

# Material Safety Data Sheet

## Hydroxylamine hydrochloride

ACC# 11280

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Hydroxylamine hydrochloride**Catalog Numbers:** AC170360000, AC170360010, AC170361000, AC170365000, AC270100000, AC270100010, AC270100050, AC270101000, AC270102500, AC412050000, AC412050050, AC412051000, AC412055000, H330-1, H330-100, H330-500**Synonyms:** Hydroxylammonium chloride; Oxammonium hydrochloride.**Company Identification:**

Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410

**For information, call:** 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
5470-11-1	Hydroxylamine hydrochloride	96+	226-798-2

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white crystals.

**Warning!** May cause burns by all exposure routes. Harmful if swallowed. Causes eye and skin irritation. May cause allergic skin reaction. May cause respiratory tract irritation. Danger of serious damage to health by prolonged exposure if swallowed. May cause methemoglobinemia. Very toxic to aquatic organisms. Corrosive to metal.

**Target Organs:** Blood, kidneys, liver, spleen, eyes, skin.

#### Potential Health Effects

**Eye:** Causes eye irritation and possible burns.**Skin:** May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May be harmful if absorbed through the skin. Causes skin irritation and possible burns.**Ingestion:** Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause burns to the gastrointestinal tract. May form methemoglobin which in sufficient concentration causes cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood).**Inhalation:** May cause respiratory tract irritation. May cause methemoglobinemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), convulsions, tachycardia, dyspnea (labored breathing), and death. May be harmful if inhaled. May cause methemoglobinemia.**Chronic:** May cause liver and kidney damage. Prolonged exposure may cause anemia and methemoglobinemia, characterized by dizziness, drowsiness, headache, breath shortness, cyanosis (bluish skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown colored blood. Repeated exposure may cause damage to the spleen. Laboratory experiments have resulted in mutagenic effects. Repeated or prolonged exposure may cause allergic reactions in sensitive individuals.

## Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

**Ingestion:** Do not induce vomiting. Get medical aid immediately. Call a poison control center.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Notes to Physician:** Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Exposure to heat may promote violent decomposition. Substance is noncombustible.

**Extinguishing Media:** Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 3; Flammability: 0; Instability: 1

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

## Section 7 - Handling and Storage

**Handling:** Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only in a chemical fume hood.

**Storage:** Store in a cool, dry place. Store in a tightly closed container. Corrosives area. Do not store in metal containers.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Hydroxylamine	none listed	none listed	none listed

hydrochloride

**OSHA Vacated PELs:** Hydroxylamine hydrochloride: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

**Physical State:** Crystals

**Appearance:** white

**Odor:** alcohol-like

**pH:** 2.5 - 3.5 (5% aq.sol.)

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** 155 - 158 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Soluble.

**Specific Gravity/Density:** Not available.

**Molecular Formula:** H3NO.HCl

**Molecular Weight:** 69.49

## Section 10 - Stability and Reactivity

**Chemical Stability:** Air sensitive. Moisture sensitive. Unstable if heated.

**Conditions to Avoid:** Incompatible materials, dust generation, exposure to air, temperatures above 100°C, exposure to moist air or water, heat.

**Incompatibilities with Other Materials:** Sodium chlorate, combustible and flammable materials (e.g. alkyl resins, asphalt, gasoline, grease, methyl acetone, polystyrene, polyurethane).

**Hazardous Decomposition Products:** Hydrogen chloride, nitrogen oxides.

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 5470-11-1: NC3675000

**LD50/LC50:**

CAS# 5470-11-1:

Oral, mouse: LD50 = 408 mg/kg;

Oral, rat: LD50 = 141 mg/kg;

**Carcinogenicity:**

CAS# 5470-11-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information found  
**Teratogenicity:** No information found  
**Reproductive Effects:** No information found  
**Mutagenicity:** Mutagenic effects have occurred in experimental animals.  
**Neurotoxicity:** No information found  
**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** No data available. No information available.  
**Environmental:** No information available.  
**Physical:** No information available.  
**Other:** Do not empty into drains.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	CORROSIVE SOLIDS, TOXIC, N.O.S.	CORROSIVE SOLIDS, TOXIC, N.O.S.
<b>Hazard Class:</b>	8	8(6.1)
<b>UN Number:</b>	UN2923	UN2923
<b>Packing Group:</b>	III	III

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 5470-11-1 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

#### SARA Codes

CAS # 5470-11-1: immediate, fire, reactive.

**Section 313** No chemicals are reportable under Section 313.

**Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**

CAS# 5470-11-1 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

**California Prop 65**

California No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations**

**European Labeling in Accordance with EC Directives**

**Hazard Symbols:**

XN N

**Risk Phrases:**

R 22 Harmful if swallowed.

R 36/38 Irritating to eyes and skin.

R 43 May cause sensitization by skin contact.

R 50 Very toxic to aquatic organisms.

R 48/22 Harmful : danger of serious damage to health by prolonged exposure if swallowed.

**Safety Phrases:**

S 22 Do not breathe dust.

S 24 Avoid contact with skin.

S 37 Wear suitable gloves.

S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

**WGK (Water Danger/Protection)**

CAS# 5470-11-1: 2

**Canada - DSL/NDSL**

CAS# 5470-11-1 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of E, D1B, D2A.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

**Section 16 - Additional Information**

**MSDS Creation Date:** 6/21/1999

**Revision #12 Date:** 8/05/2008

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