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Oxford
Range of
Laboratory Chemicals

MATERIAL SAFETY DATA SHEET

METHYL IODIDE

(For Synthesis)

MSDS CAS: 76-88-4

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product

Product Name: METHYL IODIDE
CAS#: 76-88-4
Synonym: Iodomethane.
Chemical Name: Not available.
Chemical Formula: CH3I

Brand: OXFORD

Details Of The Supplier Of The Safety Data Sheet:

Company identification: OXFORD LAB FINE CHEM LLP
Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6,
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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
METHYL IODIDE	76-88-4	100

Hazard Symbols: T
Risk Phrases: 21 23/25 37/38 40

Section 3: Hazards Identification

EMERGENCY OVERVIEW: **Appearance: clear, colorless to pale yellow liquid. Light sensitive. May cause central nervous system effects.**

Danger: **May be fatal if inhaled. Causes eye, skin, and respiratory tract irritation. Harmful if swallowed or absorbed through the skin.**

Target Organs: **Central nervous system, lungs, eyes, skin.**

Potential Health Effects:

Eye: **Causes eye irritation. Vapors cause eye irritation.**

Skin: **Causes skin irritation. Harmful if absorbed through the skin. A pad soaked in methyl iodide and held against the forearm for 10 minu tes produced stinging and reddening; swelling and blistering appeared several hours later. Similar effects, including delayed burning, have been reported. When methyl iodide was not held against the skin, but a llowed to evaporate, no effects were observed.**

Ingestion: **Harmful if swallowed. May cause irritation of the digestive tract. May cause effects similar to those for inhalation exposure.**

Inhalation: **Causes respiratory tract irritation. In humans, acute exposure to methyl iodide by inhalation may depress t he central nervous system (CNS), irritate the lungs and skin, and affe ct the kidneys. Massive acute inhalation exposure to methyl iodide has led to pulmonary edema. Acute inhalation exposure of humans to methyl iodide has resulted in nausea, vomiting, vertigo, ataxia (failure of muscular coordination), slurred speech, drowsiness, skin blistering, a nd eye irritation. Severe, prolonged and possibly permanent injury to the nervous system (mental dullness, hallucination) has been reported.**

Chronic: **Chronic inhalation may cause effects similar to those of acute inhalation. Animal studies have reported the development of tumors. Chronic or long-term exposure of humans to methyl iodide by inhalation may affect the CNS and cause skin burns. (EPA Air Toxics Website)**

Section 4: First Aid Measures

Eye Contact:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

Ingestion: **If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.**

Inhalation: **POISON material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.**

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

Section 5: Fire and Explosion Data

General Information: **As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Substance is noncombustible.**

Extinguishing Media: **Use extinguishing media most appropriate for the surrounding fire.**

Flash Point: **Not applicable.**

Autoignition Temperature: **Not applicable.**

Explosion Limits, Lower: **N/A**

Upper: N/A

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:
Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Provide ventilation. Evacuate unnecessary personnel.

Section 7: Handling and Storage

Handling:
Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not get in eyes, on skin, or on clothing. Do not breathe vapor. Use only with adequate ventilation or respiratory protection.

Storage:
Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from light.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits:

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Iodomethane	ppm TWA; skin - potential for cutaneous absorption	2 ppm TWA; 10 mg/m3 TWA 100 ppm IDLH	5 ppm TWA; 28 mg/m3 TWA

OSHA Vacated PELs : Iodomethane: 2 ppm TWA; 10 mg/m3 TWA

Personal Protective Equipment:

Eyes: Wear chemical goggles.

Skin: Wear appropriate protective 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	: Liquid
Appearance	: clear, colorless to pale yellow
Odor	: Sweet, ethereal
Colour	: Clear Colorless.
pH	: Not available.
Vapor Pressure	: 375 mm Hg @ 20 deg C
Vapor Density	: 4.89 (air = 1)
Molecular mass	: 141.94 g/mol
Viscosity	: Not available.
Boiling Point	: 42.5 deg C @ 760 mm Hg
Freezing/Melting Point	: -66 deg C
Decomposition Temperature	: 270 deg C
Solubility	: 14 g/1000 ml @ 20#C
Specific Gravity/Density	: 2.28 @ 20#C

Section 10: Stability and Reactivity Data

Chemical Stability:
Stable under normal temperatures and pressures. May discolor on exposure to light. Turns reddish-brown on exposure to light.

Conditions to Avoid: **Light, moisture, excess heat.**

Incompatibilities with Other Materials: **Strong oxidizing agents.**

Hazardous Decomposition Products: **Carbon monoxide, carbon dioxide, hydrogen iodide, iodide.**

Hazardous Polymerization: **Will not occur.**

Section 11: Toxicological Information

RTECS#:
CAS#: 74-88-4: PA9450000
LD50/LC50: CAS# 74-88-4: Dermal, guinea pig: LD50 = 800 mg/kg; Draize test, rabbit, eye: 100 mg Severe; Draize test, rabbit, skin: 500 mg Severe; Inhalation, mouse: LC50 = 5 gm/m3/57M-C; Inhalation, rat: LC50 = 1300 mg/m3/4H; Oral, rat: LD50 = 76 mg/kg;
Carcinogenicity: CAS# 74-88-4:
California: carcinogen, initial date 4/1/88
NIOSH: potential occupational carcinogen
IARC: IARC Group 3 - not classifiable
Epidemiology: Because the increase in lung tumors seen in Strain A mice i s not statistically significant, ACGIH recommends that m ethyl iodide carry no carcinogenicity notation.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Neurotoxicity: No information available.
Mutagenicity: Mutation data has been reported.
Other Studies: No data available.

Section 12: Ecological Information

Ecotoxicity: **No data available. No information available.**

Section 12: Ecological Information (Continued)

Environmental: **Naturally produced by photosynthetic marine organisms. On land, volatilizes rapidly. In atmosphere, degradation half-life is 3-7 hours. Will not bioconcentrate.**

Physical: **No information available.**

Other: **log octanol/water partition coefficient (log Kow) is 1.51.**

Section 13: Disposal Considerations

RCRA P-Series: **None listed.**
RCRA U-Series: **CAS# 74-88-4: waste number U138.**

Section 14: Transport Information

Land transport (ADR-RID)

Proper shipping name	**: METHYL IODIDE**
UN N°	**: 2644**
H.I. nr	**: 33**
ADR - Class	**: 6.1**
ADR - Group	**: I**

Sea transport (IMDG) [English only]

Proper shipping name	**: METHYL IODIDE**
UN N°	**: 2644**
IMO-IMDG - Class or division	**: 6.1**
IMO-IMDG - Packing group	**: I**

Air transport (ICAO-IATA) [English only]

Proper shipping name	**: METHYL IODIDE**
UN N°	**: 2644**
IATA - Class or division	**: 6.1**
IATA - Packing group	**: I**

Section 15: Other Regulatory Information

US FEDERAL:

TSCA: CAS# 74-88-4 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: CAS# 74-88-4: 100 lb final RQ; 45.4 kg final RQ

SARA Section 302 Extremely Hazardous Substances : None of the chemicals in this product have a TPQ.

SARA Codes: CAS # 74-88-4: acute, chronic.

Section 313: This material contains Iodomethane (CAS# 74-88-4, 98%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act: CAS# 74-88-4 is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

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# 74-88-4 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act: WARNING:

This product contains Iodomethane, a chemical known to the state of California to cause cancer. 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

Risk Phrases: R 21 Harmful in contact with skin. R 23/25 Toxic by inhalation and if swallowed. R 37/38 Irritating to respiratory system and skin. R 40 Limited evidence of a carcinogenic effect.

Safety Phrases: S 36/37 Wear suitable protective clothing and gloves. S 38 In case of insufficient ventilation, wear suitable respiratory equipment. S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection): CAS# 74-88-4: 2

Canada - DSL/NDSL: CAS# 74-88-4 is listed on Canada's DSL List.

Canada - WHMIS: This product has a WHMIS classification of D1A, D2B.

Section 15: Other Regulatory Information (Continued)

Canadian Ingredient Disclosure List: **CAS# 74-88-4 is listed on the Canadian Ingredient Disclosure List.**

Exposure Limits: CAS# 74-88-4: **OEL-AUSTRALIA:TWA 2 ppm (10 mg/m3);Skin;Carcinogen OE L-BELGIUM:TWA 2 ppm (12 mg/m3);Skin;Carcinogen OEL-CZECHOSLOVAKIA:TWA 1 mg/m3;STEL 2 mg/m3 OEL-DENMARK:TWA 1 ppm (5.6 mg/ m3);Skin OEL-FIN LAND:TWA 5 ppm (28 mg/m3);STEL 10 ppm (56 mg/m3);Skin OEL-GERMANY;Car cinogen OEL-THE NETHERLANDS:TWA 2 ppm (10 mg/m3);Skin OEL-THE PHILIP PINES:TWA 5 ppm (28 mg/m3);Skin OEL-POLAND:TWA 10 mg/m3 OEL-SWEDEN:T WA 1 ppm (6 mg/m3);STEL 5 ppm (30 mg/m3);Skin;CAR OEL-SWITZERLAND:TWA 2 ppm (12 mg/ m3);Skin OEL-UNITED KINGDOM:TWA 5 ppm (28 mg/m3);STEL 1 0 ppm;Skin OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV**

Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.

Disclaimer:

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