PANTHEON

# Material Safety Data Sheet

## Product Name: Iodine Monochloride

## Section 1-Product Information

**Formula** : $IC_1$
**Molecular weight** : 162.36
**CAS No** : 7790-99-0
**HS Code** : 28012000
**Synonym's** : Iodine Chloride

## Section 2-Composition,Information on Ingredients

**Ingredient** : Iodine Monochloride
**Hazardous** : Yes
**CAS No** : 7790-99-0
**Percent** : 90 - 100%

## Section 3-Hazards Identification

**Emergency Overview**
Danger! Corrosive. Causes severe burns to every area of contact. May be fatal if swallowed or inhaled. Vapors cause severe irritation to skin, eyes and respiratory tract. May cause allergic skin or respiratory reaction.

**SAF-T-DATA** Ratings (Provided here for your convenience)
**Health Rating** : 3 - Severe (Life)
**Flammability Rating** : 0 - None
**Reactivity Rating** : 1 - Slight
**Contact Rating** : 4 - Extreme (Corrosive)
**Lab Protective Equip** : GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES
**Storage Color Code** : White (Corrosive)

**Potential Health Effects**
**Inhalation:** Corrosive. Vapors severely irritate and can burn the mucous membranes and respiratory tract. Excessive tears, rhinitis, tightness in the chest, sore throat, headache and delayed pulmonary edema can result. Inhalation of concentrated vapors may be fatal.
**Ingestion:** Corrosive. Can cause severe burns of the mouth, throat and stomach. Causes abdominal pain, diarrhea, fever, vomiting, stupor and shock. May be fatal.
**Skin Contact:** Corrosive. Liquid contact may cause blistering burns, irritation, and pain. Vapors may be severely irritating to the skin.
**Eye Contact:** Corrosive! Vapors are severely irritating and may cause damage to the eyes. Contact may cause severe burns and permanent eye damage.
**Chronic Exposure:** Chronic exposure to iodine may cause insomnia, conjunctivitis, inflammation of the nasal mucous, bronchitis, tremor, rapid heartbeat, diarrhea and weight loss. Allergic sensitization may occur.
**Aggravation of Pre-existing Conditions:** Persons with pre-existing skin disorders, eye problems, impaired respiratory function, or disease of the thyroid, lungs, or kidney may be more susceptible to the effects of the substance.

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## Section 4-First Aid Measure

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. Observe for the development of pulmonary edema.
**Ingestion:** If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.
**Skin Contact:** Wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.
**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

## Section 5-Fire fighting procedure

**Fire:** Not expected to be a fire hazard.
**Explosion:** Sealed containers may rupture when heated.
**Fire Extinguishing Media:** Use dry chemical or carbon dioxide. Do not use water or foam. Water may be used to cool containers.
**Special Information:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Extremely hazardous vapors and fumes are produced in a fire situation.

## Section 6-Accidental Release Measure

DO NOT USE WATER. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

## Section 7-Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Refrigerate. Air and moisture sensitive--store under nitrogen. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

## Section 8-Exposure control/Personal protection

**Airborne Exposure Limits:** None established.
**Ventilation System:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition,

for details.

**Personal Respirators (NIOSH Approved):**

For conditions of use where exposure to the substance is apparent, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

**Skin Protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Eye Protection:**

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

## Section 9-Physical Chemical Properties

| | |
|---|---|
| **Appearance** | **:** Dark-brown solid and/or liquid. |
| **Odor** | **:** No information found. |
| **Solubility** | **:** Decomposes |
| **Specific Gravity** | **:** 3.10 @ 29C/4C |
| **pH** | **:** No information found. |
| **% Volatiles by volume @ 21C (70F)** | **:** 100 |
| **Boiling Point** | **:** 97C (207F) |
| **Melting Point** | **:** 27C (81F) |
| **Vapor Density (Air=1)** | **:** 5.5 |
| **Vapor Pressure (mm Hg)** | **:** No information found. |
| **Evaporation Rate (BuAc=1)** | **:** No information found. |

## Section 10-Stability and Reactivity

**Stability:** Decomposes upon contact with water, moisture or air, liberating toxic and corrosive vapors.

**Hazardous Decomposition Products:** Hydrogen chloride and hydrogen iodide may form if exposed to heat, moisture, water or air.

**Hazardous Polymerization:** Will not occur.

**Incompatibilities:** Strong bases, water, air, moisture, metals (especially aluminum), metal sulfides. Reacts vigorously with organic materials.

**Conditions to Avoid:** Heat, moisture, air, incompatibles.

## Section 11-Toxicity Information

**Toxicological Data:**

No LD50/LC50 information found relating to normal routes of occupational exposure.

**Reproductive Toxicity:**

Occasional uses of iodides for asthma in pregnancy has resulted in fetal death, severe goiter, and cretinoid appearance of the newborn.

--------\Cancer Lists\----------

| | ---NTP Carcinogen--- | | |
|---|---|---|---|
| Ingredient | Known | Anticipated | IARC Category |
| Iodine Monochloride (7790-99-0) | No | No | None |

## Section 12-Ecological Information

**Environmental Fate:** No information found.
**Environmental Toxicity:** No information found.

## Section 13-Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## Section 14-Transport Information

**Domestic (Land, D.O.T.)**
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**Proper Shipping Name:** IODINE MONOCHLORIDE
**Hazard Class:** 8
**UN/NA:** UN1792
Packing Group: II
**Information reported for product/size:** 100G

**International (Water, I.M.O.)**
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**Proper Shipping Name:** IODINE MONOCHLORIDE
**Hazard Class:** 8
**UN/NA:** UN1792
Packing Group: II
**Information reported for product/size:** 100G

**International (Air, I.C.A.O.)**
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**Proper Shipping Name:** IODINE MONOCHLORIDE
**Hazard Class:** 8
**UN/NA:** UN1792
Packing Group: II
**Information reported for product/size:** 100G

## Section 15-Regulatory Information

--------\Chemical Inventory Status - Part 1\---------------------------------

| Ingredient | TSCA | EC | Japan | Australia |
|---|---|---|---|---|
| Iodine Monochloride (7790-99-0) | Yes | Yes | Yes | Yes |

--------\Chemical Inventory Status - Part 2\---------------------------------

| Ingredient | Korea | --Canada-- DSL | NDSL | Phil. |
|---|---|---|---|---|
| Iodine Monochloride (7790-99-0) | Yes | Yes | No | Yes |

--------\Federal, State & International Regulations - Part 1\----------------

| Ingredient | -SARA 302- RQ | TPQ | ------SARA 313------ List | Chemical Catg. |
|---|---|---|---|---|
| Iodine Monochloride (7790-99-0) | No | No | No | No |

--------\Federal, State & International Regulations - Part 2\----------------

| Ingredient | CERCLA | -RCRA- 261.33 | -TSCA- 8(d) |
|---|---|---|---|
| Iodine Monochloride (7790-99-0) | No | No | No |

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No
Reactivity: No (Pure / Liquid)

**Australian Hazchem Code:** 2PE
**Poison Schedule:** None allocated.
**WHMIS:**
This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

## Section 16-Additional Information

**NFPA Ratings:** Health: **3** Flammability: **0** Reactivity: **1**

**Label Hazard Warning:**
DANGER! CORROSIVE. CAUSES SEVERE BURNS TO EVERY AREA OF CONTACT. MAY BE FATAL IF SWALLOWED OR INHALED. VAPORS CAUSE SEVERE IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY CAUSE ALLERGIC SKIN OR RESPIRATORY REACTION.

**Label Precautions:**
Do not breathe vapor or mist.
Store in a tightly closed container.

Do not get in eyes, on skin, or on clothing.
Use only with adequate ventilation.
Wash thoroughly after handling.
Handle and store under nitrogen.

**Label First Aid:**

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, wipe off excess material from skin then immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. In all cases get medical attention immediately.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

No Changes.

**Disclaimer:**

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