



Health	3
Fire	0
Reactivity	0
Personal Protection	E

# Material Safety Data Sheet

## Mercuric iodide red MSDS

### Section 1: Chemical Product and Company Identification

**Product Name:** Mercuric iodide red

**Catalog Codes:** 10904

**CAS#:** 7774-29-0

**RTECS:** OW5250000

**TSCA:** TSCA 8(b) inventory: Mercuric iodide

**CI#:** Not applicable.

**Synonym:** Mercury (II) Iodide

**Chemical Name:** Mercuric Iodide

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

**Contact Information:**

**Finar Limited**

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### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Mercuric iodide red	7774-29-0	100

**Toxicological Data on Ingredients:** Mercuric iodide: ORAL (LD50): Acute: 18 mg/kg [Rat]. 17 mg/kg [Mouse]. DERMAL (LD50): Acute: 75 mg/kg [Rat].

### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Very hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation. Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

**Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, gastrointestinal tract, skin, central nervous system (CNS), teeth. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

### Section 4: First Aid Measures

**Eye Contact:**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

**Skin Contact:**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

**Ingestion:**

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Serious Ingestion:** Not available.

## Section 5: Fire and Explosion Data

**Flammability of the Product:** Non-flammable.

**Auto-Ignition Temperature:** Not applicable.

**Flash Points:** Not applicable.

**Flammable Limits:** Not applicable.

**Products of Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** Not applicable.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:** Not applicable.

**Special Remarks on Fire Hazards:** Combination of Chlorine Trifluoride and HgI<sub>2</sub> results in reaction with flame.

**Special Remarks on Explosion Hazards:** Sodium + Mercuric Iodide or Potassium + Mercuric Iodide produces strong explosion on impact.

## Section 6: Accidental Release Measures

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container.

**Large Spill:**

Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## Section 7: Handling and Storage

### Precautions:

Keep locked up.. Do not ingest. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as alkalis.

### Storage:

Light Sensitive. Store in light resistant containers. Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 24°C (75.2°F).

## Section 8: Exposure Controls/Personal Protection

### Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Personal Protection:

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

### Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

### Exposure Limits:

TWA: 0.01 (mg/m<sup>3</sup>) from OSHA (PEL) [United States] TWA: 0.05 CEIL: 0.15 from ACGIH (TLV) [United States] Consult local authorities for acceptable exposure limits.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid. (Powdered solid.)

**Odor:** Odorless.

**Taste:** Practically Tasteless.

**Molecular Weight:** 454.4 g/mole

**Color:** Red.

**pH (1% soln/water):** Not applicable.

**Boiling Point:** 350°C (662°F)

**Melting Point:** 259°C (498.2°F)

**Critical Temperature:** Not available.

**Specific Gravity:** 6.25 @ 25 C(Water = 1)

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water, acetone.

**Solubility:**

Partially soluble in acetone. Very slightly soluble in diethyl ether. Practically insoluble in chloroform, carbon disulfides, water. Very slightly soluble in alcohol, olive oil, and ethyl acetate. Readily soluble in alkali iodides. Partially soluble in castor oil.

**Section 10: Stability and Reactivity Data**

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Incompatible materials.

**Incompatibility with various substances:** Reactive with alkalis.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:**

Light Sensitive. It becomes yellow at 130 C. Aluminum foil is unsuitable as a packing material in contact with mercury(II)salts in presence of moisture, when vigorous amalgamation ensues. Incompatible with Acetylene, ammonia, chlorine dioxide, azides, calcium(amalgam formation), sodium carbide, lithium, rubidium, copper. Also incompatible with bromides, ammonia, chlorides, cyanides, copper and lead salts, iodoform and hydrogen peroxide.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

**Section 11: Toxicological Information**

**Routes of Entry:** Absorbed through skin. Dermal contact. Inhalation. Ingestion.

**Toxicity to Animals:**

Acute oral toxicity (LD50): 17 mg/kg [Mouse]. Acute dermal toxicity (LD50): 75 mg/kg [Rat].

**Chronic Effects on Humans:**

May cause damage to the following organs: kidneys, gastrointestinal tract, skin, central nervous system (CNS), teeth.

**Other Toxic Effects on Humans:** Very hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals:**

Lowest Published Lethal Dose: LDL [Man] - Route: Oral; Dose: 357 mg/kg

**Special Remarks on Chronic Effects on Humans:**

May cause adverse reproductive effects(male and female fertility and damage to the developing fetus) based on animal data.

**Special Remarks on other Toxic Effects on Humans:**

Acute Potential Health Effects: Skin: Causes irritation. Can be absorbed through skin with symptoms similar to ingestion. Eyes: Causes eye irritation. May cause eye burns and eye damage (ulcerations of the cornea, and conjunctiva). Inhalation: Causes irritation of the respiratory tract with symptoms such as sore throat, coughing, pain, tightness in the chest, breathing difficulties (shortness of breath), headache. Pneumonitis may develop. Can be absorbed through inhalation with symptoms similar to ingestion. Ingestion: Highly toxic. May be fatal if swallowed. Causes gastrointestinal tract irritation. Symptoms of acute poisoning may include burning pain in the mouth and pharynx, epigastric pain, abdominal pain, ashen discoloration of the mucous membranes in the mouth and pharynx, excess salivation and thirst, vomiting, diarrhea, hypermotility, bloody feces, metallic taste, considerable tenesmus. May also affect the cardiovascular system (rapid, weak pulse, pallor), respiration (shallow breathing and a sense of constriction), central nervous system/brain (tremors, collapse), and kidneys (renal failure). Delayed death may occur from renal failure. Chronic Potential Health Effects: Chronic exposure through any route may produce central nervous damage (personality and behavior changes, memory loss, muscle tremors), loosening of teeth, digestive disorders, skin rashes, metallic taste, brain and kidney damage. Repeated skin contact may cause the skin to turn gray. May also damage the developing fetus and decrease fertility in males and females.

**Section 12: Ecological Information**

**Ecotoxicity:** Ecotoxicity in water (LC50): 0.2 ppm 18 hours [Algae].

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation:** Not available.

### Section 13: Disposal Considerations

**Waste Disposal:**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### Section 14: Transport Information

**DOT Classification:** CLASS 6.1: Poisonous material.

**Identification:** : Mercury Iodide UNNA: 1638 PG: II

**Special Provisions for Transport:** Marine Pollutant

### Section 15: Other Regulatory Information

**Federal and State Regulations:**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Mercuric iodide California prop.

65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Mercuric iodide Connecticut carcinogen reporting list.: Mercuric iodide New Jersey:

Mercuric iodide TSCA 8(b) inventory: Mercuric iodide

**Other Regulations:**

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

**Other Classifications:**

**WHMIS (Canada):**

CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).

**DSCL (EEC):**

R24- Toxic in contact with skin. R28- Very toxic if swallowed. R38- Irritating to skin. R41- Risk of serious damage to eyes. S1/2- Keep locked up and out of the reach of children. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28- After contact with skin, wash immediately with plenty of [\*\*\*] S36/37- Wear suitable protective clothing and gloves.

**HMIS (U.S.A.):**

**Health Hazard:** 3

**Fire Hazard:** 0

**Reactivity:** 0

**Personal Protection:** E

**National Fire Protection Association (U.S.A.):**

**Health:** 3

**Flammability:** 0

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:**

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

### Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

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