

# Material Safety Data Sheet

## Mercury (II) Iodide

ACC# 13820

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Mercury (II) Iodide  
**Catalog Numbers:** M166I 100, M166I 50, M166I 500, M166I-100, M166I-50, M166I-500, M166I100, M166I50, M166I500, S80075  
**Synonyms:** Mercuric Iodide; Mercury Diiodide; Red Mercuric Iodide.  
**Company Identification:**  
Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410  
**For information, call:** 201-796-7100  
**Emergency Number:** 201-796-7100  
**For CHEMTREC assistance, call:** 800-424-9300  
**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7774-29-0	MERCURIC IODIDE	>99	231-873-8

**Hazard Symbols:** T+ N  
**Risk Phrases:** 26/27/28 33

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: red solid. **Danger!** Highly toxic. Light sensitive. This substance has caused adverse reproductive and fetal effects in animals. May cause kidney damage. Poison! May cause central nervous system effects. Causes digestive and respiratory tract burns. Causes eye and skin burns.  
**Target Organs:** Kidneys, central nervous system.

#### Potential Health Effects

**Eye:** Contact may cause severe eye irritation and possible eye damage.  
**Skin:** May cause severe skin irritation. May be absorbed through the skin.  
**Ingestion:** May be fatal if swallowed. Poison by ingestion. May cause kidney damage. May cause severe digestive tract irritation with abdominal pain, nausea, vomiting and diarrhea. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract. Can cause nervous system damage.  
**Inhalation:** May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. May cause effects similar to those described for ingestion.  
**Chronic:** Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. Prolonged or repeated exposure may cause adverse reproductive effects. May cause

fetal effects.

## Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation.

**Notes to Physician:** Treat symptomatically and supportively.

**Antidote:** The use of Dimercaprol or BAL (British Anti-Lewisite) as a chelating agent should be determined by qualified medical personnel.

## Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Combustion generates toxic fumes.

**Extinguishing Media:** For small fires, use water spray, dry chemical, carbon dioxide or chemical foam.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 3; Flammability: 0; Instability: 0

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Store protected from light.

**Storage:** Do not store in direct sunlight. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Poison room locked.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
MERCURIC IODIDE	none listed	none listed	none listed

**OSHA Vacated PELs:** MERCURIC IODIDE: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** 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:** Wear appropriate gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

## Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** red

**Odor:** none reported

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** 662 deg F

**Freezing/Melting Point:** 498.2 deg F

**Decomposition Temperature:** Not available.

**Solubility:** Insoluble in water.

**Specific Gravity/Density:** 6.3600

**Molecular Formula:** HgI<sub>2</sub>

**Molecular Weight:** 454.399

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** High temperatures, incompatible materials, light, dust generation, excess heat.

**Incompatibilities with Other Materials:** Strong oxidizing agents, chlorine trifluoride, potassium, sodium, light.

**Hazardous Decomposition Products:** Hydrogen iodide, mercury/mercury oxides.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:**

CAS# 7774-29-0: OW5250000

**LD50/LC50:**

CAS# 7774-29-0:

Oral, mouse: LD50 = 17 mg/kg;

Oral, rat: LD50 = 18 mg/kg;

Skin, rat: LD50 = 75 mg/kg;

**Carcinogenicity:**

CAS# 7774-29-0:

**IARC:** IARC Group 3 - not classifiable (listed as Mercury inorganic compounds).**Epidemiology:** No information available.**Teratogenicity:** Embryo or Fetus: Death, inhalation-rat TCLo=4870ng/m<sup>3</sup>/24H; Extra-embryonic structures, inhalation-rat TCLo=450 ng/m<sup>3</sup>/24H; Fetotoxicity, inhalation-rat TCLo=450ng/m<sup>3</sup>/24H.**Reproductive Effects:** Fertility: Post-implantation mortality, inhalation-rat TCLo=4870ng/m<sup>3</sup>/24H.**Neurotoxicity:** No information available.**Mutagenicity:** Please refer to RTECS# OW5250000 for specific information.**Other Studies:** See actual entry in RTECS for complete information.

## Section 12 - Ecological Information

**Ecotoxicity:** No data available. No information available.**Environmental:** No information reported.**Physical:** No information available.**Other:** May be toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
<b>Shipping Name:</b>	MERCURY IODIDE				MERCURY IODIDE
<b>Hazard Class:</b>	6.1				6.1
<b>UN Number:</b>	UN1638				UN1638

Packing Group: II

II

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 7774-29-0 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### SARA

#### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

#### SARA Codes

CAS # 7774-29-0: acute, chronic.

#### Section 313

This material contains MERCURIC IODIDE (listed as Mercury compounds), 99%, (CAS# 7774-29-0) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

#### Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

#### Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

#### STATE

CAS# 7774-29-0 can be found on the following state right to know lists: New Jersey.  
 WARNING: This product contains MERCURIC IODIDE, listed as 'Mercury compounds', a chemical known to the state of California to cause birth defects or other reproductive harm. California No Significant Risk Level: None of the chemicals in this product are listed.

### European/International Regulations

#### European Labeling in Accordance with EC Directives

#### Hazard Symbols:

T+ N

#### Risk Phrases:

R 26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.  
 R 33 Danger of cumulative effects.  
 R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety Phrases:**

S 13 Keep away from food, drink and animal feeding stuffs.

S 28 After contact with skin, wash immediately with...

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

**WGK (Water Danger/Protection)**

CAS# 7774-29-0: 3

**Canada - DSL/NDSL**

CAS# 7774-29-0 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of D1A, D2B.

**Canadian Ingredient Disclosure List**

CAS# 7774-29-0 is listed on the Canadian Ingredient Disclosure List.

**Exposure Limits**

CAS# 7774-29-0: OEL-AUSTRALIA:TWA 0.05 mg(Hg)/m<sup>3</sup>;Skin JANUARY 1993  
 OEL-BELGIUM:TWA 0.05 mg(Hg)/m<sup>3</sup>;Skin JANUARY 1993 OEL-CZECHOSLOVAKIA  
 :TWA 0.05 mg(Hg)/m<sup>3</sup>;STEL 0.15 mg(Hg)/m<sup>3</sup> OEL-DENMARK:TWA 0.05 mg(Hg)/m<sup>3</sup>  
 3 JANUARY 1993 OEL-FINLAND:TWA 0.05 mg(Hg)/m<sup>3</sup> JANUARY 1993 OEL-FRA  
 NCE:TWA 0.05 mg(Hg)/m<sup>3</sup> JANUARY 1993 OEL-GERMANY:TWA 0.01 ppm (0.1 mg  
 (Hg)/m<sup>3</sup>) JANUARY 1993 OEL-HUNGARY:TWA 0.02 mg(Hg)/m<sup>3</sup>;STEL 0.04 mg(Hg)  
 )/m JANUARY 1993 OEL-JAPAN:TWA 0.05 mg(Hg)/m<sup>3</sup> JANUARY 1993 OEL-THE  
 NETHERLANDS:TWA 0.05 mg(Hg)/m<sup>3</sup>;STEL 0.15 mg(Hg)/m<sup>3</sup> OEL-THE PHILIPPINE  
 S:TWA 0.05 mg(Hg)/m<sup>3</sup> JANUARY 1993 OEL-POLAND:TWA 0.01 mg(Hg)/m<sup>3</sup> JAN  
 UARY 1993 OEL-RUSSIA:TWA 0.05 mg(Hg)/m<sup>3</sup>;STEL 0.01 mg(Hg)/m<sup>3</sup> JANUARY 1  
 993 OEL-SWEDEN:TWA 0.05 mg(Hg)/m<sup>3</sup> JANUARY 1993 OEL-THAILAND:STEL 0.  
 05 mg(Hg)/m<sup>3</sup> JANUARY 1993 OEL-UNITED KINGDOM:TWA 0.05 mg(Hg)/m<sup>3</sup>;STEL  
 0.15 mg(Hg)/m<sup>3</sup> OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH  
 TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

**Section 16 - Additional Information**

**MSDS Creation Date:** 12/12/1997

**Revision #4 Date:** 3/18/2003

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