

MATERIAL SAFETY DATA SHEET

Precision Laboratories, Inc.



Updated: May 1, 2010

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Product Name: ION™

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	ION™
Supplier:	PRECISION LABORATORIES, INC. 1429 S. SHIELDS DRIVE WAUKEGAN, IL 60085
Emergency telephone number:	(Chemtrec Information 24 hours) 1-800-424-9300
For MSDS, Product Safety, or Regulatory inquiries, call:	(800) 323-8351
Customer Service, call:	(800) 323-6280

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS#</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>% By Wt.</u>	<u>Exposure Limits</u>
Monocarbamide Dihydrogen Sulfate	21351-39-3			79.0%	N/E
Water	7732-18-5			13.5%	N/E
Urea	57-13-6			3.5%	N/E
Other				4.0%	N/E

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult a industrial hygenist or similar professional, or your local agencies, for further information.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

HMIS Hazard Rating:

- 2 Health Hazard Rating
- 0 Flammability Rating
- 2 Reactivity Rating
- x Personal Protection

Primary Routes of Exposure:

Eyes: **YES** Skin: **YES** Oral: **YES** Inhalation: **YES**

Signs and Symptoms of Exposure:

Eye contact:	Corrosive. Contact may cause severe irritation, eye burns and permanent eye damage.
Skin contact:	Severe skin irritant. While skin contact does not normally result in immediate irritation, prolonged or repeated contact may result in redness, swelling, burns, and severe skin damage. No harmful effects from skin absorption have been reported.
Inhalation:	Corrosive and toxic. May be harmful if inhaled. May cause severe irritation and burns of the nose, throat and respiratory tract.
Ingestion:	Corrosive and toxic. Harmful if swallowed. May cause severe irritation and burns of the mouth, throat, and digestive tract.
Symptoms:	Effects of overexposure may include severe irritation and burns of the mouth, nose, throat, respiratory and digestive tract, headaches, coughing, nausea, vomiting and transient disorientation.
Pre-existing medical conditions:	Conditions aggravated by exposure may include skin and respiratory (asthma-like) disorders.

4. FIRST AID MEASURES

FIRST AID MEASURES FOR ACCIDENTAL:

Eye Exposure: Immediately move person away from exposure and into fresh air. If irritation or redness develops, flush eyes with clean water and seek immediate medical attention. For direct contact, immediately hold eyelids apart and flush the affected eye(s) with clean water for at least 30 minutes. Seek immediate medical attention.

Skin Exposure: Immediately remove contaminated shoes, clothing and constrictive jewelry and flush affected area(s) with large amount of water. If skin surface is damaged, apply a clean dressing and seek immediate medical attention. If skin surface is not damaged, cleanse the affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops, seek immediate medical attention.

Inhalation: Immediately move person away from exposure and into fresh air. If respiratory symptoms and other symptoms persist, seek immediately medical attention. If person is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, qualified personnel should administer oxygen. Seek immediate medical attention.

Ingestion: DO NOT INDUCE VOMITING. CORROSIVE MATERIAL. ACID BURNS. If person has any breathing difficulties, call for emergency help immediately. If person is conscious and alert, immediately rinse mouth with water and dilute the ingested material by giving one glass of milk or water to drink; 1/2 glass to children under 5. Immediately call a physician or poison center for assistance. If possible, do not leave person unattended. NOTE TO PHYSICIANS: This material is corrosive and may cause acid burns, including gastro esophageal perforation. Late complications of severe acid burns include esophageal, gastric, or pyloric strictures and stenosis.

5. FIRE-FIGHTING MEASURES

FIRE HAZARD DATA:

Flammability: N/A LEL: N/E UEL: N/E

Auto-ignition temperature: N/D

Flash Point: None to boiling.

Extinguishing Media: Water spray, foam, CO², or dry chemicals may be used in areas where this product is stored.

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Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA Approved Self-Contained breathing apparatus and full protective clothing. For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. In addition, wear other appropriate protective equipment as conditions warrant. Isolate immediate hazard area and keep unauthorized personnel out. If tank, railcar or tank truck is involved in a fire, isolate for 1/2 mile in all directions. Consider initial evacuation for 1/2 mile in all directions. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk. Water spray may be useful in minimizing or dispersing vapors. Cool equipment exposed to fire with water, if it can be done with minimal risk.

Additional Fire and Explosive Data: This material will vigorously decompose, releasing carbon dioxide, if heated above 230-300°F. Closed containers exposed to extreme heat can rupture due to pressure buildup. Contact with common metals can generate hydrogen, which can form flammable mixture with air.

6. ACCIDENTAL RELEASE MEASURES

Stay upwind and away from spill/release. Notify persons downwind of spill/release. **RELEASES:** isolate immediate hazard area for at least 80 to 160 feet in all directions and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Spilled material may be absorbed into an appropriate absorbent material. Notify appropriate federal, state and local agencies. Immediate cleanup of any spill is recommended. If spill/release in excess of EPA reportable quantity is made into the environment, immediately notify the National Response Center 800-424-8802. **NOTE:** Dilute any remaining pools of liquid 3 to 1 with water and then neutralize with sodium bicarbonate or sodium carbonate (soda ash). Do not attempt to neutralize without first diluting with water. **WASTE DISPOSAL METHOD:** Dispose of in accordance with federal, state and local regulations.

7. HANDLING, STORAGE & SPILLAGE OR LEAK PROCEDURES

Precautions to be Taken in Handling: Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits. Wash thoroughly after handling. Do not wear contaminated clothing or shoes. Use good personal hygiene practice.

Precautions to be Taken in Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well ventilated areas. Store only in approved containers. Keep away from any incompatible material. Protect container(s) against physical damage. Product degradation may occur if heated above 176°F. Prolonged storage in mild steel containers is not recommended.

Spill or Leak Procedures: Recover free liquid. For recovery or disposal, add inert absorbent (sand, earth, sawdust, etc.) to spill area and shovel into containers for disposal. Large spills may be flushed to sewer if local authorities approve such. Product is slippery under foot; flush smooth surfaces thoroughly. Dispose of material in accordance with all federal, state and local regulations in an approved waste disposal facility.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Note: When selecting personal protective equipment and clothing, follow all of the manufacturer specifications and recommendations that apply to your specific operation and processing conditions. Take into consideration all working conditions and all chemicals to be handled or processed.

Eye Protection: The use of a face shield and/or chemical goggles to safeguard against potential eye contact, irritation, or injury is recommended. Contact lenses should not be used when working with chemicals.

Skin Protection: The use of gloves impermeable to the specific material handled is advised to prevent skin contact and possible irritation, absorption, and skin damage. Depending on conditions of use, apron and/or arm covers may be necessary. Wear coveralls and boots to minimize skin contact. As precautions, wash hands and face with mild soap and water before eating, drinking, smoking or using restroom. After each shift, clean all protective equipment, wash work clothes, and shower.

Inhalation Protection: A NIOSH/MSHA approved air purifying respirator with a N95 filter may be used under conditions where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Other Protection: Eye wash fountains and drench showers should be located within 100 feet or a 10 second walk or the work area per ANSI Z358.1-1990. Personal Protection in Case of Large Spill: Splash goggles. Full suit. Boots, Gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Appearance & Odor: Orange liquid with no distinct odor.

Boiling Point: Decomposes between 230 - 300°F

pH: N/D

Solubility in Water: Soluble

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10. STABILITY AND REACTIVITY

Chemical Stability:	Stable up to 230°F under normal conditions of storage and handling. This material is acidic in nature and can react with common metals generating hydrogen gas.
Incompatibility:	This material may be extremely hazardous in contact with chlorates or nitrates. Avoid contact with oxidizing agents. Avoid contact with hypochlorites, (e.g., chlorine bleach), sulfides, or cyanide which will generate toxic gases. Contact with alkaline materials (e.g., aqua ammonia) will generate heat. This material, especially dilute, is corrosive to common metals.
Hazardous Decomposition Products:	Small amounts of carbon dioxide are released from this material under normal storage condition. If involved in a fire, oxides of carbon, sulfur and nitrogen may be generated. Exposure to heat may liberate carbon dioxide.
Hazardous Polymerization:	Will Not Occur
Conditions to Avoid:	Precautions to be taken in handling and storage: Store between 4°C and 120°F. If heated above 230 - 300°F, material will vigorously decompose, releasing carbon dioxide gas.

11. TOXICOLOGICAL INFORMATION

No Toxicological data is available for this product.

12. ECOLOGICAL INFORMATION

No ecological data is available for this product.

13. DISPOSAL CONSIDERATIONS

Disposal Methods: Recycle or rework material if at all possible. Incinerate material at an approved facility. Treat at an acceptable waste treatment facility, or municipal waste treatment plant after proper testing and approval waste samples in compliance with applicable federal, state and local environmental regulations.

Container Reuse: An empty container can contain product residue, and should be not reused. If not professionally cleaned and reconditioned, crushing or other means is recommended to prevent unauthorized reuse.

14. TRANSPORT INFORMATION

DOT Status (Highway and rail):	Corrosive Liquid, N.O.S. (Monocarbamide dihydrogensulfate), UN1760, PG III, Class 8 Note: DOT corrosive to aluminum. Not regulated if transported by motor vehicle or railcar in packaging that will not react dangerously or be degraded by this material (49 CFR 173.154(d)).
IATA Status (Air):	N/E

15. REGULATORY INFORMATION

SARA HAZARD:	Title III, Section 313: Contains no Section 313 listed substances subject to reporting.
AICS (Australia):	Components listed
DSL (Canada):	Components listed
EINECS (Europe):	Components listed
TSCA:	Components listed

WHILE INFORMATION AND RECOMMENDATIONS SET FORTH HEREIN ARE BELIEVED TO BE ACCURATE AS OF THE DATE HEREON, PRECISION LABORATORIES, INC., MAKES NO WARRANTY WITH RESPECT THERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.

N/D - Not Determined

N/A - Not Applicable

N/E - Not Established