Material Safety Data Sheet  
Mercury(I) nitrate, dihydrate

Section 1 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: off-white solid.  
**Danger!** May be fatal if inhaled, absorbed through the skin or swallowed. Strong oxidizer. Contact with other material may cause a fire. Causes eye, skin, and respiratory tract irritation. Hygroscopic (absorbs moisture from the air). Light sensitive.  
**Target Organs:** Kidneys, central nervous system, liver.

**Potential Health Effects**  
**Eye:** Causes eye irritation.  
**Skin:** Causes skin irritation. May be absorbed through the skin in harmful amounts.  
**Ingestion:** May cause severe digestive tract irritation with abdominal pain, nausea, vomiting and diarrhea. May be harmful if swallowed. May cause central nervous system effects.  
**Inhalation:** May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. May cause gastrointestinal effects including gum and mouth inflammation, jaw necrosis, and loosening of the teeth.  
**Chronic:** May cause liver and kidney damage. May cause reproductive and fetal effects. Repeated exposure may cause central nervous system damage.

Section 2 - 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:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.  
**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.  
**Notes to Physician:** Treat symptomatically and supportively.  
**Antidote:** The use of Dimercaprol or BAL (British Anti-Lewisite) as a chelating agent should be determined by qualified medical personnel. The use of d-Penicillamine as a chelating agent should be determined by qualified medical personnel.

Section 3 - Personal Protection

**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 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 4 - Physical and Chemical Properties

**Physical State:** Solid  
**Appearance:** off-white  
**Odor:** None reported.  
**pH:** Not available.  
**Boiling Point:** Not available.  
**Freezing/Melting Point:** 70 deg C  
**Decomposition Temperature:** Not available.  
**Solubility:** Soluble in water.

### Section 5 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.  
**Conditions to Avoid:** Incompatible materials, light, moisture.  
**Incompatibilities with Other Materials:** Reducing agents; acidic materials; heavy metals; cyanides; thiocyanates; isothiocyanates; hypophosphites.  
**Hazardous Decomposition Products:** Nitrogen oxides, mercury/mercury oxides.  
**Hazardous Polymerization:** Has not been reported