

## SAFETY DATA SHEET

Creation Date 09-Apr-2010

Revision Date 14-Feb-2020

Revision Number 2

### 1. Identification

**Product Name** Mercury(II) chloride

**Cat No. :** 12274

**CAS-No** 7487-94-7  
**Synonyms** Mercuric chloride

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.  
**Details of the supplier of the safety data sheet**

**Company**

Alfa Aesar  
Thermo Fisher Scientific Chemicals, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Tel: 800-343-0660  
Fax: 800-322-4757  
**Email:** tech@alfa.com  
www.alfa.com

**Emergency Telephone Number**

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.  
After normal business hours, call Carechem 24 at (866) 928-0789.

### 2. Hazard(s) identification

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity	Category 2
Acute dermal toxicity	Category 1
Skin Corrosion/Irritation	Category 1
Serious Eye Damage/Eye Irritation	Category 1
Germ Cell Mutagenicity	Category 2
Reproductive Toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	
Specific target organ toxicity - (repeated exposure)	Category 1
Target Organs - Urinary Tract.	

**Label Elements**

**Signal Word**  
Danger

**Hazard Statements**

Fatal if swallowed  
 Fatal in contact with skin  
 Causes severe skin burns and eye damage  
 Suspected of causing genetic defects  
 Suspected of damaging fertility  
 May cause respiratory irritation  
 Causes damage to organs through prolonged or repeated exposure

**Precautionary Statements****Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Use personal protective equipment as required  
 Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Do not get in eyes, on skin, or on clothing  
 Do not breathe dust/fume/gas/mist/vapors/spray

**Response**

Immediately call a POISON CENTER or doctor/physician

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Skin**

Wash contaminated clothing before reuse  
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Ingestion**

Rinse mouth  
 Do NOT induce vomiting

**Storage**

Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Very toxic to aquatic life with long lasting effects  
 WARNING. Reproductive Harm - <https://www.p65warnings.ca.gov/>.

### 3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Mercuric chloride	7487-94-7	>95

### 4. First-aid measures

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated

	clothes and shoes. Immediate medical attention is required.
<b>Inhalation</b>	Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
<b>Ingestion</b>	Do NOT induce vomiting. Call a physician or poison control center immediately.
<b>Most important symptoms and effects</b>	Causes burns by all exposure routes. . Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
<b>Notes to Physician</b>	Treat symptomatically

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	No information available
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

### Specific Hazards Arising from the Chemical

Very toxic. Corrosive material. Do not allow run-off from fire-fighting to enter drains or water courses. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

### Hazardous Combustion Products

Toxic fumes.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

Health	Flammability	Instability	Physical hazards
4	1	1	N/A

## 6. Accidental release measures

<b>Personal Precautions</b>	Wear self-contained breathing apparatus and protective suit. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing.
<b>Environmental Precautions</b>	Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.
<b>Methods for Containment and Clean Up</b>	Wear self-contained breathing apparatus and protective suit. Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

## 7. Handling and storage

<b>Handling</b>	Use only under a chemical fume hood. Wear personal protective equipment/face protection.
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Avoid dust formation. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance.

**Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from direct sunlight.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Mercuric chloride	TWA: 0.025 mg/m <sup>3</sup> Skin	(Vacated) Ceiling: 0.1 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> TWA: 0.05 mg/m <sup>3</sup> Ceiling: 0.1 mg/m <sup>3</sup>	TWA: 0.025 mg/m <sup>3</sup>

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures**

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment****Eye/face Protection**

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 and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**

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.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

<b>Physical State</b>	Solid
<b>Appearance</b>	White
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH</b>	3.3
<b>Melting Point/Range</b>	277 °C / 530.6 °F
<b>Boiling Point/Range</b>	302 °C / 575.6 °F
<b>Flash Point</b>	No information available
<b>Evaporation Rate</b>	Not applicable
<b>Flammability (solid,gas)</b>	No information available
<b>Flammability or explosive limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Vapor Pressure</b>	No information available
<b>Vapor Density</b>	Not applicable
<b>Specific Gravity</b>	5.44 @ 25°C
<b>Solubility</b>	7.4 g/100 ml (20°C)
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	
<b>Decomposition Temperature</b>	No information available
<b>Viscosity</b>	Not applicable

Molecular Formula Cl<sub>2</sub> Hg  
Molecular Weight 271.5

## 10. Stability and reactivity

**Reactive Hazard** None known, based on information available

**Stability** Stable under normal conditions. Light sensitive.

**Conditions to Avoid** Avoid dust formation. Incompatible products. Excess heat. Exposure to light.

**Incompatible Materials** Organic materials, Acids, Bases, Strong oxidizing agents, Ammonia, Sulfides, Lead, Metals, copper

**Hazardous Decomposition Products** Toxic fumes

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Mercuric chloride	25.9 mg/kg ( Rat ) 1 mg/kg ( Rat )	LD50 = 41 mg/kg ( Rabbit ) LD50 = 41 mg/kg ( Rat )	Not listed

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** Causes burns by all exposure routes

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Mercuric chloride	7487-94-7	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects** Possible risk of irreversible effects

**Reproductive Effects** Possible risk of impaired fertility.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system  
**STOT - repeated exposure** Urinary Tract

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Mercuric chloride	Not listed	LC50: 5.933 - 10.34 mg/L, 96h static (Poecilia reticulata) LC50: = 0.041 mg/L, 96h (Poecilia reticulata) LC50: 0.1 - 0.182 mg/L, 96h flow-through (Pimephales promelas) LC50: = 0.155 mg/L, 96h (Pimephales promelas) LC50: 0.096 - 0.133 mg/L, 96h static (Lepomis macrochirus) LC50: 0.014 - 0.019 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: 0.02 - 0.26 mg/L, 96h static (Cyprinus carpio) LC50: = 4.425 mg/L, 96h (Cyprinus carpio) LC50: = 0.4 mg/L, 96h semi-static (Lepomis macrochirus) LC50: 0.13 - 0.19 mg/L, 96h static (Oncorhynchus mykiss)	Not listed	EC50=0.0015mg/L 48 h EC50=0.012mg/L >48 h

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

### DOT

UN-No UN1624  
 Proper Shipping Name MERCURIC CHLORIDE  
 Hazard Class 6.1  
 Packing Group II

### TDG

UN-No UN1624  
 Proper Shipping Name MERCURIC CHLORIDE  
 Hazard Class 6.1  
 Packing Group II

### IATA

UN-No UN1624  
 Proper Shipping Name MERCURIC CHLORIDE  
 Hazard Class 6.1

<b>Packing Group</b>	II
<b>IMDG/IMO</b>	
<b>UN-No</b>	UN1624
<b>Proper Shipping Name</b>	MERCURIC CHLORIDE
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	II

## 15. Regulatory information

### United States of America Inventory

Component	CAS-No	TSCA	TSCA Inventory notification - Active/Inactive	TSCA - EPA Regulatory Flags
Mercuric chloride	7487-94-7	X	ACTIVE	-

#### Legend:

**TSCA** - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA 12(b)** - Notices of Export      Not applicable

### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
Mercuric chloride	7487-94-7	X	-	231-299-8	X	X	X	X	KE-23121

### U.S. Federal Regulations

#### SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Mercuric chloride	7487-94-7	>95	1.0

**SARA 311/312 Hazard Categories**      See section 2 for more information

#### CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Mercuric chloride	-	-	X	-

#### Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Mercuric chloride	X		-

**OSHA** - Occupational Safety and Health Administration      Not applicable

#### CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Mercuric chloride	-	500 lb

**California Proposition 65**      This product contains the following Proposition 65 chemicals.

Component	CAS-No	California Prop. 65	Prop 65 NSRL	Category
Mercuric chloride	7487-94-7	Developmental	-	Developmental

#### U.S. State Right-to-Know

**Regulations**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Mercuric chloride	X	X	X	X	-

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant Y

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**16. Other information**

**Prepared By** Health, Safety and Environmental Department  
Email: tech@alfa.com  
www.alfa.com

**Creation Date** 09-Apr-2010  
**Revision Date** 14-Feb-2020  
**Print Date** 14-Feb-2020  
**Revision Summary** SDS authoring systems update, replaces ChemGes SDS No. 7487-94-7.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**