

Aldon $\quad \begin{aligned} & 221 \text { Rochester Street } \\ & \text { Avon NY } 14414\end{aligned}$
CHEMTREC 24 Hour Emergency
Aldon (585) 226-6177

## Phone Number ( 800 ) 424-9300

For laboratory use only.
Not for drug, food or household use.


Signal word: WARNING
Pictograms: GHS07
Target organs: None known.


GHS Classification:
Acute toxicity, oral (Category 4)
GHS Label information: Hazard statement(s):
H302: Harmful if swallowed.

Precautionary statement(s):
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.
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.


INGESTION: HARMFUL BY 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: MAY BE HARMFUL IF INHALED. CALSES 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 occasionaily. Get immediate medical attention.
 water. If irritation occurs, get medical attention.


Sultable 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.

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 adequ ${ }^{-+\cdots}$ : 2 .entilation. 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.


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 shouid be needed in normal laboratory handling at room termperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.


Appearance: Solid, purple powder. Odor: No odor.
Odor threshold: Data not available. pH: Data not available.
Melting / Freezing point: Data not available
Boiling point: Data not available
Flash point: Data not available

Evaporation rate ( Water $=1$ ): Data not available Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: Data not available Vapor pressure ( $\mathbf{m m ~ H g}$ ): Data not available Vapor density ( $\mathbf{A} \boldsymbol{i}=1$ ): Data not available Relative density (Specific gravity): Data not available Solubility(ies): $1 \mathrm{~g} / 100 \mathrm{ml}$ in water

Partition coefficient: Data not available
Auto-ignition temperature: Data not available Decomposition temperature: Data not available. Viscosity: Data not available.
Molecular formula: $\mathrm{C}_{16} \mathrm{H}_{8} \mathrm{~N}_{2} \mathrm{Na}_{2} \mathrm{O}_{8} \mathrm{~S}_{2}$
Molecular weight: 466.36

Chemical stability: Stable
Hazardous polymerization: Will not occur
Conditions to avoid: Excessive temperatures. Light sensitive. easily oxidized.
Incompatible materials: Strong oxidizers and water.
Hazardous decomposition products: Carbon, nitrogen, sulfur and sodium oxides.

Acute toxicity: Oral-rat LD50: $2,000 \mathrm{mg} / \mathrm{kg}$
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
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to $0.1 \%$ is identified as a known or anticipated carcinogen by NTP
IARC: 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: May be harmful by inhalation.
Ingestion: Harmful by ingestion.
Skin: Contact may cause irritation.
Eyes: Contact may cause 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 \#: DU3000000

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.

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.


UN/NA number: Not applicable
Hazard class: Not applicable
Exceptions: Not applicable

Shipping name: Not Regulated
Packing group: Not applicable Reportable Quantity: No Marine pollutant: No 2016 ERG Guide \# Not applicable

A chemical is considered to be listed if the CAS number for the anhydrous form is on the inventory list
Component TSCA

Indigo carmine

| RCRA code | DSL | NDSL |
| :---: | :---: | :---: |
| Not listed | Listed | Not listed |

## SAFETY DATA SHEET

HMIS:
Health- 1 Flammability- 1 Reactivity- 0 Pers. Protection- N

## NFPA:

Health- I Flammability- 1 Reactivity- 0 Special HazardN

WHMIS: B 3, D 2 B

## Section 1: Product and Company Identification

Product: Infinity 83 Melon Bacterial Enzyme Digester
ATRA Janitorial Supply
220 West Parkway Unit 6
Pompton Plains, NJ 07444
Non-Emergency: $\quad 24 \mathrm{hr}$ Emergency Spill Information:
US 973-248-3480
1-888-255-3924
International
Section 2. Hazards Identification
EMERGENCY OVERVIEW
Appearance/Odor: Opaque white liquid, characteristic aroma NOT Classified as hazardous by the criteria of NOHSC.

## WARNING

Flammability: Not classified as flammable
Health Hazards Listed : Not applicable
Ecological Hazards Listed : None known
Potential Health Effects: See section 11 for more information.

Risk Phrases:

Safety Phrases:

Hazard Phrases:

Precautionary Phrases:

Likely Routes of Exposure: Not applicable
Eye: Direct exposure can irritate

## Skin:

Ingestion:
Inhalation: Prolonged exposure can inritate
Not expected to be a problem
Not applicable

Medical Conditions Aggravated By Exposure:
Allergies to fragrances
Target Organs: None known
This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP. This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). Potential Environmental Effects: (See section 12 for more information.)
None known

|  | Section 3. Composition/Information on Ingredients |  |  |  |  |
| :--- | :--- | :--- | :--- | :---: | :---: |
| Component | CAS\# | $\%$ by Weight | WHMIS |  |  |
| Polystyrene | none | $<0.1$ | N |  |  |
| Polyethylene Glycol | $25322-68-3$ | $0.1-1.0$ | N |  |  |
| Water | $7732-18-5$ | $60-100$ | N |  |  |
| Trade Secret Fragrance Mixture | none | $0.1-1.0$ | N |  |  |
| Non-ionic Surfactant | NA | $1-5$ | Y |  |  |
|  | Section 4. First Aid Measures |  |  |  |  |

Eye Contact:
Skin Contact: Wash with soap and water.
Inhalation:
Ingestion: Give water or milk to drink if conscious.
Note to Physicians:

Section 5. Fire Fighting Measures
Suitable Extinguishing Media: Water
Unsuitable Extinguishing Media: None known
Products of Combustion: Oxides of carbon and nitrogen
Protection of Firefighters: As for surrounding fire
Section 6. Accidental Release Measures
Personal Precautions: Keep out of eyes. Avoid skin contact.
Environmental Precautions: Keep out of surface waters.
Methods for Containment: Dike with sand, clay or other suitable material.
Methods for Clean-Up: Absorb on sand, clay or other suitable material or mop up with water.
Other Information:
Section 7. Handling and Storage
HANDLING
Normal care.
STORAGE

## Section 8. Exposure Controls/Personal Protection

EXPOSURE GUIDELINES

COMPONENT:
Polystyrene
Polyethylene Glycol

TWA:
None established
None established

LD-50
Not applicable
Not applicable

| Water | Not applicable | Not applicable |
| :--- | :--- | :--- |
| Trade Secret Fragrance Mixture | None established | Not determined |
| Non-ionic Surfactant | NA | NA |

## Engineering Controls: Not normally necessary

Eye/Face Protection: Protective goggles if handling large quantities
Skin Protection: Rubber or other protective gloves if handling large quantities.
Respiratory Protection: Not normally necessary.
General Hygiene Considerations: Reasonable care. Keep away from food and beverages.

## Section 9. Physical and Chemical Properties

Color: White, opaque Odor: Characteristic. Cucumber Melon.

Physical State: Liquid
pH: 6.5-8.0
Evaporation Rate: As water
Flash Point: $>96^{\circ} \mathrm{C} />205^{\circ} \mathrm{F}$ PMCC
Upper Flammability Limit: Not determined
Vapor Pressure: As water
Vapor Density: Not determined
Volatile Organic Compound (VOC),\%weight:
Less than $1 \%$, all fragrance

Odor: Characteristic. Cucumber Melon.
Odor Treshhold:
Freezing Point: Not determined
Boiling Point: $100^{\circ} \mathrm{C} / 212^{\circ} \mathrm{F}$
Flammability(solid,gas): Not applicable
Lower Flammabilty Limit: Not determined
Specific Gravity: 0.99-1.02
Auto-ignition Temperature: Not determined
Solubility (water): Soluble
Percent Volatile: More than $95 \%$ including water

Section 10. Stability and Reactivity
Stability: Stable
Conditions to Avoid: Not applicable
Incompatable Materials: None known
Hazardous Decomposition Products: Not applicable
Possibility of Hazardous Reactions: Extremely unlikely
Section 11. Toxicology Information
ACCUTE EFFECTS
Oral LD50:
Dermal LD50:
Inhalation:
Eye Irritation:
Skin Irritation: Prolonged or repeated contact can irritate skin
Sensitization:
None known
CHRONIC EFFECTS

| Carcinogenicity: | None known |
| :--- | :--- |
| Mutagenicity: | None known |
| Reproductive Effects: | None known |
| Developmental Effects: | None known |

Section 12. Ecological Information
Ecotoxicity:
Not applicable


SDS for Product: Infinity 83 Melon Bacterial Enzyme Digester, Rev. Date: 17 March 2016 federal, state and local laws.

BOB SMITH INDUSTRIES

## Safety Data Sheet

Revision Number: 02.0
Issue date: 03/18/2015


Product name:
Product type:
Restriction of Use:
Company address:
Bob Smith Industries, Inc.
8060 Morro Road
Atascadero, CA 93422

Insta-Cure ${ }^{\text {m }}$
Cyanoacrylate None identified

IDH number:
Item number: Region:

Contact information:
Telephone: (805) 466-1717
MEDICAL EMERGENCY Phone: Poison Control Center
1-877-671-4608 (toll free) or 1-303-592-1711
TRANSPORT EMERGENCY Phone: CHEMTREC
1-800-424-9300 (toll free) or 1-703-527-3887
www.bsi-inc.com


|  | EMERGENCY OVERVIEW |
| :--- | :--- |
| WARNING: | CONDS SKIN IN SECONDS. |
|  | CAUSUSTIBLE LIQUID. |
|  | MAY CAUSE ERE IRRITATION. |
|  |  |


| HAZARD CLASS | HAZARD CATEGORY |
| :--- | :---: |
| FLAMMABLE LIQUID | 4 |
| EYE IRRITATION | $2 A$ |
| SKIN IRRITATION | 2 |

PICTOGRAM(S)
C

## Precautionary Statements

| Prevention: | Keep away from heat, sparks, open flames. No smoking. Avoid breathing vapors, |
| :--- | :--- |
|  | Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear |
|  | protective gloves, eye protection and face protection. |
| Response: | IF ON SKIN: Wash with soap and water. IF INHALED: Remove person to fresh air and keep |
|  | comfortable for breathing. |
|  | IF IN EYES: Rinse with water for several minutes. Remove contact lenses, if present |
|  | and easy to remove. Continue rinsing. If eye iritation persists: Get medical attention. |
|  | In case of fire: Use foam, dry chemical or carbon dioxide to extinguish. |
| Storage: | Store in a well-ventilated place. Keep container tightly closed. <br>  <br> Keep in a cool and dry area. Store locked up. <br> Disposal: |
|  | Dispose of contents and/or container according to Federal, State/Provincial |
|  | and local governmental regulations. |

H-2, R-1
Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

| Hazardous Component(s) | CAS Number | Percentage* |
| :---: | :---: | :---: |
| Ethyl 2 -cyanoacrylate | 7085-85-0 | 98-100 |

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.


Inhalation:

Skin contact:

Eye contact:

Ingestion:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Do not pull bonded skin apart. Soak in warm soapy water. Gently peel apart using a blunt instrument. If skin is burned due to the rapid generation of heat by a large drop, seek medical attention. If lips are bonded, apply warm water to the lips and encourage wetting and pressure from saliva in mouth. Peel or roll lips apart. Do not pull lips apart with direct opposing force.

Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein and will cause a lachrymatory effect which will help to debond the adhesive. Keep eye covered until debonding is complete, usuaily within 1-3 days. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid caused abrasive damage.

Ensure breathing passages are not obstructed. The product will polymerize rapidly and bond to the mouth making it almost impossible to swallow. Saliva will separate any solidified product in several hours. Prevent the patient from swallowing any separated mass.

## Symptoms:

Notes to physician:

See Section 11.
Surgery is not necessary to separate accidentally bonded tissues. Experience has shown that bonded tissues are best treated by passive, non-surgical first aid. If rapid curing has caused thermal burns they should be treated symptomatically after adhesive is removed.

Extinguishing media:

Special firefighting procedures:
Unusual fire or explosion hazards:
Hazardous combustion products:

Water spray (fog), foam, dry chemical or carbon dioxide.
Wear a self-contained breathing apparatus with full face piece operated in pressure demand mode.
None
Trace amounts of toxic and/or irritating fumes may be released and the use of breathing apparatus is recommended.

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:
Clean-up methods:

Ventilate area. Do not allow product to enter sewer or waterways.
Do not use cloths for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured material can be disposed of as non-hazardous waste. Refer to Section 8 "Exposure Controis / Personal Protection" prior to clean up.

Handling:

Storage:

Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist.
Wash thoroughly after handling. Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors, and cause thermal bums.

For safe storage, store between $0^{\circ} \mathrm{C}\left(32^{\circ} \mathrm{F}\right)$ and $10^{\circ} \mathrm{C}\left(50^{\circ}\right)$. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life contact BSI Customer Service at (800) 223-7699

## 8. EXPOSURE CONTROLS / 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 Component(s) | ACGIH TLV | OSHA PEL | AJHA WEEL | OTHER |
| :---: | :---: | :---: | :---: | :---: |
| Ethyl 2-cyanoacrylate | 0.2 ppm WA | None | None | None |
| Engineering controls: | Use positive down-draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits. |  |  |  |
| Respiratory protection: | Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Organic vapor cartridges are recommended. |  |  |  |
| Eye/face protection: | Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. |  |  |  |
| Skin protection: | Use nitrile gloves and aprons as necessary to prevent contact. Do not use PVC, nyton or cotton. |  |  |  |

Physical state:
Color:
Odor:
Odor threshold:
pH:
Vapor pressure:
Boiling point/range:
Meiting point/ range:
Specific gravity:
Vapor density:
Flash point:
Flammable/Explosive limits - lower:
Flammable/Explosive limits - upper:
Auto-ignition temperature:
Evaporation rate:
Solubility in water:
Partition coefficient (n-octanol/water):
VOC content:
Viscosity:
Decomposition temperature:

Liquid
Colorless, Transparent
Sharp, Irritating
1-2 ppm
Not applicable
$<0.2 \mathrm{~mm} \mathrm{hg}$
$>149^{\circ} \mathrm{C}\left(>300.2^{\circ} \mathrm{F}\right)$
Not determined
1.05

Approximately 3
$80-93^{\circ} \mathrm{C}\left(176^{\circ} \mathrm{F}-199.4^{\circ} \mathrm{F}\right)$ Tagliabue closed cup
Not determined
Not determined
$485^{\circ} \mathrm{C}\left(905^{\circ} \mathrm{F}\right)$
Not applicable
Polymerizes in presence of water.
Not applicable
$<2 \%$; $20 \mathrm{~g} / \mathrm{l}$ (California SCAQMD Method 316B) (Estimated)
1-3 cps.
Not available.


The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.


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

### 5.2. 15. REGULATORYINFORMATION

## United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act
TSCA 12 (b) Export Notification:
CERCLASARA Section 302 EHS:
CERCLASARA Section $311 / 312$ :
CERCLASARA Section 313 :
Inventory.
None above reporting de minimis.

None above reporting de minis Immediate Health, Delayed Health, Fire, Reactive
None above reporting de minimis.
California Proposition 65:
No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information
CEPA DSL/NDSL Status: Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.

## 人2

REACH \& RoHS2.0 Compliant

DISCLAMER: The data contained herein are furnished for information only and are believed to be reliable. However, BSI does not assume responsibility for any results obtained by persons over whose methods BSI has no control. It is the user's responsibility to determine the suitability of BSI's products 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 BSI's products. In light of the foregoing, BSI specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of BSI's products. BSI further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

INTRODUCTION TO TOXICOLOGY KIT \# 10-530
Kemtec (AKA - AQUAPHOENIX)

Introduction to Toxicology simulates drug isolation in an authentic forensic screening. Using diatomaceous earth columns, students isolate drugs from simulated urine. They elute the drugs, run them on fluorescent and non-fluorescent chromatographic gels, and use chemical visualization techniques to identify specific drugs. The lab may be done in four standard lab periods or two three-hour lab periods and is easily separated into drug isolation and chromatography sections.

Chemicals Included:

- Chloroplatinic Acid
- Diphenylcarbozone
- Silica Gels
- Fluorescent Silica Gels
- Ammonium Hydroxide
- Acetone
- Ninhydrin
- Ethyl Acetate
- Methanol
- Acidified Methanol
- Potassium lodide
- Simulated Urine


## Flinn Scientific, Inc. Safety Data Sheet (SDS)

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

## lodine

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300
SECTION 2 - HAZARDS IDENTIFICATION
Hazard class: Acute toxicity, dermal and inhalation (Category 4). Harmful if inhaled or in contact with skin
(H312+H332).
Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin bums and cye damage (H314).

SECTION 3 - COMPOSITION, INFORMATION ON INGREDIENTS

| Component Name | CAS Number | Formula | Formula <br> Weight | Concentration |
| :--- | :---: | :---: | :---: | :---: |
| Iodine | $7553-56-2$ |  | $\mathbf{I}_{2}$ | 253.81 |
|  |  |  |  |  |

## SECTION 4 - FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).
If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). If on skin: Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Wash contaminated clothing before reuse (P363).
If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

## 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. Sweep 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. Sublimes. Store in a Flinn Chem-Saf ${ }^{\text {TM }}$ bag. Store in a cool, dry place. Frequently oxidizes metal shelves or metal containers in proximity to the iodine. Use only in a hood or well-ventilated area ( P 271 ). Do not breathe dust or fumes ( P 260 ).

## SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).
Exposure guidelines: Ceiling 0.1 ppm (OSHA); TLV 0.01 ppm (inhalable fraction and vapor) (ACGIH)

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Gray-black flakes with a metallic luster. Characteristic odor. Boiling point: $185.24^{\circ} \mathrm{C}$
Soluble: Alcohol and other organic solvents. Insoluble in water. Melting point: $113.5^{\circ} \mathrm{C}$
Specific gravity: 4.98

## SECTION 10 - STABILITY AND REACTIVITY

Avoid contact with magnesium, zinc, ammonia, and aluminum. Corrodes steel. Reacts violently with acetaldehyde.
Shelf life: Fair, sublimes. See Section 7 for further information.

## SECTION 11 - TOXICOLOGICAL INFORMATION

Acute effects: Highly toxic, harmful vapor, corrosive, severe lachrymator, sensitizer, stomach pains, vomiting.
Chronic effects: Dermatitis.
Target organs: Thyroid.

ORL-HUM LD $_{50}: 28 \mathrm{mg} / \mathrm{kg}$
IHL-RAT LC ${ }_{50}$ : N.A.
SKN-RBT LD ${ }_{50}$ : N.A.
N.A. = Not available, not all health aspects of this substance have been fully investigated.

## SECTION 12 - ECOLOGICAL INFORMATION

Data not yet available.

## SECTION 13 - DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method \#12a is one option.

## SECTION 14 - TRANSPORT INFORMATION

Shipping name: Iodine. UN number: UN3495 Hazard class: 8L
N/A = Not applicable

## SECTION 15 - REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-442-4), 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 shail 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 OTH 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 FIinn Science Catalog/Reference Manual for additional information about laboratory chemicals.
Revision Date: March 25, 2014

## CHEMTREC 24 Hour Emergency <br> Phone Number (800) 424-9300

For laboratory use only.


S100 West Hencietta Rd PO Box 92912 Rachester, NY 14692-9012 Tef: t 800 ) $962-2660$

| Product | IODINE |
| :--- | :--- |
| Synonyms | N/A |

## 

Signal word: WARNING
Pictograms: GHS07/GHS09
Target organs: Skin, Eyes, Respiratory system. Central nervous system,
Cardiovascular system


GHS Classification:
Acute toxicity, dermal (Category 4)
Acute toxicity, inhalation (Category 4)
Aquatic Acute (Category 1)
GHS Label information: Hazard statement(s):
H312: Harmful in contact with skin.
H332: Harmful if inhaled.
H400: Very toxic to aquatic life.

Precautionary statement(s):
P261: Avoid breathing mist/vapours/spray
P271: Use only outdoors or in a well-ventilated area.
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.
P312: Call a POISON CENTER or doctor if you feel unwell.
P362+P364: Take off contaminated clothing and wash it before reuse.
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.
P391: Collect spillage.
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.


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: 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.

## 

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. Sublimes at ordinary temperatures yielding toxic iodine fumes.

## 

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8 . Provide adequate ventilation.
Envlronmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.
Containment and Cleanup: Recover for use 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 handiling. Remove and wash clothing before reuse.
Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Light sensitive. Protect from light and moisture.


Engineoring 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 airborme 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 NIOSHIMSHAapproved respirator.


Appearance: Blue-black crystals with a metalic luster. Odor: Characteristic odor.
Odor threshold: Data not available pH: Data not available
Melting / Freezing point: $113.5^{\circ} \mathrm{C}\left(235^{\circ} \mathrm{F}\right)$
Boiling point: $184^{\circ} \mathrm{C}\left(363^{\circ} \mathrm{F}\right)$
Flash point: Not flammable

Evaporation rate $(=1)$ : Data not available Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Data not available Vapor pressure ( $\mathbf{m m ~ H g}$ ): 0.3 mm Vapor density (Air = 1): $1.003 @ 37^{\circ} \mathrm{C}$ Relative density (Speclfic gravity): 4.93 Solubility(ies): $0.03 \mathrm{~g} / 100 \mathrm{ml}$ water @ $20^{\circ} \mathrm{C}$

Partition coefficient: ( $n$-octanol / water): 2.49
Auto-ignition temperature: Data not available
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: $I_{2}$
Molecular weight: 253.80

Conditions to avoid: Stable under recommended storage conditions. Excessive temperatures and heat. Protect from light and moisture.
Incompatible materials: Metals or unsaturated organic compounds, ammonia solutions or alkaline solutions of ammonia salts. Will form explosive nitrogen iodides when reacted with gaseous ammonia.
Hazardous decomposition products: Toxic iodide fumes.


Acute toxicity: Oral-Rat LD50: $14,000 \mathrm{mg} / \mathrm{kg}$
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
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to $0.1 \%$ is identified as a known or anticipated carcinogen by NTP.
IARC: 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: The substance is severely irritating to the respiratory tract. Symptoms include cough, wheezing, and labored breathing. Symptoms may be delayed.
Ingestion: Causes abdominal pain, diarrhea, nausea, and vomiting. Ingestion of levels of 2-3 grams may cause death.
Skin: The substance is irritating to the skin. Contact may cause redness and pain. Repeated or prolonged contact may cause skin sensitization in rate cases.
Eyes: Lachrymator. The substance is severely irritating to the eyes. Contact causes watering of the eyes, redness and pain.
Signs and symptoms of exposure: The substance may have effects on the thyroid. Exercise appropriate procedures to minimize potential hazards.
Additional information: RTECS \#: NN1575000


Toxicity to fish: Very toxic to aquatic life.
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 PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
 regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.


## UN/NA number: UN3495 Shipping name: lodine <br> Exceptions: Limited quantity equal to or less than 5 Kg

Hazard class: 8,(6.1) Packing group: III Reportable Quantity: No Marine pollutant: No
2012 ERG Guide \# 154


## Section 1

## Product Description

Product Name:
Recommended Use:
Distributor:

```
Iodine Potassium Iodide Solution, 0.08%
Science education applications
Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
800-227-1150 (8am-5pm (ET) M-F)
800-424-9300 (Transportation Spill Response }24\mathrm{ hours)
```

Chemical Information:
Chemtrec:

## Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;
Not a dangerous substance according to GHS classification criteria. No known OSHA hazards.
GHS Classification:
Other Safety Precautions: May cause eye irritation.
May cause gastrointestinal discomfort.
May cause irritation to respiratory tract.
May cause irritation to skin.

## Section 3 Composition / Information on Ingredients

| Chemical Name | CAS\# | \% |
| :--- | :--- | :--- |
| Water | $7732-18-5$ | 99.88 |
| Potassium lodide | $7681-11-0$ | 0.08 |
| lodine | $7553-56-2$ | 0.04 |

## Section 4 <br> 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 <br> Firefighting Procedures

Extinguishing Media:
Fire Fighting Methods and Protection:
Fire and/or Explosion Hazards:
Hazardous Combustion Products:

Use media suitable to extinguish surrounding fire.
Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire or excessive heat may produce hazardous decomposition products. Toxic fumes.

## Section 6

## Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled:

Ventilate the contaminated area.
Isolate area. Keep unnecessary personnel away.
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. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container Do not flush to sewer. Do not flush spill to drain.

## Safety Data Sheet

## Section 7

## Handling and Storage

| Handling: | Avoid creating and inhaling spray or mist. |
| :--- | :--- |
| Storage: | Suitable for any general chemical storage. <br> Store in a cool dry place |
| Storage Code: | Keep out of the reach of children. <br> Green - general chemical storage |

## Section $8 \quad$ Protection Information

|  | ACGIH |  | OSHA PEL |  |
| :---: | :---: | :---: | :---: | :---: |
| Chemical Name | (TWA) | (STEL) | (TWA) | (STEL) |
| Potassium lodide | 0.01 ppm TWA (inhalable fraction and vapor) | N/A | N/A | N/A |
| lodine | 0.01 ppm TWA (inhalable fraction and vapor) | 0.1 ppm STEL (aerosol and vapor) | 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 equipment dependin and replace at regula other exposed areas work. | earing chemically res pon conditions of use tervals. Clean protec mild soap and wate | oves, an gloves ipment eating | her protective break-through hands and when leaving |
| Gloves: | No information availa |  |  |  |

## Section 9

## Physical Data

Formula: This product is a mixture.
Molecular Weight:
Appearance: Colorless to pale amber Liquid
Odor: Mild Characteristic
Odor Threshold: No data available
pH: No data available
Melting Point: Estimated 0 C
Boiling Point: 100 C
Flash Point: No data available
Flammable Limits in Air: No data available

Vapor Pressure: 14 (water)
Evaporation Rate (BuAc=1): <1
Vapor Density (Air=1): 0.7 (water)
Specific Gravity: No data available
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: No data available

## Section 10

## Reactivity Data

Reactivity:
Chemical Stability:
Conditions to Avoid:
Incompatible Materials:
Hazardous Decomposition Products:
Hazardous Polymerization:

No data available
Stable under normal conditions.
None known.
Water-reactive materials, Ammonium Salts, Ammonia, Metals
Toxic fumes.
Will not occur

| Symptoms (Acute): | No data available |
| :--- | :--- |
| Delayed Effects: | No data available |



## Section 12

## Ecological Data

| Overview: | This material is not expected to be harmful to the ecology. |
| :--- | :--- |
| Mobility: | No data |
| Persistence: | Dissolved into water, Adsorbs to sediment, evaporates into atmosphere. |
| Bioaccumulation: | No data |
| Degradability: | No data |
| Other Adverse Effects: | No data |
|  | Combines with organics, forming new compounds. |


| Chemical Name | CAS Number | Eco Toxicity |
| :--- | :--- | :--- |
| Water | $7732-18-5$ | No data available |
| Potassium lodide | $7681-11-0$ |  |
| lodine | $7553-56-2$ | No data available |

## Section 13 Disposal Information

Disposal Methods:
Waste Disposal Code(s):

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

## Section 14

## Transport Information

Ground - DOT Proper Shipping Name: Not regulated for transport by US DOT.

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 <br> Number | $\S 313$ Name | $\S 304$ RQ | CERCLA RQ | § 302 TPQ | CAA 112(2) |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| TQ |  |  |  |  |  |  |

## Section 16 Additional Information

## Revised: 04/27/2017

Replaces: 04/27/2017
Printed: 05-05-2017
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 | National Toxicology Program |
| :--- | :--- |
| OSHA | Occupational Safety and Health Administration |
| PEL | Permissible Exposure Limit |
| ppm | Parts per million |
| RCRA | Resource Conservation and Recovery Act |
| SARA | Superfund Amendments and Reauthorization Act |
| TLV | Threshold Limit Value |
| TSCA | Toxic Substances Control Act |
| IDLH | Immediately dangerous to life and health |

## Flinn Scientific, Inc. Safety Data Sheet (SDS)

## SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION <br> Iron(III) Chloride Solution, 1M to 2.3M

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

| CHEMTREC Emergency Phonc Number: (800) 424-9300 |
| :--- | :--- |
| SECTION 2 - HAZARDS IDENTIFICATION |
| Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303). |
| Hazard class: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316). |
| Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319). |

## SECTION 3 - COMPOSITION, INFORMATION ON INGREDIENTS

| Component Name | CAS Number | Formula | Forrula <br> Weight | Concentration |
| :--- | :---: | :---: | :---: | :---: |
| Iron(III) chloride | $10025-77-1$ | $\mathrm{FeCl}_{3} \cdot 6 \mathrm{H}_{2} \mathrm{O}$ | 270.32 | $25-60 \%$ |
| Water | $7732-18-5$ | $\mathrm{H}_{2} \mathrm{O}$ | 18.00 | $40-75 \%$ |
|  |  |  |  |  |

## 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 ( $\mathrm{P} 305+\mathrm{P} 351+\mathrm{P} 338$ ). If eye irritation persists: Get medical advice or attention (P337+P313). If skin irritation occurs: Get medical advice or attention (P332 + P313). Immediately flush with fresh water for at least 15 minutes. If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

## SECTION 5-FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.

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.

Flinn Scientific, Inc.
SDS \#: 339.00
Revision Date: March 25, 2014

## 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).
Exposure guidelines: (as iron chloride) TLV $1 \mathrm{mg} / \mathrm{m}^{3}$ (ACGIH)

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Brown or amber liquid. Odorless. $\mathrm{pH}: \sim 1$

## SECTION 10 - STABILITY AND REACTIVITY

Shelf life: Good, if stored properly.

## SECTION 11 - TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD ${ }_{50}: 1278 \mathrm{mg} / \mathrm{kg}$ as iron(III) chloride.
IHL-RAT LC ${ }_{50}$ : N.A.
SKN-RBT LD $5_{50}$ : 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

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Consult your copy of the F/inn Science Catalog/Reference Manual for additional information about laboratory chemicals.
Revision Date: March 25, 2014

## Flinn Scientific, Inc. Safety Data Sheet (SDS)

## SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

## Iron(III) Nitrate

Flimn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

| CHEMTREC Emergency Phone Number: (800) 424-9300 |
| :--- |
| SECTION 2 - HAZARDS IDENTIFICATION |
| Hazard class: Oxidizing solids (Category 3). May intensify fire; oxidizer (H272). Keep away from heat, sparks, |
| open flames, and hot surfaces. No smoking (P210). |
| Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious <br> cyc irritation (H315+H319). |


| SECTION 3 - COMPOSITION, INFORMATION ON INGREDIENTS |
| :--- |
| Component Name |
| Iron(III) nitrate nonahydrate |
|  |
| SyAS Number |
| Synonym: Ferric nitrate |

## SECTION 4 - FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing. If on skin: Wash with plenty of water (P302+P352). If skin irritation occurs: Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

## SECTION 5 - FIRE FIGHTING MEASURES

Nonflammable solid. Strong oxidizer, contact with combustible material may cause fire.
When heated to decomposition, may emit toxic fumes.
NFPA Code
None
In case of fire: Use a tri-class dry chemical fire extinguisher.
established

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

## Flinn Scientific, Inc.

## SECTION 7 - HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic \#3. Store with amides, nitrates, nitrites and azides.
Deliquescent. Store in a cool, dry place within a Flinn Chem-Saf ${ }^{\text {TM }}$ bag. Keep and store away from clothing and combustible materials ( P 220 ). Take any precautions to avoid mixing with combustibles ( P 221 ).

## SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling (P264).
Exposure guidelines: TLV $1 \mathrm{mg} / \mathrm{m}^{3}$ (ACGIH)

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Pale violet crystals. Odorless.
Soluble: Water and alcohol.

Melting point: $47.2^{\circ} \mathrm{C}$
Specific gravity: 1.7

## SECTION 10 - STABILITY AND REACTIVITY

Avoid contact with combustible materials.
Shelf life: Fair to poor, deliquescent. See Section 7 for further information.

## SECTION 11 - TOXICOLOGICAL INFORMATION

| Acute effects: Irritant. | ORL-RAT LD $_{50}: 3250 \mathrm{mg} / \mathrm{kg}$ |
| :--- | :--- |
| 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

Plcase review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method \#26b is one option.

## SECTION 14 - TRANSPORT INFORMATION

Shipping name: Ferric nitrate. Hazard class: 5.1, Oxidizer. UN number: UN1466.
N/A = Not applicable

## SECTION 15 - REGULATORY INFORMATION

TSCA-listed, EINECS-listed (233-899-5), RCRA code D001.

## SECTION 16 - OTHER INFORMATION

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Revision Date: March 21, 2014
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Page 2 of 2

## Flinn Scientific, Inc. <br> Safety Data Sheet (SDS)

# SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION Iron(III) Nitrate Solution 

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300
SECTION 2 - HAZARDS IDENTIFICATION
Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314). Do
not breathe mist, vapors or spray (P260). not breathe mist, vapors or spray (P260).

## Flinn Scientific, Inc.

## SECTION 7 - HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic \#3. Store with amides, nitrates, nitrites and azides.

## SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: (as iron nitrate) TLV $1 \mathrm{mg} / \mathrm{m}^{3}$ (ACGIH)

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Brown-yellow liquid. Odorless.

## SECTION 10 - STABILITY AND REACTIVITY

Avoid contact with oxidizers and organic material.
Shelf life: Good, if stored properly.

## SECTION 11 - TOXICOLOGICAL INFORMATION

Acute effects: Corrosive, irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD $_{50}: 3250 \mathrm{mg} / \mathrm{kg}$ as iron(III) nitrate
IHL-RAT LC $_{50}$ : N.A.
SKN-RBT LD $_{56}$ : 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 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
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WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).
Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.
Revision Date: March 25, 2014

## Safety Data Sheet

## Iron Filings

# CAROLINA <br> www.carolina.com 

## Section 1

## Product Description

| Product Name: | Iron Filings |
| :--- | :--- |
| Recommended Use: | Science education applications |
| Synonyms: | N/A |
| 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 <br> Hazard Identification

Classification of the chemical in accordance with paragraph (d) of $\$ 1910.1200$;
Harmful to aquatic life.
GHS Classification:
Hazardous to the aquatic environment - Acute Category 3

| Acute Toxicity Dermal Contains | 100\% of the mixture consists of ingredient(s) of unknown toxicity |
| :---: | :---: |
| Acute Toxicity Inhalation Gas | 100\% of the mixture consists of ingredient(s) of unknown toxicity |
| Contains |  |
| Acute Toxicity Inhalation Vapor | $100 \%$ of the mixture consists of ingredient(s) of unknown toxicity |
| Contains |  |
| Acute Toxicity Inhalation Dust/Mist | $100 \%$ of the mixture consists of ingredient(s) of unknown toxicity |
| Contains |  |

Section 3 Composition / Information on Ingredients

| Chemical Name | CAS \# | $\frac{\%}{100}$ |
| :--- | :--- | :--- |
| Iron Filings | $7439-89-6$ |  |

## 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:
Fire Fighting Methods and Protection:
Fire and/or Explosion Hazards:
Hazardous Combustion Products:

Use dry chemical or cover with dry sand or lime.
Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Avoid Dusting. May become explosive when dispersed in air.
Carbon dioxide, Carbon monoxide

## Section 6

Steps to Take in Case Material Is Released or Spilled:

## Spill or Leak Procedures

No adverse health affects expected from the clean-up of spilled material.
No special spill clean-up considerations. Collect and discard in regular trash.

## Safety Data Sheet

| Handling: | Avoid release to the environment. Keep container tightly closed in a cool, well-ventilated place. Keep away from <br> heat. Keep away from sources of ignition - No smoking. |
| :--- | :--- |
| Storage: | Keep container tightly closed in a cool, well-ventilated place. |
| Storage Code: | Green - general chemical storage |

## Section 8

## Protection Information

|  | ACGIH | OSHA PEL |  |
| :---: | :---: | :---: | :---: |
| Chemical Name | (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 show |  |  |
| Respiratory Protection: | No respiratory protection required under | itions of |  |
| Eye Protection: | Wear chemical splash goggles when h available. | oduct. H | sh station |
| Skin Protection: | Avoid skin contact by wearing chemically equipment depending upon conditions and replace at regular intervals. Clean other exposed areas with mild soap and work. | oves, an gloves ipment eating | her protective break-through hands and when leaving |
| Gloves: | Natural latex, Natural rubber, Neopren | vinyl ch |  |

## Section 9

## Physical Data

Formula: Fe
Molecular Weight: 55.85
Appearance: Solid
Odor: No data avallable
Odor Threshold: No data available
pH : No data available
Melting Point: 1539 C
Boiling Point: No data available 2735 C
Flash Point: No data available
Flammable Limits in Air: N/A

Vapor Pressure: 0.000001 hPa at $25^{\circ} \mathrm{C}$
Evaporation Rate (BuAc=1): N/A
Vapor Density (Air=1): N/A
Specific Gravity: 7.87
Solubility in Water: Practically Insoluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: 0\%

## Section 10

## Reactivity Data

Reactivity:
Chemical Stability:
Conditions to Avoid:
Hazardous Polymerization:

No data available
Stable under normal conditions.
None known.
Will not occur

## Section 11

## Toxicity Data

Routes of Entry Symptoms (Acute): Delayed Effects:

Inhalation, ingestion, eye or skin contact.
N/A
No data available

| Acute Toxicity: <br> Chemical Name <br> Iron Filings | CAS Number | Oral LD50 <br> Oral LD50 Rat | Dermal LD50 <br> Not determined | Inhalation LC50 <br> Not determined |
| :--- | :---: | :---: | :---: | :---: |
| Carcinogenicity: | C439-89-6 |  |  |  |

## 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:
Mobility:
Persistence:
Bioaccumulation:
Degradability:
Other Adverse Effects:

| Chemical Name | CAS Number | Eco Toxicity |
| :--- | :--- | :--- |
| Iron Filings | $7439-89-6$ | 96 HR LC50 MORONE SAXATILIS 13.6 MG/L [STATIC] |

## Section 13

Disposal Information

Disposal Methods:
Waste Disposal Code(s):

Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance. 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.

## Section 15

## Regulatory Information

TSCA Status:

| Chemical Name | CAS <br> Number | $\S 313$ Name | $\S 304$ RQ | CERCLA RQ | $\S 302$ TPQ | CAA 112(2) <br> TQ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No data available | $7439-89-6$ | No | No | No | No | No |

## Section 16

## Additional Information

Revised: 09/03/2014
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 | NTP | National Toxicology Program |
|  | Industrial Hygienists | OSHA | Occupational Safety and Health Administration |
| CAS | Chemical Abstract Service Number | PEL | Permissible Exposure Limit |
| CERCLA | Comprehensive Environmental Response, | ppm | Parts per million |
|  | Compensation, and Liability Act | RCRA | Resource Conservation and Recovery Act |
| DOT | U.S. Department of Transportation | SARA | Superfund Amendments and Reauthorization Act |
| IARC | International Agency for Research on Cancer | TLV | Threshold Limit Value |
| N/A | Not Available | TSCA | Toxic Substances Control Act |
|  |  | IDLH | Immediately dangerous to life and health |

- 



## CHEMTREC 24 Hour Emergency

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

| Product | IRON METAL, DEGREASED |
| :---: | :---: |
| Synonyms | Iron Aggregate / Iron Filings / Iron / Iron Metal |
| Stumay |  |

This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.

Signal word: None assigned
Pictograms: None assigned
Target organs: None known

## GHS Classification:

None assigned
GHS Label information: Hazard statement:
None assigned
Precautionary statement:
None assigned

Supplemental infortmation:
Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

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.


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: 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.

## 

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam. 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. A fire hazard in the form of a fine dust dispersed in air or by chemical reaction with strong oxidizers can be an explosion hazard, especially when heated.

## 

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8 . Provide adequate ventilation.
Environmental Precautlons: 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.

| Exposure Limits: | Chemical Name | ACGIH (TLV) | OSHA (PEL) | NIOSH (REL) |
| :---: | :---: | :---: | :---: | :---: |
|  | Particulates not otherwise specified | TWA: $15 \mathrm{mg} / \mathrm{m}^{3}$ Total dust | None established | 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/MSHAapproved respirator

| Appearance: Solid. Grey particles. (40-60 mesh) <br> Odor: No odor. <br> Odor threshold: Data not available. <br> pH : Data not available. <br> Melting / Freezing point: $1508.49^{\circ} \mathrm{C}\left(2750^{\circ} \mathrm{F}\right)$ <br> Boiling point: Data not available <br> Flash point: Data not available | Evaporation rate ( $=\mathbf{1}$ ): Data not available <br> Flammability (solid/gas): Data not available. <br> Explosion limits: Lower / Upper: Data not available <br> Vapor pressure ( $\mathbf{m m} \mathbf{~ H g}$ ): Data not available <br> Vapor density (Air = 1): Data not available <br> Relative density (Specific gravity): $6.7 \mathrm{gm} / \mathrm{cc}$ <br> Solubility(ies): Insoluble in water. | Partition coefficient: Data not available <br> Auto-ignition temperature: Data not available <br> Decomposition temperature: Data not available. <br> Viscosity: Data not available. <br> Molecular formula: Mixture <br> Molecular weight: Mixture |
| :---: | :---: | :---: |
|  |  |  |
| Chemical stability: Stable Conditions to avoid: Excessive temperatures, hea Incompatible materials: Strong oxidizers, organic Hazardous decomposition products: None know | Hazardous polymerization: Will not occur. sparks, open flame and other sources of ignition. Acids. cids, mineral acids, water. |  |

Acute toxicity: Data not available
Skin corrosion/irritation: Data not available
Serious eye damagefirritation: Data not available
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to $0.1 \%$ is identified as a known or anticipated carcinogen by NTP.
IARC: 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:
Inhatation: Inhalation may cause respiratory tract intation.
Ingestion: No hazard known.
Skin: Contact with skin causes irritation.
Eyes: Contact may cause mechanical irritation and possible scratches to surface of the eye.
Signs and symptoms of exposure: See Potential health effects above.
Additional information: RTECS \#: Data not available

| -xaytry |  |
| :---: | :---: |

Toxicity to fish: No data available
Toxicity to daphnia and other aquatic invertabrates: 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.

|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 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. |  |  |  |  |  |
|  | Shipping name: Not Regulated <br> Packing group: Not applicable 2012 ERG Guide \# Not applicable |  |  | Marine pollutant: No |  |
| UN/NA number: Not applicable Hazard class: Not applicable Exceptions: Not applicable |  | Reportable Quantity: No |  |  |  |
|  |  |  |  |  |  |
| A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. |  |  |  |  |  |
| Component | TSCA CERLCA (RQ) | RCRA code | DSL | NDSL | WHMIS Classification |
| Iron aggregate | Listed Not listed | Not listed | Listed | Not listed | Not listed |

Benjamin Moore Paints
Material Safety Data Sheet

Revision Date: 21-Jan-2010
Revision Number: 1


Product Name
Product Code
Product Class
Color
Manufacturer
Benjamin Moore \& Co.
101 Paragon Drive Montvale, NJ 07645
Phone: 201-573-9600
www.benjaminmoore.com

IRONCLAD LATEX LOW LUSTRE METAL \& WOOD ENAMEL
363
WATER THINNED PAINT
All
Emergency Telephone Number(s)
CHEMTREC: 800-424-9300
Hazardous Components

| Chemical Name | CAS-No | Weight \% (max) |
| :---: | :---: | :---: |
| Titanium dioxide | $13463-67-7$ | 20 |
| Kaolin | $1332-58-7$ | 10 |
| Ethylene glycol mono-2-ethylhexyl ether | $1559-35-9$ | 5 |
| Ethylene glycol | $107-21-1$ | 5 |
| Zinc phosphate | $7779-90-0$ | 5 |
| Carbon black | $1333-86-4$ | 5 |
| Diethylene glycol monomethyl ether | $111-77-3$ | 5 |
| Sodium nitrite | $7632-00-0$ | 0.5 |

## Emergency Overview

Vapors may be irritating to eyes, nose, throat, and lungs. May cause skin irritation and/or dermatitis.
Appearance liquid

## Potential Health Effects

Principal Routes of Exposure
Eye contact, skin contact and inhalation.

## Acute Effects

Eyes
Contact with eyes may cause irritation.

Skin
Inhalation
Ingestion

May cause skin irritation and/or dermatitis. May be absorbed through the skin in harmful amounts. May cause irritation of respiratory tract. May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Contains ethylene glycol which may cause birth defects.

Repeated contact may cause allergic reactions in very susceptible persons. Can be absorbed through skin. May cause liver damage. May cause kidney damage.

Chronic Effects

## See Section 11 for additional Toxicological information.

Aggravated Medical Conditions None known
HMIS Health: 2* Flammability: 1 Reactivity: $0 \quad$ PPE: -

## HMIS Legend

0 - Minimal Hazard
1 - Slight Hazard
2 - Moderate Hazard
3 - Serious Hazard
4 - Severe Hazard

*     - Chronic Hazard

X - Consult your supervisor or S.O.P. for "Special" handling instructions.

[^0]
## General Advice

## Eye Contact

## Skin Contact

Inhalation
Ingestion

Notes To Physician

No hazards which require special first aid measures.
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Move to fresh air. If symptoms persist, call a physician.
Clean mouth with water and afterwards drink plenty of water. Consult a physician if necessary.

Treat symptomatically

## Suitable Extinguishing Media

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


The ratings assigned by Benjamin Moore \& Co. are only suggested ratings, the contractor/employer has ultimate responsibilities for NFPA ratings where this system is used.
Additional information regarding the NFPA rating system is available from the National Fire Protection Agency (NFPA) at www.nfpa.org.

## 

## Personal Precautions

## Environmental Precautions

Methods For Clean-Up

Other Information

Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
Prevent further leakage or spillage if safe to do so.
Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

None known

Handling

Storage

Avoid contact with skin, eyes and clothing. Avoid breathing vapors, spray mists or sanding dust. In case of insufficient ventilation, wear suitable respiratory equipment.

Keep container tightly closed. Keep out of the reach of children.

Exposure Limits

| Chemical Name | ACGIH | OSHA |
| :---: | :---: | :---: |
| - Titanium dioxide | $10 \mathrm{mg} / \mathrm{m}^{3}$ - TWA | $15 \mathrm{mg} / \mathrm{m}^{3}$ - TWA total |
| Kaolin | $2 \mathrm{mg} / \mathrm{m}^{3}$ - TWA | $15 \mathrm{mg} / \mathrm{m}^{3}$ - TWA total $5 \mathrm{mg} / \mathrm{m}^{3}$ - TWA |
|  | N/E | N/E |
| Ethylene glycol mono-2-ethylene glycol | $100 \mathrm{mg} / \mathrm{m}^{3}-$ Ceiling | N/E |
| Zinc phosphate | N/E | N/E |
| Carbon black | $3.5 \mathrm{mg} / \mathrm{m}^{3}-$ TWA | $3.5 \mathrm{mg} / \mathrm{m}^{3}$ - TWA |
| Diethylene glycol monomethyl ether | N/E | N/E |
| Sodium nitrite | N/E | N/E |

## Legend

ACGIH - American Conference of Governmental Industrial Hygienists Exposure Limits
OSHA - Occupational Safety \& Health Administration Exposure Limits
N/E - Not Established

## Engineering Measures

## Personal Protective Equipment

Eye/Face Protection Skin Protection Respiratory Protection

Hygiene Measures

Ensure adequate ventilation, especially in confined areas.

Safety glasses with side-shields.
Protective gloves and impervious clothing.
In case of insufficient ventilation wear suitable respiratory equipment.
Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.

| Appearance | liquid |
| :--- | :--- |
| Odor | little or no odor |
| Density (Ibs/gal) | $8.9-10.4$ |
| Specific Gravity | $1.06-1.25$ |
| pH | Not available |
| Viscosity (centistokes) | Not available |
| Evaporation Rate | Not available |
| Vapor Pressure | Not available |
| Vapor Density | Not available |
| Wt. \%Solids | $40-60$ |
| Vol. \%Solids | $30-50$ |
| Wt. \% Volatiles | $40-60$ |
| Vol. \%Volatiles | $50-70$ |
| VOC Regulatory Limit (g/L) | $<250$ |
| Boiling Point $\left({ }^{\circ} \mathrm{F}\right)$ | 212 |
| Boiling Point $\left({ }^{\circ} \mathrm{C}\right)$ | 100 |
| Freezing Point $\left({ }^{\circ} \mathrm{F}\right)$ | 32 |

## ENAMEL



Chemical Stability
Conditions To Avoid
Incompatible Materials
Hazardous Decomposition Products
Possibility Of Hazardous Reactions

Stable under normal conditions.
Prevent from freezing
No materials to be especially mentioned.
None under normal use.
None under normal conditions of use.

## Acute Toxicity

## Product

No information available

## Component

Titanium dioxide
LD50 Oral: $>24000 \mathrm{mg} / \mathrm{kg}$ (Rat)
LD50 Dermal: > $10000 \mathrm{mg} / \mathrm{m}^{3}$ (Rabbit)
LC50 Inhalation (Dust): $>6.82 \mathrm{mg} / \mathrm{L}$ (Rat, 4 hr .)
Kaolin
LD50 Oral: > $5000 \mathrm{mg} / \mathrm{kg}$ (Rat)
Ethylene glycol
LD50 Oral: $4700 \mathrm{mg} / \mathrm{kg}$ (Rat)
LD50 Dermal: $9530 \mu \mathrm{~g} / \mathrm{L}$ (Rabbit)
Carbon black
LD50 Oral: > $15400 \mathrm{mg} / \mathrm{kg}$ (Rat)
LD50 Dermal: > $3000 \mathrm{mg} / \mathrm{kg}$ (Rabbit)
Diethylene glycol monomethyl ether
LD50 Oral: $7,190 \mathrm{mg} / \mathrm{kg}$ (Rat)
LD50 Dermal: $2,500 \mu \mathrm{~L} / \mathrm{kg}$ (Rabbit)

Sodium nitrite
LD50 Oral: $180 \mathrm{mg} / \mathrm{kg}$ (Rat)
LC50 Inhalation (Dust): $5.5 \mathrm{mg} / \mathrm{m}^{3}$ (Rat, 4 hr .)

## Chronic Toxicity

Carcinogenicity
The information below indicates whether each agency has listed any ingredient as a carcinogen:

| Chemical Name | ACGIH | IARC | NTP | OSHA <br> Carcinogen |
| :--- | :---: | :---: | :---: | :---: |
| Titanium dioxide |  | 2B-Possible <br> Human <br> Carcinogen |  | Listed |
| Carbon black |  | 2B-Possible <br> Human <br> Carcinogen |  | Listed |
| Sodium nitrite | 2A - Probable <br> Human <br> Carcinogen |  |  |  |

- Although IARC has classified titanium dioxide as possibly carcinogenic to humans (2B), their summary concludes: "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as paint."


## Legend

ACGIH - American Conference of Governmental Industrial Hygienists IARC - International Agency for Research on Cancer NTP - National Toxicity Program OSHA - Occupational Safety \& Health Administration

## Ecotoxicity Effects

## Product

Acute Toxicity to Fish
No information available

## Acute Toxicity to Aquatic Invertebrates

No information available

Acute Toxicity to Aquatic Plants
No information available

Component
Acute Toxicity to Fish

## ENAMEL



Titanium dioxide
LC50: $>1000 \mathrm{mg} / \mathrm{L}$ (Fathead Minnow - 96 hr .)
Ethylene glycol
LC50: $8050 \mathrm{mg} / \mathrm{L}$ (Fathead Minnow - 96 hr .)

Acute Toxicity to Aquatic Invertebrates
No information available

## Acute Toxicity to Aquatic Plants

## No information available

Waste Disposal Method | Dispose of in accordance with federal, state, and local regulations. Dry, empty |
| :--- |
| containers may be recycled in a can recycling program. Local requirements may |
| vary, consult your sanitation department or state-designated environmental |
| protection agency for more disposal options. |

DOT
Not regulated
IMDG / IMO
Not regulated
Not regulated

## International Inventories

## United States TSCA <br> Canada DSL

Yes - All components are listed or exempt.
No - Not all of the components are listed.

## Federal Regulations

SARA 311/312 hazardous categorization
Acute Health Hazard Yes
Chronic Health Hazard Yes
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No

## 363 - IRONCLAD LATEX LOW LUSTRE METAL \& WOOD ENAMEL

Revision Date: 21-Jan-2010

## SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

| Chemical Name | CAS-No | Weight \% (max) |
| :--- | :--- | :--- |
| Ethylene glycol | $\frac{107-21-1}{5}$ |  |
| Sodium nitrite | $7632-00-0$ | 0.5 |

This product may contain trace amounts of (other) SARA reportable chemicals. Contact Benjamin Moore \& Co. for further information.

## Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

| Chemical Name | CAS-No | Weight \% (max) |
| :--- | :--- | :--- |
| Ethylene glycol | $\frac{5}{107-21-1}$ | 5 |

This product may contain trace amounts of (other) HAPs chemicals. Contact Benjamin Moore \& Co. for further information.

## State Regulations

## California Proposition 65

This product may contain small amounts of materials known to the state of California to cause cancer or reproductive harm.

## State Right-to-Know

| Chemical Name | Massachusetts | New Jersey | Pennsylvania | Louisiana | Rhode Island |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Titanium dioxide | $X$ | $X$ | $X$ |  | $X$ |
| Kaolin | $X$ | $X$ | $X$ |  | $X$ |
| Ethylene glycol | $X$ | $X$ | $X$ |  | $X$ |
| Carbon black | $X$ | $X$ | $X$ |  | $X$ |
| Diethylene glycol monomethyl <br> ether | $X$ |  | $X$ |  |  |
| Sodium nitrite | $X$ | $X$ | $X$ |  |  |

## Legend <br> $X$-Listed

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

| Prepared By | Product Stewardship Department <br>  <br>  <br>  <br>  <br>  <br>  <br>  <br>  <br> Flanjamin Moore \& Co. |
| :--- | :--- |
|  | $866-690-1961$ |
|  |  |
| Revision Date: 06 -P.O. Box 4000 |  |
| Revision Summary | 21-Jan-2010 |
|  | Not available |

## Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, provincial, and local laws and regulations.

End of MSDS



## CHEMTREC 24 Hour Emergency

Phone Number (800) 424-9300
For laboratory use only.
Not for drug, food or househoid use.

| Product | ISOPROPYL ALCOHOL |
| :--- | :--- |
| Synonyms | 2-Propanol ; isopropanol |


Signal word: DANGER
Pictograms: GHS02 / GHS07
Target organs: Central nervous system, Liver, Kidneys.


GHS Classification:
Flammable liquid (Category 2)
Eye irritation (Category 2)
STOT-SE (Category 3)
GHS Label information: Hazard statement(s):
H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.

## Precautionary statement(s):

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.
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.
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.
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.
$\mathrm{P} 370+\mathrm{P} 378$ : In case of fire: Use dry chemical, $\mathrm{CO}_{2}$, water spray or alcohol-resistant foam 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.


INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel.
Never give anything by mouth to an unconscious person.
INHALATION: MAY BE HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration, If breathing is
difficult, give oxygen. Get medical attention.
EYE CONTACT: CAUSES 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: 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.

## 

Suitable Extinguishing Media: Dry chemical, $\mathrm{CO}_{2}$, water spray or alcohol-resistant foam.
Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved setf-contained breathing apparatus and full protective gear. Use water spray to keep
Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

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
 contact with eyes, skin and clothing. Do not inhale vapors, spray or mist Use with adentact lenses when working with chemicals. Keep out of reach of children. Avoid 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*{ Exposure Limits: <br> …............ <br> Chemical Name

Isopropanol $\quad$ ACGIH (TLV) $\quad$ TWA: 200 ppm / STEL: 400 ppm <br> 

Engineering controls: Facilities storing or utilizing this materiai should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel hould 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/MSHAapproved respirator.
Sontonst

Appearance: Clear, colorless liquid.
Odor: Aromatic odor
Odor threshold: Data not available.
pH : Data not available.
Melting / Freezing point: $-90^{\circ} \mathrm{C}\left(-130^{\circ} \mathrm{F}\right)$
Boiling point: $82^{\circ} \mathrm{C}\left(179.6^{\circ} \mathrm{F}\right)$
Flash point: $12^{\circ} \mathrm{C}\left(53^{\circ} \mathrm{F}\right) \mathrm{CC}$

Evaporation rate (Butyl acetate $=1$ ): 2.3 Flammability (solid/gas): Data not available Explosion limits: Lower / Upper: 2\%/12\% Vapor pressure ( mm Hg ): $33 \mathrm{~mm} @ 20^{\circ} \mathrm{C}$ Vapor density ( Alr =1): 2.1
Relative density (Specific gravity): 0.786-0.79@ $20^{\circ} \mathrm{C}$ Solubility(ies): Complete in water.

## 

## Chemical stability: Stabie

## Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.
Incompatible materials: Strong oxidizing materials, caustics, aluminums, metals, nitroform, oleum, chlorinated compounds can react vigorously with this alcohol.
Hazardous decomposition products: Carbon oxides

## Squgit

Acute toxicity: Oral-rat LD50: $4396 \mathrm{mg} / \mathrm{kg}$; Inhalation-rat LC50: $72.6 \mathrm{mg} / \mathrm{L} / 4$ hours ; Dermal-rat LD50: $12,800 \mathrm{mg} / \mathrm{kg}$
Skin corrosionfirritation: Skin-rabbit - Slight irritant
Serious eye damage/irritation: Eyes-rabbit - Irritating
Respiratory or skin sensitization: Not sensitizing
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to $0.1 \%$ is identified as a known or anticipated carcinogen by NTP
ARC classified: Group 3: Not classifiable as to its carcinogenicity to humans
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: Yes
Potential health effects:
Inhalation: Inhalation of high vapor concentrations may cause central nervous system depression resulting in dizziness, drowsiness, nausea, vomiting, inability to concentrate and irritation of the throat. Continued inhalation may result in unconsciousness and death.
ingestion: Aspiration hazard. Liquid can directly enter the lungs (aspirated) when swallowed or vomited. Serious lung damage and possible fatal chemical pneumonia can develop if this occurs.
Skin: Prolonged or repeated contact may cause irritation and drying, cracking and defatting of the skin which can lead to dermatitis.
Eyes: Contact causes burning sensation, redness, swelling, and/or blurred vision.
Signs and symptoms of exposure: See Potential health effects above
Additional information: RTECS \#: NT8050000 [Isopropanol]
-spinvand
Toxicity to fish: Pimephales promelas (Fish, fresh water) LC50: $9640 \mathrm{mg} / \mathrm{L} / 96$ hours [isopropanol]
Toxicity to daphnia and other aquatlc invertebrates: Artemia salina (Crustacea), EC50 $=>10,000 \mathrm{mg} / \mathrm{L} / 24$ hours [Isopropanol]
Toxicity to algae: Scenedesmus quadricauda (Algae), LOEC50 $=1,800 \mathrm{mg} / \mathrm{L} / 7$ days [lsopropanol]
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.

| These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container |  |  |
| :---: | :---: | :---: |
|  |  |  |
| S |  |  |
| UN/NA number: UN1219 Shipping name: Isopropanol |  |  |
| Hazard class: 3 Packing group: II |  |  |
| Exceptions: Limited quantity equal to or less than 1 L | ERG Guide \# 129 | Marine pollutant: No |


| Component | TSCA | CERLCA (RQ) | RCRA code | DSL | NDSL | WHMIS Classification |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Isopropyl alcohol |  |  |  |  |  |  |
| a | Listed | Not listed | Not listed | Listed | Not listed | B2; D2B |

## Flinn Scientific, Inc. Safety Data Sheet (SDS)

## SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

## Isopropyl Alcohol

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300
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: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316).
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).
The single lethal dose for a human adult is about 250 mL , although as little as 100 mL can be fatal. Although
isopropyl alcohol is slightly toxic by definition, teachers should be alert to students attempting to drink this
"alcohol" on a dare.

SECTION 3 - COMPOSITION, INFORMATION ON INGREDIENTS

| Component Name | CAS Number | Formula | Formula <br> Weight | Concentration |
| :--- | :---: | :---: | :---: | :---: |
| Isopropyl alcohol | $67-63-0$ | $\mathrm{C}_{3} \mathrm{H}_{8} \mathrm{O}$ | 60.10 |  |
| Synonyms: 2-Propanol, Rubbing alcohol |  |  |  |  |

## 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 ( $\mathrm{P} 305+\mathrm{P} 351+\mathrm{P} 338$ ). If eye irritation persists: Get medical advice or attention (P337+P313).
If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). If skin irritation occurs: Get medical advice or attention (P332+P313).

## SECTION 5 - FIRE FIGHTING MEASURES

Class IB flammable liquid. NFPA Code
Flash point: $12{ }^{\circ} \mathrm{C}$ Flammable limits: Lower: $2.0 \%$ Upper: $12.7 \%$ Autoignition Temperature: $399^{\circ} \mathrm{C}$
H-1
When heated to decomposition, may emit toxic fumes.
F-3
In case of fire: Use a tri-class dry chemical fire extinguisher ( $\mathrm{P} 370+\mathrm{P} 378$ ).
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.

Flinn Scientific, Inc.

## SECTION 7 - HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic \#2. Store with alcohols, glycols, amines and amides.
Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor ${ }^{\mathrm{TM}}$ can.
Keep container tightly closed ( P 233 ). Keep cool (P235). Use only in a hood or well-ventilated area ( P 271 ). Avoid prolonged storage (see Section 10).

## SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).
Exposure guidelines: PEL $980 \mathrm{mg} / \mathrm{m}^{3}$ (OSHA); TLV $492 \mathrm{mg} / \mathrm{m}^{3}$ Ceiling $984 \mathrm{mg} / \mathrm{m}^{3}$ (ACGIH)

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Distinctive odor like rubbing alcohol.
Soluble: Water, alcohol, and ether

Boiling point: $83^{\circ} \mathrm{C}$
Melting point: $-889^{\circ} \mathrm{C}$
Specific gravity: 0.8

## SECTION 10 - STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, acetaldehyde, chlorine, ethylene oxide, acids, and isocyanates.
Shelf life: Fair. Organic peroxides may develop if exposed to light and air, which can result in explosions, especially when distilled. Avoid prolonged storage.

## SECTION 11 - TOXICOLOGICAL INFORMATION

Acute effects: Serious eye irritant, mild skin irritant, dizziness, drowsiness, nausea, headache.
Chronic effects: N.A.
Target organs: Eyes, skin, respiratory system.

ORL-RAT LD $_{50}: 5045 \mathrm{mg} / \mathrm{kg}$
IHL-RAT LC ${ }_{50}: 16,000 \mathrm{ppm} / 8 \mathrm{H}$
SKN-RBT LD $50: 12,800 \mathrm{mg} / \mathrm{kg}$
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 bcfore proceeding.
Flinn Suggested Disposal Method \#18a is one option.

## SECTION 14 - TRANSPORT INFORMATION

Shipping name: Isopropyl alcohol. Hazard class: 3, Flammable liquid. UN number: UN1219.
N/A = Not applicable

## SECTION 15 - REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-661-7), RCRA code D001.

## SECTION 16 - OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any Use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and reguiations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).
Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.
Revision Date: March 25, 2014

| Product | ISOPROPYL ALCOHOL |
| :---: | :---: |
| Synonyms | 2-Propanol ; Isopropanol |

Signal word: DANGER
Pictograms: GHS02 / GHS07
Target organs: Central nervous system, Liver, Kidneys.


GHS Classification:
Flammable liquid (Category 2)
Eye irritation (Category 2)
STOT-SE (Category 3)
GHS Label information: Hazard statement(s):
H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.

Precautionary statement(s):
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
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. P303+P361+P353: IF ON SKIN (or hair): Take off immediately ail contarninated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P312: Call a POISON CENTER or doctor if you feel unwell.
$\mathrm{P} 337+\mathrm{P} 3 \uparrow 3$ : If eye irritation persists: Get medical attention.
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 coot.
P405: Store locked up.
5501: 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.


| Chemical Name | CAS \# | \% | EINECS |
| :---: | :---: | :---: | :---: |
| Isopropyl alcohol | 67-63-0 | 100\% | 200-661-7 |

## 

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.
 difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughiy with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.
 and water. If irritation occurs, get medical attention.

Suitable Extinguishing Medla: 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.
 air and may travel aiong the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

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.

| Exposure Limits: | Chemical Name | ACGIH (TLV) | OSHA (PEL) | TWA: $400 \mathrm{Npm} / \mathrm{STESH}$ (REL) 500 ppm |
| :---: | :---: | :---: | :---: | :---: |
|  | Isopropanol | TWA: $200 \mathrm{ppm} /$ / STEL: 400 ppm | TWA: $400 \mathrm{ppm} / 980 \mathrm{mg} / \mathrm{m}^{3}$ |  |

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/MSHAapproved respirator.

## 

Appearance: Clear, colorless liquid.
Odor: Aromatic odor.
Odor threshold: Data not available.
pH : Data not avallable.
Melting / Freezing point: Approximately $-50^{\circ} \mathrm{C}\left(-58^{\circ} \mathrm{F}\right)$ Boiling point: Approximately $85-100^{\circ} \mathrm{C}\left(185-212^{\circ} \mathrm{F}\right)$
Flash point: $12^{\circ} \mathrm{C}\left(53^{\circ} \mathrm{F}\right) \mathrm{CC}$

Evaporation rate ( Butyl acetate $=1$ ): >1 Fiammability (solid/gas): Data not available. Explosion limits: Lower / Upper: $2 \%$ / $12 \%$ Vapor pressure ( $\mathbf{m m ~ H g}$ ): $33 \mathrm{~mm} @ 20^{\circ} \mathrm{C}$ Vapor density ( Air = 1): 2.1 Relative density (Specific gravity): 0.8 Solubility(ies): Complete in water.

Partition coefficient: ( $n$-octanol / water): Data not available Auto-ignition temperature: $399^{\circ} \mathrm{C}\left(750^{\circ} \mathrm{F}\right)$ ASTM-E659-78 Decomposition temperature: Data not available. Viscosity: Data not available.
Molecular formu la: Mixture
Molecular weight: Mixture

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 oxidizing materials, caustics, aluminums, metals, nitroform, oleum, chlorinated compounds can react vigorously with this alcohol.
Hazardous decomposition products: Oxides of carbon.

## Sectiond

Acute toxicity: Oral-rat LD50: $4396 \mathrm{mg} / \mathrm{kg}$; Inhalation-rat LC50: $72.6 \mathrm{mg} / \mathrm{L} / 4$ hours ; Dermal-rat LD50: $12,000 \mathrm{mg} / \mathrm{kg}$
Skin corrosion/irritation: Skin-rabbit - Slight irritant.
Serious eye damage/irritation: Eyes-rabbit - Irritating.
Respiratory or skin sensitization: Not sensitizing
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to $0.1 \%$ is identified as a known or anticipated carcinogen by NTP.
IARC classified: Group 3: Not classifiable as to its carcinogenicity to humans
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 avaitiable
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 avaitable
Aspiration hazard: Yes
Potential health effects:
Inhalation: Inhalation of high vapor concentrations may cause central nervous system depression resulting in dizziness, drowsiness, nausea, vomiting, inability to concentrate and irritation of the throat. Continued inhalation may result in unconsciousness and death.
Ingestion: Aspiration hazard. Liquid can directly enter the lungs (aspirated) when swallowed or vomited. Serious lung damage and possible fatal chemical pneumonia can develop if this occurs.
Skin: Prolonged or repeated contact may cause irritation and drying, cracking and defatting of the skin which can lead to dermatitis.
Eyes: Contact causes burning sensation, redness, swelling, and/or blurred vision.
Signs and symptoms of exposure: See Potential health effects above.
Additional information: RTECS \#: NT8050000 [Isopropanol]

## Sectont

Toxicity to fish: Pimephales promelas (Fish, fresh water) LC50: $9640 \mathrm{mg} / \mathrm{L} / 96$ hours [lsopropanol]
Toxicity to daphnia and other aquatic invertebrates: Artemia salina (Crustacea), EC50 $=>10,000 \mathrm{mg} / \mathrm{L} / 24$ hours [isopropanol])
Toxicity to algae: Scenedesmus quadricauda (Algae), LOEC50 $=1,800 \mathrm{mg} / \mathrm{L} / 7$ days [lsopropanol]
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.

##  <br> 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 iocal, state and federal regulations or contract with a licensed chemical disposal agency.Sectonty

UN/NA number: UN1219 Shipping name: Isopropanol
Hazard class: 3 Packing group: II Reportable Quantity: No
Exceptions: Limited quantity equal to or less than 1 L

ERG Guide \# 129

Marine pollutant: No

| A chemical is considered to be listed if the CAS number for the anhydrous form is on the lnventory list. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Component | TSCA | CERLCA (RQ) | RCRA code | DSL | NDSL | WHMIS Classification |
| Isopropyl alcohol | Listed | Not listed | Not listed | Listed | Not listed | 82; D28 |

[^1] ERG: Emergency Response Guidebook.

# Safety Data Sheet <br> Isopropyl Rubbing Alcohol USP 70\% 

SDS Revision Date: 02/24/2015

## 1. Identification

### 1.1. Product identifier

| Product Identity | Isopropyl Rubbing Alcohol USP 70\% |
| :--- | :--- |
| Alternate Names | Product Code: 112-7067, 112-7011, 112-7068 |

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use

Application Method
1.3. Details of the supplier of the safety data sheet

Company Name Henry Schein Inc.

Emergency
Chemtrec 24 hour Emergency Telephone No. 800-424-9300
Customer Service:

135 Duryea Road
Melville, NY 11747

800-472-4346

## 2. Hazard(s) identification

### 2.1. Classification of the substance or mixture

Flam. Liq. 3;H226 Flammable liquid and vapor.

Eye Irrit. 2;H319
STOT SE 3;H336

First aid to help prevent the risk of infection in: minor cuts, scrapes, burns. For external use only.
Clean the affected area. Apply 1 to 3 times daily.

### 2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.


Warning
H226 Flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness and dizziness.

# Safety Data Sheet <br> Isopropyl Rubbing Alcohol USP 70\% 

SDS Revision Date:

## [Prevention]:

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.
P235 Keep cool.
P240 Ground / bond container and receiving equipment.
P241 Use explosion-proof electrical / ventilating / light / equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust / fume / gas / mist / vapors / spray.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / eye protection / face protection.

## [Response]:

P303 $+361+353$ IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.
P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P337+313 If eye irritation persists: Get medical advice / attention.
P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.
[Storage]:
P403+233 Store in a well ventilated place. Keep container tightly closed.
P405 Store locked up.
[Disposal]:
P501 Dispose of contents / container in accordance with local / national regulations.

## 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

| Ingredient/Chemical Designations | Weight \% | GHS Classification | Notes |
| :---: | :---: | :---: | :---: |
| Isopropyl Alcohol | 50-75 | Flam. Liq. 2; H225 | [1][2] |
| CAS Number: 0000067-63-0 |  | Eye Irrit. 2; $\mathbf{H} 319$ STOT SE 3;H336 |  |

[^2]
# Safety Data Sheet <br> Isopropyl Rubbing Alcohol USP 70\% 

SDS Revision Date:

## 4. First aid measures

### 4.1. Description of first aid measures

| General | In all cases of doubt, or when symptoms persist, seek medical attention. <br> Never give anything by mouth to an unconscious person. |
| :--- | :--- |
| Inhalation | Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give <br> artificial respiration. If unconscious place in the recovery position and obtain immediate <br> medical attention. Give nothing by mouth. |
| Eyes | Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and <br> seek medical attention. |
| Skin | Remove contaminated clothing. Wash skin thoroughly with soap and water or use a <br> recognized skin cleanser. |
| If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. |  |

### 4.2. Most important symptoms and effects, both acute and delayed <br> Overview Signs and Symptoms of Exposure: Giddiness, headache, dizziness and nausea.

Medical Conditions Generally Aggravated by Exposure: Pre-existing and respiratory disorders, may be aggravated by exposure.

Health Hazards (Acute and Chronic): Generally used as a rubdown. Vapor irritates eyes. High concentration of vapor can irritate respiratory tract, is anesthetic and may cause CNS depression.

Not a carcinogen.
Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage. See section 2 for further details.
Inhalation May cause drowsiness or dizziness.
Eyes Causes serious eye irritation.

## 5. Fire-fighting measures

### 5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, $\mathrm{CO}_{2}$, water fog.
Do not use; water jet.

## Safety Data Sheet <br> Isopropyl Rubbing Alcohol USP 70\%

SDS Revision Date:
02/24/2015

### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Burning may produce carbon monoxide and carbon dioxide contamination.
Keep away from heat / sparks / open flames / hot surfaces - No smoking.
Avoid breathing dust / fume / gas / mist / vapors / spray.

### 5.3. Advice for fire-fighters

Dilution of burning liquid with water will affect extinguishment.
None
ERG Guide No.

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

### 6.2. Environmental precautions

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

### 6.3. Methods and material for containment and cleaning up

Eliminate all sources of ignition. Small spills should be flushed with large quantities of water, larger spills should be collected for disposal.

Atomize into an incinerator where permitted under appropriate federal, state, and local regulations.

## 7. Handling and storage

### 7.1. Precautions for safe handling

Do NOT take internally. Flammable liquid. Keep away from heat, sparks and open flames. Keep container closed. See section 2 for further details. - [Prevention]:

### 7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.
Naked flames and smoking should not be permitted in storage areas. It is recommended that fork lift trucks and electrical equipment are protected to the appropriate standard.
Incompatible materials: Anyhydride, isocyanate, monomer and organo-metallic.
See section 2 for further details. - [Storage]:

### 7.3. Specific end use(s)

No data available.

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## 8. Exposure controls and personal protection

### 8.1. Control parameters

Exposure

| CAS No. | Ingredient | Source | Value |
| :---: | :---: | :---: | :---: |
| 0000067-63-0 | Isopropyl Alcohol | OSHA | TWA $400 \mathrm{ppm}(980 \mathrm{mg} / \mathrm{m} 3)$ STEL 500 ppm |
|  |  | ACGIH | TWA: 200 ppm STEL: 400 ppm Revised 2003, |
|  |  | $\overline{\mathrm{NIOSH}}$ | TWA $400 \mathrm{ppm}(980 \mathrm{mg} / \mathrm{m} 3)$ ST 500 ppm ( $1225 \mathrm{mg} / \mathrm{m} 3$ ) |
|  |  | Supplier | No Established Limit |

## Carcinogen Data

| CAS No. | Ingredient | Source | Value |
| :---: | :---: | :---: | :---: |
| 0000067-63-0 | Isopropyl Alcohol | OSHA | Select Carcinogen: No |
|  |  | NTP | Known: No; Suspected: No |
|  |  | IARC | Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No; |

### 8.2. Exposure controls

| Respiratory | If workers are exposed to concentrations above the exposure limit they must use the <br> appropriate, certified respirators. |
| :--- | :--- |
| Eyes | Protective goggles if desired. |
| Skin | Rubber or vinyl gloves if desired. |
| Engineering Controls | Provide adequate ventilation. Where reasonably practicable this should be achieved by the <br> use of local exhaust ventilation and good general extraction. If these are not sufficient to <br> maintain concentrations of particulates and any vapor below occupational exposure limits <br> suitable respiratory protection must be worn. |

Other Work Practices Ensure showers and eyewash stations are available. Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.
See section 2 for further details. - [Prevention]:

## 9. Physical and chemical properties

```
Appearance
Odor
Odor threshold
pH
Melting point / freezing point
Initial boiling point and boiling range
Flash Point
```

Colorless Liquid
Characteristic
Not Measured
Not Measured
Not Measured
87C
77F (TCC)

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Evaporation rate (Ether $=1$ ) 2.3 (Butyl Acetate=1)
Flammability (solid, gas)
Upper/lower flammability or explosive limits
Vapor pressure (Pa)
Vapor Density
Specific Gravity
Solubility in Water
Partition coefficient n-octanol/water (Log Kow)
Auto-ignition temperature
Decomposition temperature
Viscosity (cSt) ..... Applicable
Lower Explosive Limit: 2
Upper Explosive Limit: 12
33 mmHg
2.07 (Air=1)
0.88 ( $\mathrm{H} 2 \mathrm{O}=1$ ) @ 25 C
Complete
Not Measured
Not Measured
Not Measured
Not Measured
\% Volatile ..... 100
Isopropyl Alcohol Assay by Volume ..... $68 \%-72 \%$
9.2. Other information
No other relevant information.
10. Stability and reactivity
10.1. Reactivity
Hazardous Polymerization will not occur.
10.2. Chemical stability
Stable under normal circumstances.
10.3. Possibility of hazardous reactions
No data available.
10.4. Conditions to avoid
Avoid heat, sparks and open flame.
10.5. Incompatible materials
Anyhydride, isocyanate, monomer and organo-metallic.
10.6. Hazardous decomposition products
Burning may produce carbon monoxide and carbon dioxide contamination.
11. Toxicological information

## Acute toxicity

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

| Ingredient | Oral LD50, | Skin LD50, | Inhalation | Inhalation | Inhalation |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

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|  | $\mathrm{mg} / \mathrm{kg}$ | $\mathrm{mg} / \mathrm{kg}$ | Vapor LD50, $\mathrm{mg} / \mathrm{L} / 4 \mathrm{hr}$ | Dust/Mist LD50, $\mathrm{mg} / \mathrm{L} / 4 \mathrm{hr}$ | $\begin{gathered} \text { Gas LD50, } \\ \mathrm{ppm} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Isopropyl Alcohol - (67-63-0) | 4,710.00, Rat Category: 5 | $\begin{aligned} & 12,800.00, \text { Rat - } \\ & \text { Category: NA } \end{aligned}$ | 72.60, Rat Category: NA | No data available | No data available |

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

| Classification | Category | Hazard Description |
| :--- | :--- | :--- |
| Acute toxicity (oral) | -- | Not Applicable |
| Acute toxicity (dermal) | -- | Not Applicable |
| Acute toxicity (inhalation) | -- | Not Applicable |
| Skin corrosion/irritation | -- | Not Applicable |
| Serious eye damage/irritation | 2 | Causes serious eye irritation. |
| Respiratory sensitization | --- | Not Applicable |
| Skin sensitization | -- | Not Applicable |
| Germ cell mutagenicity | --- | Not Applicable |
| Carcinogenicity | --- | Not Applicable |
| Reproductive toxicity | --- | Not Applicable |
| STOT-single exposure | 3 | May cause drowsiness or dizziness. |
| STOT-repeated exposure | --- | Not Applicable |
| Aspiration hazard | -- | Not Applicable |

## 12. Ecological information

### 12.1. Toxicity

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive

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1999/45/EC and GHS and is not classified as dangerous for the environment, but contains substance(s) dangerous for the environment. See section 3 for details
Aquatic Ecotoxicity

| Ingredient | 96 hr LC50 fish, mg/l | 48 hr EC50 crustacea, $\mathrm{mg} / \mathrm{l}$ | ErC50 algae, $\mathrm{mg} / \mathrm{I}$ |
| :---: | :---: | :---: | :---: |
| Isopropyl Alcohol - (67-63-0) | 1,400.00, Lepomis macrochirus | 100.00, Daphnia magna | 100.00 (72 hr), Scenedesmus subspicatus |

### 12.2. Persistence and degradability

There is no data available on the preparation itself.
12.3. Bioaccumulative potential

Not Measured
12.4. Mobility in soil

No data available.
12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.
12.6. Other adverse effects

No data available.

## 13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

## 14. Transport information

| DOT (Domestic Surface | IMO /IMDG (Ocean | ICAO/IATA |
| :--- | :--- | :--- |
| Transportation) | Transportation) |  |

14.1. UN number
14.2. UN proper shipping name
14.3. Transport hazard class(es)

DOT Hazard Class: DOT Label:

IMDG:
Sub Class:
14.4. Packing group
14.5. Environmental hazards

IMDG Marine Pollutant:
14.6. Special precautions for user

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## 15. Regulatory information

| Regulatory Overview | The regulatory data in Section 15 is not intended to be all-inclusive, only selected <br> regulations are represented. |
| :--- | :--- |
| Toxic Substance All components of this material are either listed or exempt from listing on the TSCA <br> Control Act ( TSCA) Inventory. <br> WHMIS Classification B2 D2B <br> US EPA Tier II Hazards Fire: Yes <br> Sudden Release of Pressure: No  <br> Reactive: No  <br> Immediate (Acute): Yes  <br> Delayed (Chronic): No  |  |

## EPCRA 311/312 Chemicals and RQs:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
EPCRA 302 Extremely Hazardous:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

## EPCRA 313 Toxic Chemicals:

Isopropyl Alcohol
Proposition 65 - Carcinogens ( $>0.0 \%$ ):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
Proposition 65 - Developmental Toxins ( $>0.0 \%$ ):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
Proposition 65 - Female Repro Toxins ( $>0.0 \%$ ):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
Proposition 65 - Male Repro Toxins ( $>0.0 \%$ ):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
New Jersey RTK Substances (>1\%):
Isopropyl Alcohol
Pennsylvania RTK Substances (>1\%):
Isopropyl Alcohol

## 16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our

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products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.
The full text of the phrases appearing in section 3 is:
H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness and dizziness.
This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.
Disclaimer: The contents of this MSDS are believed to be correct but do not purport to be all-inclusive and should only be used as a guide. Henry Schein Inc. disclaims any express or implied warranty as to the accuracy of the above information and shall not be held liable for any direct, incidental or consequential damages resulting from the reliance on the above information.

End of Document


[^0]:    Note: The PPE rating has intentionally been left blank. Choose appropriate PPE that will protect employees from the hazards the material will present under the actual normal conditions of use.

    Caution: HMISQ ratings are based on a $0-4$ rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, Benjamin Moore \& Co., has choosen to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS $\otimes$ training. HMIS $\$$ is a registered trade and service mark of the NPCA. HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

[^1]:    Section 66 ws a doitonalingtiation
    The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to ather information gathered by them and must make independent determinations of suitability and completeness of information from ail sources to assure proper use of these materials and the safety and heatth of employees. NTP: National Toxicology Program, IARC: Intemational Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure,

[^2]:    [1] Substance classified with a health or environmental hazard.
    [2] Substance with a workplace exposure limit.
    [3] PBT-substance or vPvB-substance.
    *The full texts of the phrases are shown in Section 16.

