

# MERCUROUS NITRATE

MRN

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Mercurous nitrate monohydrate Mercury protonitrate		Solid	White	Slight odor
Sinks in water.				
<p><b>KEEP PEOPLE AWAY. AVOID CONTACT WITH SOLID AND DUST.</b>                  Wear dust respirator and rubber overclothing (including gloves).                  Shut off ignition sources and call fire department.                  Notify local health and pollution control agencies.</p>				
<b>Fire</b>	Not flammable. Will increase the intensity of a fire. POISONOUS GASES MAY BE PRODUCED WHEN HEATED.			
<b>Exposure</b>	CALL FOR MEDICAL AID. DUST POISONOUS IF INHALED OR IF SKIN IS EXPOSED. If inhaled will cause coughing or difficult breathing. 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.  SOLID POISONOUS IF SWALLOWED OR IF SKIN IS EXPOSED. Irritating to skin and eyes. If swallowed will cause nausea and vomiting. 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.			
<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.			

<b>1. CORRECTIVE RESPONSE ACTIONS</b> Stop discharge Collection Systems: Dredge	<b>2. CHEMICAL DESIGNATIONS</b> 2.1 CG Compatibility Group: Not listed. 2.2 Formula: HgNO <sub>3</sub> ·H <sub>2</sub> O 2.3 IMO/UN Designation: 6.1/1627 2.4 DOT ID No.: 1627 2.5 CAS Registry No.: 10415-75-5 2.6 NAERG Guide No.: 141 2.7 Standard Industrial Trade Classification: 52359
<b>3. HEALTH HAZARDS</b> 3.1 <b>Personal Protective Equipment:</b> Dust mask; goggles or face shield; protective gloves 3.2 <b>Symptoms Following Exposure:</b> Acute systemic poisoning may be fatal within a few minutes; death by uremic poisoning is usually delayed 5-12 days. Acute poisoning has resulted from inhaling dust concentrations of 1.2-8.5 mg/m <sup>3</sup> of air; symptoms include tightness and pain in chest, coughing, and difficulty in breathing. Ingestion causes necrosis, pain, vomiting, and severe purging. Contact with eyes causes ulceration of conjunctiva and cornea. Contact with skin causes irritation and possible dermatitis; systemic poisoning can occur by absorption through skin. 3.3 <b>Treatment of Exposure:</b> INHALATION: remove victim to fresh air; get medical attention. INGESTION: give egg whites, milk, or activated charcoal; induce vomiting; consult physician. EYES: flush with water for at least 15 min. SKIN: flush with water. 3.4 <b>TLV-TWA:</b> 0.025 mg/m <sup>3</sup> (as mercury) 3.5 <b>TLV-STEL:</b> Not listed. 3.6 <b>TLV-Ceiling:</b> Not listed. 3.7 <b>Toxicity by Ingestion:</b> Grade 3; oral LD <sub>50</sub> = 297 mg/kg (rat) 3.8 <b>Toxicity by Inhalation:</b> Currently not available. 3.9 <b>Chronic Toxicity:</b> Currently not available 3.10 <b>Vapor (Gas) Irritant Characteristics:</b> Currently not available 3.11 <b>Liquid or Solid Characteristics:</b> Currently not available 3.12 <b>Odor Threshold:</b> Currently not available 3.13 <b>IDLH Value:</b> Not listed. 3.14 <b>OSHA PEL-TWA:</b> Not listed. 3.15 <b>OSHA PEL-STEL:</b> Not listed. 3.16 <b>OSHA PEL-Ceiling:</b> 0.1 mg/m <sup>3</sup> (as mercury) 3.17 <b>EPA AEGL:</b> Not listed	

<b>4. FIRE HAZARDS</b> 4.1 <b>Flash Point:</b> Not flammable, but may intensify fire. 4.2 <b>Flammable Limits in Air:</b> Not flammable 4.3 <b>Fire Extinguishing Agents:</b> Not pertinent 4.4 <b>Fire Extinguishing Agents Not to Be Used:</b> Not pertinent 4.5 <b>Special Hazards of Combustion</b> Products: Smoke from fire may contain toxic mercury vapor and oxides of nitrogen. 4.6 <b>Behavior in Fire:</b> May increase intensity of fire 4.7 <b>Auto Ignition Temperature:</b> Not pertinent 4.8 <b>Electrical Hazards:</b> Not pertinent 4.9 <b>Burning Rate:</b> Not pertinent 4.10 <b>Adiabatic Flame Temperature:</b> Currently not available 4.11 <b>Stoichiometric Air to Fuel Ratio:</b> Not pertinent. 4.12 <b>Flame Temperature:</b> Currently not available 4.13 <b>Combustion Molar Ratio (Reactant to Product):</b> Not pertinent. 4.14 <b>Minimum Oxygen Concentration for Combustion (MOCC):</b> Not listed	<b>7. SHIPPING INFORMATION</b> 7.1 <b>Grades of Purity:</b> Reagent; Purified 7.2 <b>Storage Temperature:</b> Ambient 7.3 <b>Inert Atmosphere:</b> No requirement 7.4 <b>Venting:</b> Open 7.5 <b>IMO Pollution Category:</b> Currently not available 7.6 <b>Ship Type:</b> Currently not available 7.7 <b>Barge Hull Type:</b> Currently not available
<b>5. CHEMICAL REACTIVITY</b> 5.1 <b>Reactivity with Water:</b> Dissolves, then forms cloudy acid solution. The reaction is not hazardous. 5.2 <b>Reactivity with Common Materials:</b> Solution may corrode most metals. Solid in contact with wood or paper may cause fire. 5.3 <b>Stability During Transport:</b> Stable 5.4 <b>Neutralizing Agents for Acids and Caustics:</b> Flush with water, rinse with dilute solution of sodium bicarbonate or soda ash. 5.5 <b>Polymerization:</b> Not pertinent 5.6 <b>Inhibitor of Polymerization:</b> Not pertinent	<b>8. HAZARD CLASSIFICATIONS</b> 8.1 <b>49 CFR Category:</b> Poison 8.2 <b>49 CFR Class:</b> 6.1 8.3 <b>49 CFR Package Group:</b> II 8.4 <b>Marine Pollutant:</b> Yes 8.5 <b>NFPA Hazard Classification:</b> Not listed 8.6 <b>EPA Reportable Quantity:</b> 10 pounds 8.7 <b>EPA Pollution Category:</b> A 8.8 <b>RCRA Waste Number:</b> Not listed 8.9 <b>EPA FWPCA List:</b> Yes
<b>6. WATER POLLUTION</b> 6.1 <b>Aquatic Toxicity:</b> Currently not available 6.2 <b>Waterfowl Toxicity:</b> Currently not available 6.3 <b>Biological Oxygen Demand (BOD):</b> Currently not available 6.4 <b>Food Chain Concentration Potential:</b> Possible bioaccumulation problem. Many organisms can accumulate mercury from water. Bioconcentrative up to 10,000 fold. 6.5 <b>GESAMP Hazard Profile:</b> Bioaccumulation: + Damage to living resources: 4 Human Oral hazard: 2 Human Contact hazard: II Reduction of amenities: XX	<b>9. PHYSICAL &amp; CHEMICAL PROPERTIES</b> 9.1 <b>Physical State at 15° C and 1 atm:</b> Solid 9.2 <b>Molecular Weight:</b> 280.6 9.3 <b>Boiling Point at 1 atm:</b> Not pertinent (decomposes) 9.4 <b>Freezing Point:</b> Not pertinent 9.5 <b>Critical Temperature:</b> Not pertinent 9.6 <b>Critical Pressure:</b> Not pertinent 9.7 <b>Specific Gravity:</b> 4.78 at 20°C (solid) 9.8 <b>Liquid Surface Tension:</b> Not pertinent 9.9 <b>Liquid Water Interfacial Tension:</b> Not pertinent 9.10 <b>Vapor (Gas) Specific Gravity:</b> Not pertinent 9.11 <b>Ratio of Specific Heats of Vapor (Gas):</b> Not pertinent 9.12 <b>Latent Heat of Vaporization:</b> Not pertinent 9.13 <b>Heat of Combustion:</b> Not pertinent 9.14 <b>Heat of Decomposition:</b> Not pertinent 9.15 <b>Heat of Solution:</b> Not pertinent 9.16 <b>Heat of Polymerization:</b> Not pertinent 9.17 <b>Heat of Fusion:</b> Currently not available 9.18 <b>Limiting Value:</b> Currently not available 9.19 <b>Reid Vapor Pressure:</b> 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
	I N S O L U B I L E		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