



## Material Safety Data Sheet

**Product Name: Methyl Iodide**

### Section 1-Product Information

**Formula** : CH<sub>3</sub>I  
**Molecular weight** : 142.00  
**CAS No** : 74-88-4  
**HS Code** : 28299003  
**Synonym's** : Iodomethane

### Section 2-Composition, Information on Ingredients

**Ingredient** : Methyl Iodide  
**Hazardous** : Yes  
**CAS No** : 74-88-4  
**Percent** : 97-100%  
**Appearance** : White Crystalline Powder

### Section 3-Hazards Identification

#### Emergency Overview

Danger! May be fatal if swallowed, Inhaled or absorbed through skin. Affects central nervous system. Causes irritation to skin, eyes and respiratory tract.

**Health Rating** : 3 – Severe (Cancer Causing)  
**Flammability Rating** : 0 – None  
**Reactivity Rating** : 1 – Slight  
**Contact Rating** : 3 – Severe (Life)  
**Lab protective Equip** : Goggles & Shield, Lab coat & Apron, Vent hood, proper gloves.  
**Storage Color Code** : Blue (Health)

#### Potential Health Effects

**Eye Contact** : Vapours can cause irritation. Splashes may cause severe irritation with eye damage.

**Skin Contact** : Causes irritation, rash and blister formation. Prolonged contact can cause skin burns. Can be absorbed through skin with toxic effects.

**Ingestion** : May damage the gastro-intestinal tract. Severe intoxication can occur with symptoms of central nervous system depression. Coma, convulsion, and death may follow.

**Inhalation** : Inhalation of vapors can irritate the respiratory tract. Overexposure may produce symptoms of vertigo, delirium and mental disturbances. Other symptoms may include slurred speech, drowsiness, coughing, nausea and vomiting. Higher exposure can cause a build up of fluid in the lungs which can cause death.

**Chronic Exposure**: Prolonged or repeated exposure to smaller doses cause primarily central nervous system effects. Symptoms may include slurred speech, blurred vision, Parkinsonian rigidity and memory defects. Has been shown to cause cancer in animals and may be linked to cancer in humans.

**Aggravation of Pre-existing Conditions**: Persons with pre-existing skin disorders or eye problems, or impaired respiratory function may be more susceptible to the effects of the substance.



#### 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.

**Ingestion:** Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Skin Contact:** Immediately flush skin with plenty of soap and 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 considered to be a fire hazard. Fire may produce poisonous or irritating gases.

**Explosion:** Not considered to be an explosion hazard.

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

**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.

#### Section 6-Accidental Release Measure

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! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

#### Section 7-Handling and Storage

Keep in a tightly closed light-resistant container, stored in a cool, dry, ventilated area. Protect against physical damage. Wear special protective equipment (Sec. 8) for maintenance break-in or where exposures may exceed established exposure levels. Wash hands, face, forearms and neck when exiting restricted areas. Shower, dispose of outer clothing, change to clean garments at the end of the day. Avoid cross-contamination of street clothes. Wash hands before eating and do not eat, drink, or smoke in workplace. 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:

-OSHA Permissible Exposure Limit (PEL):

5 ppm (TWA) skin.

-ACGIH Threshold Limit Value (TLV):

2 ppm (TWA) skin.

**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):** If the exposure limit is exceeded and engineering controls are not feasible, wear a supplied air, full-facepiece respirator, airlined hood, or full-facepiece self-contained breathing apparatus. Breathing air quality must meet the requirements of the OSHA respiratory protection standard (29CFR1910.134).

**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

<b>Appearance</b>	: Clear, colorless liquid.
<b>Odor</b>	: Acrid odor.
<b>Solubility</b>	: 14 g/100 g water @ 20C (68F)
<b>Specific Gravity</b>	: 2.28 @ 20C/4 C
<b>pH</b>	: No information found.
<b>% Volatiles by volume @ 21C (70F)</b>	: 100
<b>Boiling Point</b>	: 42C (108F)
<b>Melting Point</b>	: -66.1C (-87F)
<b>Vapor Density (Air=1)</b>	: 4.9
<b>Vapor Pressure (mm Hg)</b>	: 400 @ 25C (77F)
<b>Evaporation Rate (BuAc=1)</b>	: No information found.

## Section 10-Stability and Reactivity

**Stability:** Stable at room temperature in sealed containers. Turns yellow, red, or brown on exposure to light, due to decomposition and liberation of free iodine. Decomposes at 270C (518F)

**Hazardous Decomposition Products:** Burning may produce toxic iodine vapors.

**Hazardous Polymerization:** This substance does not polymerize.

**Incompatibilities:** Strong oxidizers, powdered metals, reducing agents.

**Conditions to Avoid:** No information found.



## Section 11-Toxicity Information

### Toxicological Data:

Oral rat LD50:76 mg/kg. Inhalation rat LC50: 1300 mg/m<sup>3</sup>/4H Investigated as a tumorigen and mutagen.

### Carcinogenicity:

NIOSH considers this substance to be a potential occupational carcinogen.

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

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Methyl Iodide (74-88-4)	No	No	3

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## Section 12-Ecological Information

**Environmental Fate:** When released into the soil, this material is expected to quickly evaporate. When released into the water, this material is expected to have a half-life of greater than 30 days. This material has an estimated bioconcentration factor (BCF) of less than 100. When released into the air, this material may be moderately degraded by photolysis.

**Environmental Toxicity:** No information found.

## Section 13-Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. 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:** METHYL IODIDE

**Hazard Class:** 6.1

**UN/NA:** UN2644

Packing Group: I

**Information reported for product/size:** 230ML

### International (Water, I.M.O.)

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**Proper Shipping Name:** METHYL IODIDE

**Hazard Class:** 6.1

**UN/NA:** UN2644

Packing Group: I

**Information reported for product/size:** 230ML



## Section 15-Regulatory Information

-----\Chemical Inventory Status - Part 1\-----  
 Ingredient TSCA EC Japan Australia  
 -----  
 Methyl Iodide (74-88-4) Yes Yes Yes Yes

-----\Chemical Inventory Status - Part 2\-----  
 --Canada--  
 Ingredient Korea DSL NDSL Phil.  
 -----  
 Methyl Iodide (74-88-4) Yes Yes No Yes

-----\Federal, State & International Regulations - Part 1\-----  
 -SARA 302- -----SARA 313-----  
 Ingredient RQ TPQ List Chemical Catg.  
 -----  
 Methyl Iodide (74-88-4) No No Yes No

-----\Federal, State & International Regulations - Part 2\-----  
 -RCRA- -TSCA-  
 Ingredient CERCLA 261.33 8(d)  
 -----  
 Methyl Iodide (74-88-4) 100 U138 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)

### WARNING:

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

**Australian Hazchem Code:** 2XE

**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: **1** Reactivity: **0**

### Label Hazard Warning:

DANGER! MAY BE FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

**Label Precautions:**

Do not get in eyes, on skin, or on clothing.

Do not breathe mist.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

**Label First Aid:**

If swallowed, induce vomiting immediately as directed by medical personnel. 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, 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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