

## SAFETY DATA SHEET

Creation Date 09-Apr-2010

Revision Date 09-Feb-2024

Revision Number 5

### 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** Food, drug, pesticide or biocidal product use.

#### Details of the supplier of the safety data sheet

##### Company

Fisher Scientific Company  
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: 001-800-227-6701 / **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 |
| 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

|                                            |                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Advice</b>                      | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.                                                                                                                                                                                                                              |
| <b>Eye Contact</b>                         | In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.                                                                                                                                                                                                                              |
| <b>Skin Contact</b>                        | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.                                                                                                                                                                                                                    |
| <b>Inhalation</b>                          | Remove to fresh air. If not breathing, give artificial respiration. 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. CO <sub>2</sub> , dry chemical, dry sand, alcohol-resistant foam. |
| <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>         | No information available                                                                                                                                |
| <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

The product causes burns of eyes, skin and mucous membranes.

### 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. Thermal decomposition can lead to release of irritating gases and vapors.

### NFPA

**Health**  
4

**Flammability**  
1

**Instability**  
1

**Physical hazards**  
N/A

## 6. Accidental release measures

|                                             |                                                                                                                                                                                     |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal Precautions</b>                 | Use personal protective equipment as required. Evacuate personnel to safe areas. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid dust formation. |
| <b>Environmental Precautions</b>            | Should not be released into the environment.                                                                                                                                        |
| <b>Methods for Containment and Clean Up</b> | Sweep up and shovel into suitable containers for disposal. Avoid dust formation.                                                                                                    |

## 7. Handling and storage

### Handling

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

### Storage.

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from direct sunlight. Corrosives area. Incompatible Materials. Organic materials. Acids. Bases. Strong oxidizing agents. Ammonia. Sulfides. Lead. Metals. copper.

## 8. Exposure controls / personal protection

### Exposure Guidelines

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

#### Recommended Filter type:

Particulates filter conforming to EN 143.

#### 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               | No information available |
| Decomposition Temperature              | No information available |
| Viscosity                              | 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 )<br>1 mg/kg ( Rat ) | LD50 = 41 mg/kg ( Rabbit ) | 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: 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: 0.13 - 0.19 mg/L, 96h static (Oncorhynchus mykiss)<br>LC50: 0.014 - 0.019 mg/L, 96h flow-through (Oncorhynchus mykiss)<br>LC50: 0.02 - 0.26 mg/L, 96h static (Cyprinus carpio)<br>LC50: = 4.425 mg/L, 96h (Cyprinus carpio)<br>LC50: = 0.4 mg/L, 96h semi-static (Lepomis macrochirus)<br>LC50: = 0.041 mg/L, 96h (Poecilia reticulata)<br>LC50: 5.933 - 10.34 mg/L, 96h static (Poecilia reticulata)<br>LC50: = 0.155 mg/L, 96h (Pimephales promelas) | 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

|                             |                   |
|-----------------------------|-------------------|
| <b>Proper Shipping Name</b> | MERCURIC CHLORIDE |
| <b>Hazard Class</b>         | 6.1               |
| <b>Packing Group</b>        | II                |
| <b>IATA</b>                 |                   |
| <b>UN-No</b>                | UN1624            |
| <b>Proper Shipping Name</b> | MERCURIC CHLORIDE |
| <b>Hazard Class</b>         | 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 -<br>Active-Inactive | TSCA - EPA Regulatory<br>Flags |
|-------------------|-----------|------|--------------------------------------------------|--------------------------------|
| Mercuric chloride | 7487-94-7 | X    | ACTIVE                                           | -                              |

#### Legend:

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

X - Listed

'-' - Not Listed

#### TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)

Not applicable

#### TSCA 12(b) - Notices of Export

Not applicable

### International Inventories

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

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

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### U.S. Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372. Note that PBT chemicals are not eligible for the de minimis exemption. For these chemicals, supplier notification limits are provided.

> 0 % = no low concentration cut-off set, supplier notification limit applies.

| Component         | CAS No    | Weight % | SARA 313 - Threshold<br>Values % | SARA 313 - Reporting<br>thresholds |
|-------------------|-----------|----------|----------------------------------|------------------------------------|
| Mercuric chloride | 7487-94-7 | >95      | > 0 %                            | RT = 10 lb                         |

#### SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

#### CWA (Clean Water Act)

| Component | CWA - Hazardous<br>Substances | CWA - Reportable<br>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) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

| Component         | Hazardous Substances RQs | CERCLA Extremely Hazardous Substances RQs | SARA Reportable Quantity (RQ) |
|-------------------|--------------------------|-------------------------------------------|-------------------------------|
| 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

**Authorisation/Restrictions according to EU REACH**

| Component         | CAS No    | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances                                                         | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-------------------|-----------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Mercuric chloride | 7487-94-7 | -                                                                   | Use restricted. See item 75.<br>(see link for restriction details) Use restricted. See item 18.<br>(see link for restriction details) | -                                                                                                     |

**REACH links**

<https://echa.europa.eu/substances-restricted-under-reach>

## Safety, health and environmental regulations/legislation specific for the substance or mixture

| Component         | CAS No    | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|-------------------|-----------|----------------|------------------------------|---------------------------|--------------------------------------------|
| Mercuric chloride | 7487-94-7 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |

## Contains component(s) that meet a 'definition' of per &amp; poly fluoroalkyl substance (PFAS)?

Not applicable

## Other International Regulations

| Component         | CAS No    | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|-------------------|-----------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------|------------------------------------|
| Mercuric chloride | 7487-94-7 | Not applicable                                                                            | Not applicable                                                                           | X                          | Annex I - Y29                      |

## 16. Other information

## Prepared By

Regulatory Affairs  
Thermo Fisher Scientific  
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## Creation Date

09-Apr-2010

## Revision Date

09-Feb-2024

## Print Date

09-Feb-2024

## 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**