

Material Safety Data Sheet

Version 3.1
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Iodomethane

Product Number : 289566
Brand : Sigma-Aldrich

Company : Sigma-Aldrich Canada, Ltd
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CANADA

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Methyl iodide

Formula : CH₃I

CAS-No.	EC-No.	Index-No.	Concentration
Methyl iodide			
74-88-4	200-819-5	602-005-00-9	>= 99.5 %
Copper			
7440-50-8	231-159-6	-	-

3. HAZARDS IDENTIFICATION**Emergency Overview****Target Organs**

Central nervous system, Liver, Kidney, Thyroid., Lungs

WHMIS Classification

D1A	Very Toxic Material Causing Immediate and	Highly toxic by inhalation
D1B	Serious Toxic Effects	Toxic by ingestion
D2A		Toxic by skin absorption
D2B		Respiratory sensitiser
		Moderate eye irritant
		Skin sensitiser

HMIS Classification

Health hazard: 3
Chronic Health Hazard: *
Flammability: 0

Physical hazards: 0

Potential Health Effects

Inhalation	Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	Toxic if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.
Ingestion	Toxic if swallowed. Causes burns.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point no data available

Ignition temperature no data available

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

Storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: 2 - 8 °C

Light sensitive. Moisture sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Methyl iodide	74-88-4	TWA	2 ppm	2006-11-29	Canada. British Columbia OEL
Remarks	Contributes significantly to the overall exposure by the skin route.				
		TWAE V	2 ppm 12 mg/m3	2005-12-17	Canada. Ontario OELs
	Skin				
		TWA	2 ppm 12 mg/m3	2007-01-01	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Substance may be readily absorbed through intact skin				
		TWAE V	2 ppm 12 mg/m3	2006-12-29	Canada. Quebec OELs
	A substance to which exposure must be reduced to a minimum in accordance with section 42 Skin (percutaneous) Carcinogenic effect suspected in humans				

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum).

Skin and body protection

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

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form liquid

Safety data

pH	no data available
Melting point	-64 °C (-83 °F)
Boiling point	42 - 43 °C (108 - 109 °F) at 1,013 hPa (760 mmHg)
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	8.5 %(V)
Upper explosion limit	66 %(V)
Vapour pressure	544 hPa (408 mmHg) at 20 °C (68 °F) 1,660 hPa (1,245 mmHg) at 55 °C (131 °F)
Density	2.275 g/cm ³
Water solubility	14 g/l at 20 °C (68 °F)
Partition coefficient: n-octanol/water	log Pow: 1.5 at 20 °C (68 °F)
Relative vapour density	4.90 - (Air = 1.0)

10. STABILITY AND REACTIVITY**Storage stability**

Stable under recommended storage conditions.

Materials to avoid

Strong oxidizing agents, Strong bases, Oxygen

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen iodide

Contains the following stabiliser(s):

Copper (%)

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 76 mg/kg

LC50 Inhalation - rat - 4 h - 1,300 mg/m³

LC50 Inhalation - mouse - 57 min - 5,000 mg/m³

LD50 Dermal - guinea pig - 800 mg/kg

Irritation and corrosion

Skin - rabbit - Severe skin irritation - Draize Test

Eyes - rabbit - Severe eye irritation - Draize Test

Sensitisation

May cause allergic respiratory and skin reactions

Chronic exposure

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Methyl iodide)

Signs and Symptoms of Exposure

Nausea, Dizziness, Headache, Blurred vision, Weakness, Drowsiness, Ataxia., Confusion., Convulsions, narcosis, Pulmonary edema. Effects may be delayed.

Potential Health Effects

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12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability	aerobic
	Result: 16 % - Not readily biodegradable.
	Method: Closed Bottle test

Ecotoxicity effects

no data available

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN-Number: 2644	Class: 6.1	Packing group: I
Proper shipping name: Methyl iodide		
Reportable Quantity (RQ): 100 lbs		
Marine pollutant: No		
Poison Inhalation Hazard: Hazard zone B		

IMDG

UN-Number: 2644	Class: 6.1	Packing group: I	EMS-No: F-A, S-A
Proper shipping name: METHYL IODIDE			
Marine pollutant: No			

IATA

UN-Number: 2644 Class: 6.1

Proper shipping name: Methyl iodide

IATA Passenger: Not permitted for transport

IATA Cargo: Not permitted for transport

15. REGULATORY INFORMATION**DSL Status**

This product contains the following components that are not on the Canadian DSL nor NDSL lists.

Copper

CAS-No.

7440-50-8

WHMIS Classification

D1A	Very Toxic Material Causing Immediate and	Highly toxic by inhalation
D1B	Serious Toxic Effects	Toxic by ingestion
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16. OTHER INFORMATION**Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.