIFICATION: Not Regulated.

15. REGULATORY INFORMATION

OSHA hazardous chemical(s) according to 29 CFR 1910.1200: None.

WHMIS (Canada) Status: Not a controlled product.

WHMIS (Canada) Ingredients Disclosure List: None.

Chemical(s) subject to the reporting requirements of Section 313 or Title III of SARA of 1986 and 40CFR 372: None.

SARA Sections 311 and 312 hazard classification(s): N/A.

US Toxic Substances Control Act (TSCA): All Components of this product are listed or are excluded from listing on the TSCA Chemical Substance Inventory.

Material(s) known to the State of California to cause cancer: None

Material(s) known to the State of California to cause adverse reproductive effects: None

New Jersey Workplace Hazardous Substance List: None

Pennsylvania Hazardous Substance List: None

16. OTHER INFORMATION

The above information and recommendations are believed accurate and reliable. The GLITTEREX Corporation makes no warranty of any kind, either express or implied, including merchantability and fitness. Users should consider these data only as a supplement to other information available from all sources, and should incorporate these into programs for the proper use and disposal of these materials and the safety and health of employees and customers.