



Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810

Number:  
Issue Date

HGLM-3851  
04/25/11

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## MATERIAL SAFETY DATA SHEET

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### 1 CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Description MERCURY-202 METAL (202Hg)

Cambridge Isotope Laboratories, Inc.  
50 Frontage Rd  
ANDOVER, MA 01810  
USA

E-mail [cilsales@isotope.com](mailto:cilsales@isotope.com)  
Web Site [www.isotope.com](http://www.isotope.com)

#### Phone Numbers

Emergency Contact Chemtrec  
Emergency Phone 1-800-424-9300 (24 hours)  
  
Customer Service 1-800-322-1174 (8:30-5:30 EST)  
Phone  
Transportation 1-202-483-7616 (24 hours)

### 2 HAZARDS IDENTIFICATION

#### OSHA Hazards

Target Organ Effect, Highly toxic by inhalation, Respiratory sensitizer  
Reproductive hazard

#### Target Organs

Kidney

#### GHS Classification

Acute toxicity, Inhalation (Category 1)  
Respiratory sensitization (Category 1)  
Reproductive toxicity (Category 1A)  
Specific Target Organ Toxicity - Repeated exposure (Category 1)  
Hazardous to the aquatic environment, Chronic hazard (Category 1)

#### GHS Label Information

Signal Word Danger

#### Hazards Identification

Health hazard  
Skull & crossbones  
Environment



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### Hazard Statement(s)

Fatal if inhaled.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May damage fertility or the unborn child.  
Causes damage to organs through prolonged or repeated exposure.  
Very toxic to aquatic life with long lasting effects.

### Precautionary Statement(s)

Obtain special instructions before use.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Avoid release to the environment.  
Wear respiratory protection.  
Immediately call POISON CENTER or doctor/physician.  
Dispose of contents/container to an approved waste disposal plant.

### HMIS Ratings

Chronic Health	*
Physical	0
Flammability	0
Health	4

### NFPA Codes

Fire	0
Health	4
Reactivity	0

### Potential Health Effects

Eyes	May cause eye irritation.
Ingestion	May be harmful if swallowed.
Inhalation	May be fatal if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation. May be fatal if absorbed through skin.

## 3 COMPOSITION / INFORMATION ON INGREDIENTS

### Composition / Information on Ingredients

Chemical Formula	Hg
Molecular Weight	201.94
CAS No.	14191-86-7
EC No.	231-106-7
Index No.	080-001-00-0

## 4 FIRST AID MEASURES

### First Aid Measures



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Eyes	Flush eye with water for 15 minutes. Get medical attention.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Inhalation	If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
Skin	Wash with soap and plenty of water. Consult a physician.
Additional Information	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

### 5 FIRE FIGHTING MEASURE

#### Fire Fighting Measures

Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
Fire Fighting Equipment	Wear self contained breathing apparatus for fire fighting if necessary.

### 6 ACCIDENTAL RELEASE MEASURES

#### Accidental Release Measures

Personal Precautions	Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe area.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods and materials for containment and cleanup	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### 7 HANDLING AND STORAGE

#### Precautions for Safe Handling

Handling	Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.
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#### Conditions for Safe Storage



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Storage Store at room temperature away from light and moisture.

### 8 EXPOSURE CONTROL / PERSONAL PROTECTION

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

CHEMICAL NAME	TWA	OSHA PEL	ACGIH TLV
MERCURY-202 METAL		0.05 mg/M <sup>3</sup>	0.02 mg/M <sup>3</sup>

Personal Protection

Eyes - Face Wear safety glasses with side shields (or goggles) and a face shield.

Skin Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory When appropriate, use NIOSH/CEN approved respirator.

Protective Clothing Wear suitable protective clothing and gloves.

Work Hygienic Practices Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties (Unlabeled Compound)

Form	Liquid
pH	No data available
Melting Point	- 38.87 °C (- 37.97 °F) - lit
Boiling Point	356.6 °C (673.9 °F) - lit
Flashpoint	Not applicable
Lower Explosion Limit	No data available
Upper Explosion Limit	No data available
Vapor Pressure	< 0.01 hPa (< 0.01 mmHg) at 20 °C (68 °F)
Vapor Density	6.93 - (Air = 1.0)
Solubility in Water	No data available
Auto Ignition Temperature	No data available

### 10 STABILITY AND REACTIVITY

Stability and Reactivity



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Chemical Stability	Stable if stored under recommended conditions.
Conditions to Avoid	Not available
Hazardous decomposition products	Formed under fire conditions: Mercury/mercury oxides
Materials to avoid	Strong oxidizing agents, Ammonia, Azides, Nitrates, Chlorates, Copper

### 11 TOXICOLOGICAL INFORMATION

#### Acute Toxicity

Serious Damage/Eye Irritation No data available

Skin Corrosion/Irritation No data available

Inhalation No data available

Respiratory or Skin Sensitization May cause allergic respiratory reaction.

Germ Cell Mutagenicity Not available

Carcinogenicity This product is or contains a component that is not classifiable as to its carcinogenicity on its IARC, ACGIH, NTP, or EPA classification.

IARC 3 - Group 3: not classifiable as to its carcinogenicity to humans.  
ACGIH No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.  
NTP \*\*\* - STATEMENT 942 \*\*\*  
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 Known human reproductive toxicant.

#### Specific Target Organ Toxicity

Single Exposure No data available  
Repeated Exposure Inhalation - Causes damage to organs through prolonged or repeated exposure

#### Other Information

RTECS OV4550000



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### 12 ECOLOGICAL INFORMATION

#### Toxicity

Toxicity to Fish LC50 Labeo rohita - 0.018 mg/l - 96 h

Persistence and Degradability Not available

Bioaccumulative Potential Bioaccumulation: Carassius auratus (goldfish) - 1,789 d  
Bioconcentration factor (BCF): 155,986

Mobility in Soil Not available

PBT and vPvB Assessment Not available

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.

### 13 DISPOSAL CONSIDERATIONS

#### Disposal Considerations

Product Disposal Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.

### 14 TRANSPORT INFORMATION

#### Transportation Information-DOT/IATA/IMDG

UN Number 2809  
Prop. Ship. Name Mercury  
Hazard Class 8  
Packing Group III  
Reportable Quantity (RQ) DOT US 1 lbs  
Marine Pollutant No  
Poison Inhalation Hazard No



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### 15 REGULATORY INFORMATION

#### Regulatory Information

Target Organ Effect, Highly toxic by inhalation, Respiratory sensitizer  
Reproductive hazard

#### SARA

Sara 302 No chemicals in this material are subject to the reporting requirements.

Component

Sara 313 No chemicals in this material are subject to the reporting requirements.

Component

#### SARA 311/312 Hazards

Acute (Y/N) Y

Chronic (Y/N) Y

#### STATE REGULATIONS

Massachusetts Yes

Right to Know

Pennsylvania Right Yes

to Know

New Jersey Right Yes

to Know

California Proposition 65 WARNING! This product contains a chemical known by the state of California to cause birth defects or other reproductive harm.

#### Canada

DSL Status All components are on the Canadian DSL list.

#### EU

Hazard Toxic. Dangerous for environment.

#### Safety Statements

Keep container tightly closed.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

This material and its container must be disposed of as hazardous waste.

Avoid release to the environment. Refer to special instructions/safety data sheet.

#### Risk Statements

Toxic by inhalation.



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Danger of cumulative effects.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 16 OTHER INFORMATION

Additional MSDS Information      This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Approved On                      04/25/11  
Version Number                 2