

# HYDROXYLAMINE SULFATE

HAS

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Oxammonium sulfate	Solid White Odorless
Sinks and mixes with water.	
<p><b>KEEP PEOPLE AWAY. AVOID CONTACT WITH SOLID AND DUST.</b>                  Wear chemical protective suit with self-contained breathing apparatus.                  Notify local health and pollution control agencies.                  Protect water intakes.</p>	
<b>Fire</b>	Not Flammable. POISONOUS GASES MAY BE PRODUCED IN FIRE.
<b>Exposure</b>	<p>CALL FOR MEDICAL AID.                  DUST                  Irritating to eyes, nose and throat.                  If inhaled will cause difficult breathing or loss of consciousness.                  If in eyes, hold eyelids open and flush with plenty of water.                  If breathing has stopped, give artificial respiration.                  If breathing is difficult, give oxygen.</p> <p>SOLID                  POISONOUS IF SWALLOWED.                  Irritating to skin and eyes.                  If swallowed will cause nausea or loss of consciousness.                  Remove contaminated clothing and shoes.                  Flush affected areas with plenty of water.                  IF IN EYES: hold eyelids open and flush with plenty of water.                  IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk and have victim induce vomiting.                  IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.</p>
<b>Water Pollution</b>	Effect of low concentrations on aquatic life is unknown. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

### 1. CORRECTIVE RESPONSE ACTIONS

Dilute and disperse  
 Stop discharge  
 Chemical and Physical Treatment:  
 Neutralize

### 2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: Not listed.  
 2.2 Formula: (NH<sub>2</sub>OH)<sub>2</sub>H<sub>2</sub>SO<sub>4</sub>  
 2.3 IMO/UN Designation: Not listed  
 2.4 DOT ID No.: 2865  
 2.5 CAS Registry No.: 10039-54-0  
 2.6 NAERG Guide No.: 154  
 2.7 Standard Industrial Trade Classification:  
 51451

### 3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Acid-resistant protective clothing, including coveralls, wrist-length gloves, cap, goggles, and dust mask
- 3.2 **Symptoms Following Exposure:** Inhalation of dust or ingestion may cause systemic poisoning characterized by cyanosis, methemoglobinemia, convulsions, and coma. Contact with eyes or skin causes irritation.
- 3.3 **Treatment of Exposure:** INHALATION: remove victim to fresh air; get medical attention if symptoms occur. INGESTION: give large amount of water; induce vomiting; get medical attention. EYES: flush with water for at least 15 min., and get medical attention. SKIN: flush immediately with plenty of water, then wash with soap and water.
- 3.4 TLV-TWA: Not listed.  
 3.5 TLV-STEL: Not listed.  
 3.6 TLV-Ceiling: Not listed.  
 3.7 Toxicity by Ingestion: Grade 3; LD<sub>50</sub> = 50-500 mg/kg  
 3.8 Toxicity by Inhalation: Currently not available.  
 3.9 Chronic Toxicity: Currently not available  
 3.10 Vapor (Gas) Irritant Characteristics: Currently not available  
 3.11 Liquid or Solid Characteristics: Currently not available  
 3.12 Odor Threshold: Currently not available  
 3.13 IDLH Value: Not listed.  
 3.14 OSHA PEL-TWA: Not listed.  
 3.15 OSHA PEL-STEL: Not listed.  
 3.16 OSHA PEL-Ceiling: Not listed.  
 3.17 EPA AEGL: Not listed

### 4. FIRE HAZARDS

- 4.1 **Flash Point:**  
Not flammable
- 4.2 **Flammable Limits in Air:** Not flammable
- 4.3 **Fire Extinguishing Agents:** Not pertinent
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
- 4.5 **Special Hazards of Combustion Products:** Sulfuric acid fumes may form in fires.
- 4.6 **Behavior in Fire:** Not pertinent
- 4.7 **Auto Ignition Temperature:** Not pertinent
- 4.8 **Electrical Hazards:** Not pertinent
- 4.9 **Burning Rate:** Not pertinent
- 4.10 **Adiabatic Flame Temperature:** Currently not available
- 4.11 **Stoichiometric Air to Fuel Ratio:** Not pertinent
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** Not pertinent
- 4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

### 5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction
- 5.2 **Reactivity with Common Materials:** May be corrosive to metals in presence of moisture
- 5.3 **Stability During Transport:** Stable
- 5.4 **Neutralizing Agents for Acids and Caustics:** Flush with water
- 5.5 **Polymerization:** Not pertinent
- 5.6 **Inhibitor of Polymerization:** Not pertinent

### 6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**  
Currently not available
- 6.2 **Waterfowl Toxicity:** Currently not available
- 6.3 **Biological Oxygen Demand (BOD):**  
Currently not available
- 6.4 **Food Chain Concentration Potential:**  
None
- 6.5 **GESAMP Hazard Profile:** Not listed

### 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Commercial, 97-99%
- 7.2 **Storage Temperature:** Ambient
- 7.3 **Inert Atmosphere:** No requirement
- 7.4 **Venting:** Open
- 7.5 **IMO Pollution Category:** Currently not available
- 7.6 **Ship Type:** Currently not available
- 7.7 **Barge Hull Type:** Currently not available

### 8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Corrosive material
- 8.2 **49 CFR Class:** 8
- 8.3 **49 CFR Package Group:** III
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:** Not listed
- 8.6 **EPA Reportable Quantity:** Not listed.
- 8.7 **EPA Pollution Category:** Not listed.
- 8.8 **RCRA Waste Number:** Not listed
- 8.9 **EPA FWPCA List:** Not listed

### 9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Solid
- 9.2 **Molecular Weight:** 164.14
- 9.3 **Boiling Point at 1 atm:** Not pertinent (decomposes)
- 9.4 **Freezing Point:** Not pertinent
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** >1 at 20°C (solid)
- 9.8 **Liquid Surface Tension:** Not pertinent
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 9.10 **Vapor (Gas) Specific Gravity:** Not pertinent
- 9.11 **Ratio of Specific Heats of Vapor (Gas):**  
Not pertinent
- 9.12 **Latent Heat of Vaporization:** Not pertinent
- 9.13 **Heat of Combustion:** Not pertinent
- 9.14 **Heat of Decomposition:** Not pertinent
- 9.15 **Heat of Solution:** Not pertinent
- 9.16 **Heat of Polymerization:** Not pertinent
- 9.17 **Heat of Fusion:** Currently not available
- 9.18 **Limiting Value:** Currently not available
- 9.19 **Reid Vapor Pressure:** Currently not available

### NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
	N O T  P E R T I N E N T		N O T  P E R T I N E N T		N O T  P E R T I N E N T		N O T  P E R T I N E N T

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
77	64.000		N O T  P E R T I N E N T		N O T  P E R T I N E N T		N O T  P E R T I N E N T