

## SAFETY DATA SHEET

# Mercury

Date of Preparation: 06/19/2014

SDS #: 004-16015-00MSDS

### SECTION 1: IDENTIFICATION

**Product Identification:** Mercury, Hg

**CAS Number:** 7439-97-6

**Other Designations:** Quicksilver

**Volumes:** 5 lb (1 liter), 1.5 oz, 7 ml

**Recommended Use:** For laboratory use only.

**Restrictions:** For laboratory use only.

**Supplier Information:**

Micromeritics Instrument Corp.  
4356 Communications Drive  
Norcross, GA 30093-2901 USA

Contact: Human Resources  
Phone: (770) 662-3636  
Fax: (770) 662-3696

**Manufacturer:** Micromeritics Instrument Corp., 4356 Communications Drive, Norcross, GA 30093-2901 USA, Phone: (770) 662-3678 D.F. Goldsmith Chemical & Metal Co., 909 Pitner Avenue, Evanston, IL 60202, Phone: (800)424-9300, Contact: (847)869-7800

### SECTION 2: HAZARDS IDENTIFICATION

**GHS Classification:**

Acute toxicity, Inhalation (Category 2)

Reproductive toxicity (Category 1B)

Specific target organ toxicity - repeated exposure (Category 1)

Acute aquatic toxicity (Category 1)

Chronic aquatic toxicity (Category 1)

**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.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

**Pictograms:**



**Precautionary Statements:**

- 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/ vapors/ 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.
- P281: Use personal protective equipment as required.
- P284: Wear respiratory protection.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P310: Immediately call a POISON CENTER or doctor/ physician.
- P320: Specific treatment is urgent (see supplemental first aid instructions on this label).
- P391: Collect spillage.
- P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
- P405: Store locked up.
- P501: Dispose of contents/ container to an approved waste disposal plant.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS Number	% wt
Mercury (Metallic Mercury)	7439-97-6	100

**Trace Impurities:**

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
	TWA	STEL	TWA	STEL	TWA	STEL	IDLH
Mercury	0.1 mg/m <sup>3</sup>	none estab.	0.025 mg/m <sup>3</sup>	none estab.	0.05 mg/m <sup>3</sup>	none estab.	none estab.

All the components of this material are on the toxic substances control act chemical substances inventory.

## SECTION 4: FIRST-AID MEASURES

### Description of 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:** Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**In case of eye contact:** Flush eyes with water as a precaution.

**If swallowed:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Most important symptoms and effects, both acute and delayed:** The most important known symptoms and effects are described in the labelling and/or in section 11

**Indication of any immediate medical attention and special treatment needed:** no data available

## SECTION 5: FIRE-FIGHTING MEASURES

**Flammability Classification:** Not applicable

**Extinguishing Media:** Dry chemical, carbon dioxide, water spray or foam.

**Unusual Fire or Explosion Hazards:** Use water in flooding amounts as a fog. Avoid breathing corrosive and poisonous vapors. Keep upwind.

**Hazardous Combustion Products:** Not applicable

**Fire-Fighting Instructions:** For larger fires, use water spray, fog or alcohol foam (1984 Emergency Response Guide, DOT P 5800.3). Move containers from area if possible. Cool containers exposed to flames with water from side until well after fire is out. Use agents suitable for type of fire.

**Fire-Fighting Equipment:** Not applicable

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

**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 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.

**Reference to other sections:** For disposal see section 13.

## SECTION 7: HANDLING AND STORAGE

**Precautions for safe handling:** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. For precautions see section 2.

Do not store near chemicals that can create explosive mixtures with mercury (Acetylene, ammonia, boron phosphodiiodide, chlorine dioxide, methyl azide, ground sodium carbide)

Minimize the amount of mercury in use or in storage by ordering on an as needed basis

Use containers made of impact-resistant material

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**Specific end use(s):** Apart from the uses mentioned in section 1 no other specific uses are stipulated.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure controls

**Appropriate engineering controls:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

### Personal protective equipment

**Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Body Protection:** Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) 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).

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

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Flash Point:** Not applicable

**Flash Point Method:** Not applicable

**Burning Rate:** Not applicable

**Autoignition Temperature:** Not applicable

**LEL:** Not applicable

**UEL:** Not applicable

**Physical State:** Liquid Metal

**Appearance and Odor:** Silver-White, Heavy mobile

**Odor Threshold:** Not applicable

**Vapor Pressure:** 0.0012 mm Hg at 20°C

**Vapor Density (Air=1):** 7.0

**Formula Weight:** Not applicable

**Density:** Not applicable

**Specific Gravity (H<sub>2</sub>O=1):** 13.6

**pH:** N/A

**Water Solubility:** Insoluble

**Other Solubilities:** Not applicable

**Boiling Point:** 675F (375C)

**Melting Point:** -38F (-39C)

**Viscosity:** Not applicable

**Refractive Index:** Not applicable

**Surface Tension:** Not applicable

**% Volatile:** Not applicable

**Evaporation Rate:** Not applicable

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** no data available

**Chemical stability:** Stable under recommended storage conditions.

**Possibility of hazardous reactions:** no data available

**Conditions to avoid:** no data available

**Incompatible materials:** Strong oxidizing agents, Ammonia, Azides, Nitrates, Chlorates, Copper

**Hazardous decomposition products:** Other decomposition products - no data available

In the event of fire: see section 5

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on toxicological effects

**Acute toxicity:** no data available

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

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: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Mercury)

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.

**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

### Additional Information

RTECS: OV4550000

Mercury accumulates in almost all tissues, especially in the: Kidney, Effects due to ingestion may include: Nausea, Vomiting, Diarrhea, intestinal bleeding

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

## SECTION 12: ECOLOGICAL INFORMATION

**Toxicity:** Toxicity to fish mortality LC50 - Cyprinus carpio (Carp) - 0.160 mg/l - 96 h

**Persistence and degradability:** no data available

### 12.3 Bioaccumulative potential

[WWW.MICROMERITICS.COM](http://WWW.MICROMERITICS.COM) | 4356 COMMUNICATIONS DRIVE, NORCROSS, GA 30093 | 770-662-3636

Bioaccumulation - Carassius auratus (goldfish) - 1,789 d- 0.25 µg/l

Bioconcentration factor (BCF): 155,986

**Mobility in soil:** no data available

**Results of PBT and vPvB assessment:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

## SECTION 13: DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Product:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging:** Dispose of as unused product.

## SECTION 14: TRANSPORT INFORMATION

### DOT (US)

UN number: 2809      Class: 8 (6.1)      Packing group: III

Proper shipping name: A,W Mercury

Reportable Quantity (RQ): 1 lbs

Marine pollutant: No

Poison Inhalation Hazard: No

### IMDG

UN number: 2809      Class: 8 (6.1)      Packing group: III EMS-No: F-A, S-B

Proper shipping name: MERCURY

Marine pollutant: No

### IATA

UN number: 2809      Class: 8 (6.1)      Packing group: III

Proper shipping name: Mercury

## SECTION 15: REGULATORY INFORMATION

**SARA 302 Components:** SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components:** SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards:** Acute Health Hazard, Chronic Health Hazard

## SECTION 16: OTHER INFORMATION

**Prepared By:** Zuniga, A.

**Revision Notes:** Not Applicable

**Additional Hazard Rating Systems:** Not Applicable

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