

# • SAFETY DATA SHEET

Version 6.9  
Revision Date 09/22/2025  
Print Date 09/23/2025

## SECTION 1. IDENTIFICATION

### 1.1 Product identifiers

Product name : Mercury  
Product Number : 215457  
Brand : SIGALD  
Index-No. : 080-001-00-0  
CAS-No. : 7439-97-6

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Scientific research and development, Reagent for analysis  
Uses advised against :  
The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

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

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES  
Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

### 1.4 Emergency telephone number

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

---

## SECTION 2. HAZARDS IDENTIFICATION

### GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

#### Hazards for the product as supplied

Acute toxicity : Category 2

SIGALD - 215457

Page 1 of 15

(Inhalation)

Reproductive toxicity : Category 1B

Specific target organ toxicity - repeated exposure : Category 1

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

### Other hazards

None known.

### GHS label elements

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H330 Fatal if inhaled.  
H360 May damage fertility or the unborn child.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P284 Wear respiratory protection.

#### Response:

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Immediately call a POISON CENTER/ doctor.  
P308 + P313 IF exposed or concerned: Get medical

advice/ attention.  
P391 Collect spillage.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

---

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Substance

**Components**

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
mercury	7439-97-6*	>= 90 - <= 100	-

\* Indicates that the identifier is a CAS No.  
Actual concentration is withheld as a trade secret

---

**SECTION 4. FIRST AID MEASURES**

- General advice : First aiders need to protect themselves. Show this safety data sheet to the doctor in attendance.
- If inhaled : After inhalation: fresh air. Immediately call in physician.  
If breathing stops: immediately apply artificial respiration, if necessary also oxygen.
- In case of skin contact : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.
- In case of eye contact : After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.
- If swallowed : After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.
- Most important symptoms and effects, both acute and delayed : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Protection of first-aiders : For personal protection see section 8.

Notes to physician : No data available

---

## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : For this substance/mixture no limitations of extinguishing agents are given.

Specific hazards during fire fighting : Not combustible.

Ambient fire may liberate hazardous vapours.

Hazardous combustion products : Mercury/mercury oxides.

Specific extinguishing methods : No data available

Further information : Suppress (knock down) gases/vapours/mists with a water spray jet.  
Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for fire-fighters : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

---

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Advice for non-emergency personnel:  
Do not breathe vapours, aerosols.  
Avoid substance contact.  
Ensure adequate ventilation.  
Evacuate the danger area, observe emergency procedures, consult an expert.  
Advice for emergency responders:  
For personal protection see section 8.

- Environmental precautions : Do not let product enter drains.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material and dispose of as hazardous waste.  
Keep in suitable, closed containers for disposal.  
In some instances, a mercury spill kit may be used.  
Please consult with your site EHS representative to determine the most appropriate clean up method.
- Cover drains. Collect, bind, and pump off spills.  
Observe possible material restrictions (see sections 7 and 10).  
Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

## SECTION 7. HANDLING AND STORAGE

For precautions see section 2.2.

- Advice on safe handling : Work under hood. Do not inhale substance/mixture.  
Avoid generation of vapours/aerosols.
- Further information on storage conditions : Tightly closed.  
Keep in a well-ventilated place.  
Keep locked up or in an area accessible only to qualified or authorised persons.
- Storage class : 6.1B, Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials
- Recommended storage temperature : Recommended storage temperature see product label.
- Further information on storage stability : Store under inert gas.
- Packaging material : Suitable material: HR-HDPE Bottle/Jar

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis

SIGALD - 215457

Page 5 of 15

mercury	7439-97-6	CEIL	1 mg/10m3	OSHA Z-2
		TWA	0.025 mg/m3 (Mercury)	ACGIH

**Engineering measures** : No data available

**Personal protective equipment**

Respiratory protection : required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: : Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Hand protection**

Material : Nitrile rubber  
 Break through time : 480 min  
 Glove thickness : 0.11 mm  
 Protective index : Full contact  
 Manufacturer : KCL 741 Dermatril® L

Material : Nitrile rubber  
 Break through time : 480 min  
 Glove thickness : 0.11 mm  
 Protective index : Splash contact  
 Manufacturer : KCL 741 Dermatril® L

Remarks : This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Eye protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).  
 Safety glasses

Skin and body protection : protective clothing

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

---

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : silver, white

Odor : odourless

Odor Threshold : No data available  
pH : No data available

Melting point/ range : -37.97 °F / -38.87 °C  
Method: lit.

Boiling point/boiling range : 673.9 °F / 356.6 °C  
Method: lit.

Flash point : Not applicable

Evaporation rate : No data available

Flammability (solid, gas) : The product is not flammable.

Flammability (liquids) : No data available

Burning rate : No data available

Upper explosion limit /  
Upper flammability limit : No data available

Lower explosion limit /  
Lower flammability limit : No data available

Vapor pressure : < 0.01 hPa (68 °F / 20 °C)  
1 hPa (259 °F / 126 °C)

Relative vapour density : 6.93  
(Air = 1.0)

Relative density : No data available

SIGALD - 215457

Page 7 of 15

Density	: 13.55 g/cm <sup>3</sup> (77 °F / 25 °C)
Solubility(ies)	
Water solubility	: 0.00006 g/l (77 °F / 25 °C)
Partition coefficient: n-octanol/water	: Not applicable for inorganic substances
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: 1.55 mPa.s (68 °F / 20 °C)
Viscosity, kinematic	: No data available
Flow time	: No data available
Explosive properties	: No data available
Oxidizing properties	: none
Molecular weight	: 200.59 g/mol
Particle characteristics	
Particle size	: No data available

---

## SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No data available
Chemical stability	: The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	: Risk of explosion with: Acetylene Alkali metals Aluminium Amines Ammonia chlorine dioxide Potassium sodium oxalic acid perchlorates Risk of ignition or formation of inflammable gases or vapours with:

Chlorine  
silanes  
Oxygen  
Generates dangerous gases or fumes in contact with:  
Nitric acid  
Exothermic reaction with:  
Bromine  
Metals  
acetylidene  
Oxygen

Conditions to avoid : no information available

Incompatible materials : Aluminium  
Lead  
Copper  
silver  
Zinc  
zinc alloys  
Tin

Hazardous decomposition products : In the event of fire: see section 5

---

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

Oral: No data available

LC50 Inhalation - Rat - male - 2 h - < 27 mg/m<sup>3</sup> - vapour

Dermal: No data available

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitization

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

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: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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

SIGALD - 215457

Page 9 of 15

on OSHA's list of regulated carcinogens.

**Reproductive toxicity**

Presumed human reproductive toxicant

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

**Aspiration hazard**

No data available

**11.2 Additional Information**

RTECS: OV4550000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

---

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Components:**

**mercury:**

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 0.160 mg/l  
Exposure time: 96 h  
Test Type: mortality

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : Remarks: No data available

M-Factor (Chronic aquatic toxicity) : 100

**Persistence and degradability**

**Components:**

**mercury:**

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

## Bioaccumulative potential

### Components:

#### mercury:

Bioaccumulation : Species: Carassius auratus (goldfish)  
Bioconcentration factor (BCF): 155,986  
Exposure time: 1,789 d  
Concentration: 0.25 µg/l

Partition coefficient: n-octanol/water : Remarks: Not applicable for inorganic substances

## Mobility in soil

### Components:

#### mercury:

Stability in soil : Remarks: No data available

## Other adverse effects

### Components:

#### mercury:

Additional ecological information : No data available

---

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

---

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### IATA-DGR

UN/ID No. : UN 2809  
Proper shipping name : Mercury  
Class : 8  
Subsidiary risk : 6.1  
Packing group : III  
Labels : Class 8 - Corrosive substances, Division 6.1 - Toxic substances  
Packing instruction (cargo aircraft) : 868  
Packing instruction : 868

SIGALD - 215457

Page 11 of 15

(passenger aircraft)

**IMDG-Code**

UN number : UN 2809  
Proper shipping name : MERCURY

Class : 8  
Subsidiary risk : 6.1  
Packing group : III  
Labels : 8 (6.1)  
EmS Code : F-A, S-B  
Marine pollutant : yes

**Transport in bulk according to IMO instruments**

Not applicable for product as supplied.

**National Regulations**

**49 CFR Road**

UN/ID/NA number : UN 2809  
Proper shipping name : Mercury

Class : 8  
Subsidiary risk : 6.1  
Packing group : III  
Labels : Class 8 - Corrosive substances, Division 6.1 - Toxic substances  
ERG Code : 172  
Marine pollutant : no

Poison Inhalation Hazard : No

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

---

**SECTION 15. REGULATORY INFORMATION**

**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
mercury	7439-97-6	1	1
mercury	7439-97-6	1	1 (D009)

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312** : Acute Health Hazard

**Hazards** Chronic Health Hazard

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:  
mercury 7439-97-6 >= 90 - <= 100 %

**US State Regulations**

**Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

mercury 7439-97-6

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

mercury 7439-97-6

**Washington Chemicals of High Concern**

mercury 7439-97-6

**California Prop. 65**

WARNING: This product can expose you to chemicals including mercury, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**International Regulations**

Rotterdam Convention (Prior Informed Consent) : mercury

**The components of this product are reported in the following inventories:**

TSCA : All substances listed as active on the TSCA inventory

**TSCA list**

The following substance(s) is/are subject to a Significant New Use Rule:  
mercury 7439-97-6 See 40 CFR § 721.10068; Final Rule

The following substance(s) is/are subject to TSCA 12(b) export notification requirements:  
mercury 7439-97-6

---

**SECTION 16. OTHER INFORMATION**

**Full text of other abbreviations**

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
OSHA Z-2 : USA. Occupational Exposure Limits (OSHA) - Table Z-

ACGIH / TWA : 8-hour, time-weighted average  
 OSHA Z-2 / CEIL : Acceptable ceiling concentration

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Copyright 2025 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

Revision Date : 09/22/2025

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [mlsbranding@sial.com](mailto:mlsbranding@sial.com).

US / EN