

GARDENA, CA
NEW BRUNSWICK, NJ

Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table border="1"> <tr><td>Health Hazard</td><td style="text-align: center;">3</td></tr> <tr><td>Physical Hazard</td><td style="text-align: center;">1</td></tr> <tr><td>Reactivity</td><td style="text-align: center;">0</td></tr> </table>	Health Hazard	3	Physical Hazard	1	Reactivity	0	 See Section 15.
Health Hazard	3							
Physical Hazard	1							
Reactivity	0							

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Section 1. Chemical Product and Company Identification

Common Name/ Trade Name	Hydroxylamine hydrochloride
Manufacturer	ProChem, Inc. 826 Roosevelt Rd Rockford, IL 61109
Commercial Name(s)	Not available.
Synonym	Hydroxyamine hydrochloride; Hydroxammonium chloride; Hydroxylamine chloride; Hydroxylammonium chloride; Oxammonium chloride
Chemical Name	Hydroxylamine Hydrochloride
Chemical Family	Not available.
Chemical Formula	NH ₂ OH.HCl
Supplier	

CAS#	5470-11-1
RTECS	NC3675000
TSCA	TSCA 8(b) inventory: Hydroxylamine hydrochloride
CI#	Not available.

IN CASE OF EMERGENCY
CHEMTREC (24hr) 800-424-9300

CALL 815-398-1788

Section 2. Composition and Information on Ingredients

Name	CAS #	Exposure Limits			% by Weight
		TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	
1) Hydroxylamine hydrochloride	5470-11-1				100

Toxicological Data
on Ingredients**Hydroxylamine hydrochloride:**

ORAL (LD50): Acute: 408 mg/kg [Mouse]. 141 mg/kg [Rat].

Section 3. Hazards Identification

Potential Acute Health Effects Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (sensitizer). Corrosive to eyes and skin. The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Hydroxylamine hydrochloride

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Potential Chronic Health Effects	Slightly hazardous in case of skin contact (sensitizer). CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.
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Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Serious Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.
Ingestion	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	May be combustible at high temperature.
Auto-Ignition Temperature	Not available.
Flash Points	CLOSED CUP: 152°C (305.6°F).
Flammable Limits	Not available.
Products of Combustion	Not available.
Fire Hazards in Presence of Various Substances	Slightly flammable to flammable in presence of heat. Non-flammable in presence of open flames and sparks, of shocks.
Explosion Hazards in Presence of Various Substances	Slightly explosive in presence of open flames and sparks, of heat. Non-explosive in presence of shocks.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Special Remarks on Fire Hazards	Material in powder form, capable of creating a dust explosion. Decomposes violently when heated above 150 °C.
Special Remarks on Explosion Hazards	Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

Section 6. Accidental Release Measures

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container.
Large Spill	Corrosive solid. Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

Section 7. Handling and Storage

Precautions	Keep container dry. Keep away from heat. Keep away from sources of ignition. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, combustible materials, organic materials.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Hygroscopic Moisture sensitive.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance	Solid. (Crystalline solid.)	Odor	Not available.
Molecular Weight	69.49 g/mole	Taste	Not available.
pH (1% soln/water)	Not available.	Color	White to yellowish.
Boiling Point	Not available.		
Melting Point	Decomposition temperature: 151°C (303.8°F) -157 C		
Critical Temperature	Not available.		
Specific Gravity	Density: 1.67 (Water = 1)		
Vapor Pressure	Not applicable.		
Vapor Density	Not available.		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water.		
Solubility	Easily soluble in cold water, hot water. Solubility in water: 560 g/l @ 20 deg. C		

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Excess heat, incompatible materials, moisture
Incompatibility with various substances	Reactive with oxidizing agents, organic materials, metals.
Corrosivity	Non-corrosive in presence of glass.
Special Remarks on Reactivity	Moisture sensitive Hygroscopic; keep container tightly closed.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 141 mg/kg [Rat].
Chronic Effects on Humans	MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
Other Toxic Effects on Humans	Very hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (sensitizer).
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	May affect genetic material (mutagenic)
Special Remarks on other Toxic Effects on Humans	<p>Acute Potential Health Effects:</p> <p>Skin: Depending on the duration of skin contact, it may cause reddening, discomfort, severe irritation, and possible chemical burns. Chemical burns result in blistering of the skin and possible scarring. Skin contact may cause allergic sensitization and reaction in susceptible individuals.</p> <p>Eyes: Contact with eyes will cause severe irritation, pain, reddening, watering, and possibly blindness.</p> <p>Inhalation: Harmful if inhaled. May cause respiratory tract irritation, breathing difficulty, burns of the mucous membranes, coughing, nasal congestion, laryngitis, sore throat, nausea, vomiting, and Methemoglobinemia (a condition that affects the ability of the blood to carry oxygen), and cyanosis (blue color of the skin due to lack of oxygen). Inhalation of low levels can cause allergic sensitization and reaction in susceptible individuals. Severe inhalation over-exposure can be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may be delayed.</p> <p>Ingestion: Harmful if swallowed. It can cause severe irritation and burns of the mouth, throat, esophagus, and other tissues of the digestive tract. Symptoms may include nausea, vomiting, diarrhea as well as those described under "Inhalation." It may also affect behavior(convulsions). Ingestion of large volumes may fatal.</p> <p>Chronic Potential Health Effects:</p> <p>Skin: Repeated or prolonged skin contact to low concentrations may cause dermatitis.</p> <p>Inhalation: Repeated or prolonged inhalation of low concentrations may cause liver and kidney damage.</p> <p>Ingestion: Repeated or prolonged ingestion of low amounts may affect, metabolism (weight loss), blood (decreased leukocyte count), spleen, and thyroid</p>


Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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Section 14. Transport Information

DOT Classification	Class 8: Corrosive material
Identification	: Amine, solid, corrosive, n.o.s. (Hydroxylamine hydrochloride) UNNA: 3259 PG: II
Special Provisions for Transport	Not available.
DOT (Pictograms)	

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations	TSCA 8(b) inventory: Hydroxylamine hydrochloride TSCA 8(a) CAIR: Hydroxylamine hydrochloride										
California Proposition 65 Warnings											
Other Regulations	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.										
Other Classifications	WHMIS (Canada)	CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC). CLASS E: Corrosive solid.									
	DSCL (EEC)	<table border="0"> <tr> <td>R22- Harmful if swallowed.</td> <td>S22- Do not breathe dust.</td> </tr> <tr> <td>R36/38- Irritating to eyes and skin.</td> <td>S24- Avoid contact with skin.</td> </tr> <tr> <td>R43- May cause sensitization by skin contact.</td> <td>S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.</td> </tr> <tr> <td>R50- Very toxic to aquatic organisms.</td> <td>S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.</td> </tr> <tr> <td>R48/22- Harmful: danger of serious damage to health by prolonged exposure if swallowed.</td> <td></td> </tr> </table>	R22- Harmful if swallowed.	S22- Do not breathe dust.	R36/38- Irritating to eyes and skin.	S24- Avoid contact with skin.	R43- May cause sensitization by skin contact.	S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.	R50- Very toxic to aquatic organisms.	S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.	R48/22- Harmful: danger of serious damage to health by prolonged exposure if swallowed.
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Hydroxylamine hydrochloride

HMIS (U.S.A.)

Health Hazard	3
Fire Hazard	1
Reactivity	0
Personal Protection	j

National Fire Protection Association (U.S.A.)

Health

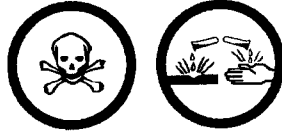


Flammability

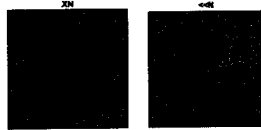
Reactivity

Specific hazard

WHMIS (Canada)
(Pictograms)



DSCL (Europe)
(Pictograms)



TDG (Canada)
(Pictograms)



ADR (Europe)
(Pictograms)



Protective Equipment



Gloves.



Synthetic apron.



Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

Section 16. Other Information

References Not available.

Other Special Considerations Not available.

PREPARATION DATE: NOV 2005

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, ProChem Chemicals Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.