

Common Name: **MERCURIC CHLORIDE**

Synonyms: Mercury Dichloride; Perchloride of Mercury

CAS No: 7487-94-7

Molecular Formula: HgCl₂

RTK Substance No: 1170

Description: Odorless, white crystal or powder

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
<p>3 - Health</p> <p>0 - Fire</p> <p>1 - Reactivity</p> <p>DOT#: UN 1624</p> <p>ERG Guide #: 154</p> <p>Hazard Class: 6.1</p> <p>(Poison)</p>	<p>Mercuric Chloride itself does not burn but may explode if exposed to heat, shock or friction.</p> <p>Use dry chemical, CO₂, water spray or foam as extinguishing agents.</p> <p>POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Chlorine, Hydrogen Chloride, Mercury and Mercury Oxides.</i></p> <p>CONTAINERS MAY EXPLODE IN FIRE.</p> <p>Use water spray to keep fire-exposed containers cool.</p>	<p>Mercuric Chloride may explode with HEAT, FRICTION, SHOCK or on contact with ALKALI METALS (such as LITHIUM, SODIUM and POTASSIUM); SULFIDES; ACETYLENE; AMMONIA; and OXALIC ACID.</p> <p>Mercuric Chloride is not compatible with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC); STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE); FORMATES; PHOSPHATES; CARBONATES; ANTIMONY; BROMIDES; and BORAX.</p> <p>Mercuric Chloride is decomposed by SUNLIGHT and reacts when in solution with STAINLESS and CARBON STEELS, BRASS and BRONZE.</p>

SPILL/LEAKS

Isolation Distance:
 Spill: 25 meters (75 feet)
 Fire: 800 meters (1/2 mile)
 For clean-up, use a specialized charcoal-filtered vacuum.
 DO NOT wash into sewer.
Mercuric Chloride is very toxic to aquatic organisms.

PHYSICAL PROPERTIES

Odor Threshold: Odorless
Flash Point: Nonflammable
Vapor Pressure: 1 mm Hg at 277°F (136°C)
Specific Gravity: 5.4 (water = 1)
Water Solubility: Soluble
Boiling Point: 576°F (302°C)
Melting Point: 529°F (276°C)
Molecular Weight: 271.5
pH: 4.7

EXPOSURE LIMITS

NIOSH: 0.05 mg/m³, 10-hr TWA (as *Mercury vapor*)
 0.1 mg/m³, Ceiling (as *Mercury*)
ACGIH: 0.025 mg/m³, 8-hr TWA (as *Mercury*)
IDLH: 10 mg/m³ (as *Mercury*)
 The Protective Action Criteria values are:
 PAC-1 = 2 mg/m³ PAC-3 = 13.5 mg/m³
 PAC-2 = 13.5 mg/m³

PROTECTIVE EQUIPMENT

Gloves: Butyl, Nitrile, Neoprene, PVC, Silver Shield®/4H® (>8-hr breakthrough for *Mercury*)
Coveralls: Tychem® fabrics
Respirator: >0.025 mg/m³ - full facepiece APR with cartridges specific for *Mercury*
 >2 mg/m³ - SCBA

HEALTH EFFECTS

Eyes: Irritation and burns
Skin: Irritation and burns, skin rash, itching and gray skin color
Inhalation: Nose, throat and lung irritation with coughing, wheezing and shortness of breath
 Nausea, vomiting and tremors
Chronic: Cancer (thyroid) in animals

FIRST AID AND DECONTAMINATION

Remove the person from exposure.
Flush eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn. Seek medical attention.
Quickly remove contaminated clothing and wash contaminated skin with large amounts of soap and water.
Begin artificial respiration if breathing has stopped and CPR if necessary.
Transfer promptly to a medical facility.