Material Safety Data Sheet
Mercury(II) chloride

Section 1 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: white crystals.

**Danger!** May be fatal if swallowed. May be fatal if absorbed through the skin. Causes severe eye and skin irritation with possible burns. Causes digestive and respiratory tract irritation with possible burns. May impair fertility. May cause harm to the unborn child. Harmful if inhaled. May cause allergic skin reaction. May cause central nervous system effects. Light sensitive. May cause kidney damage. Severe marine pollutant.

**Target Organs:** Kidneys, central nervous system, reproductive system.

**Potential Health Effects**

**Eye:** Exposure to mercury or mercury compounds can cause discoloration on the front surface of the lens, which does not interfere with vision. Causes severe eye irritation and possible burns. Contact with mercury or mercury compounds can cause ulceration of the conjunctiva and cornea.

**Skin:** May be fatal if absorbed through the skin. Causes severe skin irritation and possible burns. May cause allergic contact dermatitis.

**Ingestion:** May be fatal if swallowed. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Causes gastrointestinal tract burns. May cause muscle tremor and impaired motor function. May cause cardiac disturbances. Symptoms of acute mercury salt poisoning include nausea, vomiting, bloody diarrhea, foul taste, loosened teeth, circulatory collapse, peripheral neurological disease, and kidney damage requiring dialysis.

**Inhalation:** May cause central nervous system effects including vertigo, anxiety, depression, muscle incoordination, and emotional instability. May cause gastrointestinal effects including gum and mouth inflammation, jaw necrosis, and loosening of the teeth. May cause burns to the respiratory tract. Acute exposure to high concentrations of mercury vapors may cause severe respiratory tract irritation.

**Chronic:** Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. May cause reproductive and fetal effects. Chronic ingestion may cause accumulation of mercury in body tissues. Laboratory experiments have resulted in mutagenic effects. May be rapidly transferred across the placenta and cause adverse fetal effects. Chronic mercury poisoning involves kidney damage, visual defects, tremor, and severe psychological changes. The brain is the critical organ for chronic mercury poisoning. The half-life of mercury in the brain is 10 years. Cumulative toxicity is a major consideration with chronic exposure.

Section 2 - First Aid Measures

**Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

**Skin:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes.
while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

**Ingestion:** POISON material. If swallowed, get medical aid immediately. Only induce vomiting if directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** The concentration of mercury in whole blood is a reasonable measure of the body-burden of mercury and thus is used for monitoring purposes. Persons with kidney disease, chronic respiratory disease, liver disease, or skin disease may be at increased risk from exposure to this substance.

**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.

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**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 protective gloves to prevent skin exposure.

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

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

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**Section 4 - Physical and Chemical Properties**

**Physical State:** Crystals

**Appearance:** white

**Odor:** odorless

**pH:** 4.7

**Boiling Point:** 300 deg C

**Freezing/Melting Point:** 277 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Soluble.

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**Section 5 - Stability and Reactivity**

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:** Light, dust generation, excess heat.

**Incompatibilities with Other Materials:** Strong oxidizing agents, strong bases, ammonia, copper, iron, silver salts, potassium, antimony, sodium, lead, hypophosphites, formates, sulfites, phosphates, albumin, gelatin, alkalies, alkaloid salts, lime water, arsenic, bromides, borax, carbonates, reduced iron, infusions of cinchona, columbo, oak bark or
senna, tannic acid, metallic halides, vegetable astringents.

**Hazardous Decomposition Products:** Mercury/mercury oxides, chloride fumes.

**Hazardous Polymerization:** Will not occur.