# SAFETY DATA SHEET

**Creation Date** 09-Apr-2010 **Revision Date** 19-Jan-2018 **Revision Number** 3

## 1. Identification

**Product Name** **Mercury(II) chloride**

**Cat No. :** **AC201430000; AC201430010; AC201430250; AC201431000; AC201435000**

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

**Recommended Use** Laboratory chemicals.
**Uses advised against** Not for food, drug, pesticide or biocidal product use

**Details of the supplier of the safety data sheet**

**Company**
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

**Emergency Telephone Number**
For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
**CHEMTREC** Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

## 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 |

**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.

**Inhalation** Move 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.

**Ingestion** Do not induce vomiting. Call a physician or Poison Control Center immediately.

**Most important symptoms and effects** 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

**Notes to Physician** Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

**Unsuitable Extinguishing Media** No information available

**Flash Point** No information available
**Method -** No information available

**Autoignition Temperature**
**Explosion Limits**
**Upper** No data available
**Lower** No data available
**Sensitivity to Mechanical Impact** No information available
**Sensitivity to Static Discharge** 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**
Highly 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

**Personal Precautions** 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.

**Environmental Precautions** 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.

**Methods for Containment and Clean Up** Wear self-contained breathing apparatus and protective suit. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

## 7. Handling and storage

**Handling** Use only under a chemical fume hood. Wear personal protective equipment. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Do not ingest.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away 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/m³<br>Skin | (Vacated) Ceiling: 0.1 mg/m³ | IDLH: 10 mg/m³<br>TWA: 0.05 mg/m³<br>Ceiling: 0.1 mg/m³ | TWA: 0.05 mg/m³ |

*Legend*

*ACGIH - American Conference of Governmental Industrial Hygienists*
*OSHA - Occupational Safety and Health Administration*
*NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or 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

| | |
|---|---|
| **Physical State** | Solid |
| **Appearance** | White |
| **Odor** | Odorless |
| **Odor Threshold** | No information available |
| **pH** | 3.3 |
| **Melting Point/Range** | 277 °C / 530.6 °F |
| **Boiling Point/Range** | 302 °C / 575.6 °F |
| **Flash Point** | No information available |
| **Evaporation Rate** | Not applicable |
| **Flammability (solid,gas)** | No information available |
| **Flammability or explosive limits** | |
| **Upper** | No data available |
| **Lower** | No data available |
| **Vapor Pressure** | No information available |
| **Vapor Density** | Not applicable |
| **Specific Gravity** | 5.44 @ 25°C |
| **Solubility** | 7.4 g/100 ml (20°C) |
| **Partition coefficient; n-octanol/water** | No data available |
| **Autoignition Temperature** | |
| **Decomposition Temperature** | No information available |
| **Viscosity** | Not applicable |
| **Molecular Formula** | Cl2 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** Highly toxic fumes

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

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

**Acute Toxicity**

**Component Information**

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Mercuric chloride | 25.9 mg/kg ( Rat )<br>1 mg/kg ( Rat ) | LD50 = 41 mg/kg ( Rabbit )<br>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** None known

**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: 0.02 - 0.26 mg/L, 96h static (Cyprinus carpio)<br>LC50: = 0.4 mg/L, 96h semi-static (Lepomis macrochirus)<br>LC50: = 4.425 mg/L, 96h (Cyprinus carpio)<br>LC50: 0.014 - 0.019 mg/L, 96h flow-through (Oncorhynchus mykiss)<br>LC50: 0.13 - 0.19 mg/L, 96h static (Oncorhynchus mykiss)<br>LC50: = 0.155 mg/L, 96h (Pimephales promelas)<br>LC50: 0.1 - 0.182 mg/L, 96h flow-through (Pimephales promelas)<br>LC50: 0.096 - 0.133 mg/L, 96h static (Lepomis macrochirus)<br>LC50: 5.933 - 10.34 mg/L, 96h static (Poecilia reticulata)<br>LC50: = 0.041 mg/L, 96h (Poecilia reticulata) | Not listed | EC50=0.0015mg/L 48 h<br>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 |
| **Packing Group** | II |

**IMDG/IMO**

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

## 15. Regulatory information

**International Inventories**

| Component | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercuric chloride | X | X | - | 231-299-8 | - | | X | X | X | X | X |

**Legend:**
**X - Listed**
**E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.**
**F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.**
**N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.**
**P - Indicates a commenced PMN substance**
**R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.**
**S - Indicates a substance that is identified in a proposed or final Significant New Use Rule**
**T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.**
**XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).**
**Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.**
**Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.**

**U.S. Federal Regulations**

**TSCA 12(b)** Not applicable

**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**
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

| | |
|---|---|
| **Creation Date** | 09-Apr-2010 |
| **Revision Date** | 19-Jan-2018 |
| **Print Date** | 19-Jan-2018 |
| **Revision Summary** | This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). |

**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**