

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Mercury(II) chloride  
Product Number : M1136  
Brand : Sigma-Aldrich  
Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA  
Telephone : +1 800-325-5832  
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Emergency Phone # : (314) 776-6555

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Mercuric chloride  
Formula :  $\text{Cl}_2\text{Hg}$   
Molecular Weight : 271.50 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Mercuric chloride</b>			
7487-94-7	231-299-8	080-010-00-X	-

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Target Organ Effect, Highly toxic by ingestion, Highly toxic by skin absorption, Corrosive, Reproductive hazard

##### Target Organs

Kidney, Nerves., Gastrointestinal tract

#### HMIS Classification

Health Hazard: 4

Chronic Health Hazard: \*

Flammability: 0

Physical hazards: 0

#### NFPA Rating

Health Hazard: 3

Fire: 0

Reactivity Hazard: 0

#### Potential Health Effects

<b>Inhalation</b>	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Skin</b>	Causes skin burns. May be fatal if absorbed through skin.
<b>Eyes</b>	Causes eye burns.
<b>Ingestion</b>	May be fatal if swallowed. Causes burns.

#### 4. FIRST AID MEASURES

##### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

##### If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

##### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

##### In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 5. FIRE-FIGHTING MEASURES

##### Flammable properties

Flash point not applicable

Ignition temperature no data available

##### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

##### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

##### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

##### Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

#### 7. HANDLING AND STORAGE

##### Handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

##### Storage

Keep container tightly closed in a dry and well-ventilated place.

Light sensitive. Moisture sensitive. Product is sensitive to light and moisture.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Mercuric chloride	7487-94-7	CEIL	0.1 mg/m3	1989-03-01	US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A
Remarks	Skin contact does contribute to exposure. See Table Z-2.				
		TWA	0.03 mg/m3	1994-09-01	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004:Committees on Threshold Limit Values (TLVs ) and Biological Exposure Indices (BEIs)
	The agent (mixture , or exposure circumstance) is not classifiable as to its carcinogenicity to humans . Skin contact does contribute to exposure. Refers to Appendix A -- Carcinogens. 1994-1995 Adoption Substances for which there is a Biological Exposure Index or Indices.				

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves.

#### Eye protection

Safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form solid

### Safety data

pH no data available  
Melting point 277 °C (531 °F)  
Boiling point 302 °C (576 °F) at 1,013 hPa (760 mmHg)  
Flash point not applicable  
Ignition temperature no data available  
Lower explosion limit no data available  
Upper explosion limit no data available  
Vapour pressure 1.7 hPa (1.3 mmHg) at 236 °C (457 °F)  
Density 5.440 g/cm<sup>3</sup>  
Water solubility no data available

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Conditions to avoid

Avoid moisture. Light.

### Materials to avoid

Strong oxidizing agents, Strong bases

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Mercury/mercury oxides.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - rat - 1 mg/kg

LD50 Dermal - rat - 41 mg/kg

### Irritation and corrosion

Skin - rabbit - Severe skin irritation - 24 h

Eyes - rabbit - Severe eye irritation - 24 h

### Sensitisation

no data available

### Chronic exposure

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: Group 3 - Not classifiable as to carcinogenicity to humans (Mercuric chloride)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as

a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

### Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

### Potential Health Effects

<b>Inhalation</b>	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Skin</b>	Causes skin burns. May be fatal if absorbed through skin.
<b>Eyes</b>	Causes eye burns.
<b>Ingestion</b>	May be fatal if swallowed. Causes burns.
<b>Target Organs</b>	Kidney, Nerves., Gastrointestinal tract,

### Additional Information

RTECS: OV9100000

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

Bioaccumulation	Pimephales promelas (fathead minnow) - Bioconcentration factor (BCF): 5,680
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### Ecotoxicity effects

Toxicity to fish	mortality LOEC - Lates calcarifer - 0.113 mg/l - 96 h LC50 - Oncorhynchus mykiss (rainbow trout) - 0.016 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates.	EC50 - Daphnia magna (Water flea) - 0.002 mg/l - 48 h
Toxicity to algae	Growth inhibition EC50 - Ditylum brightwellii - 0.01 mg/l - 5 d

### Further information on ecology

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## 13. DISPOSAL CONSIDERATIONS

### Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### DOT (US)

UN-Number: 1624 Class: 6.1 Packing group: II  
Proper shipping name: Mercuric chloride  
Marine pollutant: Severe marine pollutant  
Poison Inhalation Hazard: No

**IMDG**

UN-Number: 1624 Class: 6.1 Packing group: II EMS-No: F-A, S-A  
Proper shipping name: MERCURIC CHLORIDE  
Marine pollutant: Severe marine pollutant

**IATA**

UN-Number: 1624 Class: 6.1 Packing group: II  
Proper shipping name: Mercuric chloride

**15. REGULATORY INFORMATION**

**OSHA Hazards**

Target Organ Effect, Highly toxic by ingestion, Highly toxic by skin absorption, Corrosive, Reproductive hazard

**DSL Status**

All components of this product are on the Canadian DSL list.

**SARA 302 Components**

	CAS-No.	Revision Date
Mercuric chloride	7487-94-7	1991-07-01

**SARA 313 Components**

	CAS-No.	Revision Date
Mercuric chloride	7487-94-7	1991-07-01

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

	CAS-No.	Revision Date
Mercuric chloride	7487-94-7	1991-07-01

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
Mercuric chloride	7487-94-7	1991-07-01

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
Mercuric chloride	7487-94-7	1991-07-01

**California Prop. 65 Components**

	CAS-No.	Revision Date
WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm. Mercuric chloride	7487-94-7	1990-07-01

**16. OTHER INFORMATION**

**Further information**

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