Material Safety Data Sheet
Methyl Iodide

ACC# 14520

Section 1 - Chemical Product and Company Identification

MSDS Name: Methyl Iodide
Catalog Numbers: M212-100, M212I 100, M212I100
Synonyms: Methyl iodide, Halon 10001.
Company Identification:
Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410
For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
74-88-4	Methyl iodide	100.0	200-819-5

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

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless liquid. Light sensitive. May cause central nervous system effects. Causes severe eye and skin irritation. Causes respiratory tract irritation. May cause digestive tract irritation. May cause cancer based on animal studies. Harmful if swallowed.
Warning!
Target Organs: Central nervous system.

Potential Health Effects
Eye: Causes eye irritation. Causes redness and pain. If splashed in the eye, causes conjunctivitis.
Skin: Causes skin irritation. May cause irritation with pain and stinging, especially if the skin is abraded. May cause reddening of the skin.
Ingestion: Harmful if swallowed. Aspiration hazard. May cause irritation of the digestive tract. May cause effects similar to those for inhalation exposure. Prolonged or repeated exposure may cause CNS effects.
Inhalation: Causes respiratory tract irritation. May cause lung damage. May cause spleen and liver damage. Initial symptoms include lethargy, drowsiness, slurred speech, ataxia, muscular incoordination, visual disturbances. May progress to convulsions, coma and death. Other symptoms include giddiness, diarrhea, sleepiness, irritability, vomiting, pallor, muscular twitching and kidney effects.
Chronic: Chronic inhalation may cause effects similar to those of acute inhalation.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is noncombustible. Decomposes at high temperatures, resulting in toxic and corrosive products. Containers may explode in the heat of a fire. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.
Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire. Do NOT get water inside containers. For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use water spray, fog or regular foam. Cool containers with flooding quantities of water until well after fire is out.
Flash Point: 270 deg C (518.00 deg F)
Autoignition Temperature: 352 deg C (665.60 deg F)
Explosion Limits, Lower:N/A
Upper: N/A
NFPA Rating: (estimated) Health: ; Flammability: ; Instability:

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. Do not get water inside containers.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Store protected from light. Use only in a chemical fume hood.
Storage: Do not store in direct sunlight. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Use only under a chemical fume hood.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Methyl iodide	2 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: Methyl iodide: 2 ppm TWA; 10 mg/m3 TWA
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
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: colorless
Odor: sweetish odor
pH: Not available.
Vapor Pressure: 4.97 kPa @-25C
Vapor Density: 4.89 (air = 1)
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 42.5 deg C @ 760.00mm Hg
Freezing/Melting Point:-66 deg C
Decomposition Temperature:270 deg C
Solubility: 2 g/100ml in water
Specific Gravity/Density:2.2800g/cm3
Molecular Formula:CH3I
Molecular Weight:141.94

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, light, moisture.
Incompatibilities with Other Materials: Oxygen, silver chlorite, sodium, and trialkylphosphines
Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, hydrogen iodide, iodine.
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: NIOSH has determined that there is sufficient evidence of carcinogenicity in animals to indicate a potential for human carcinogenicity. IARC states that there is limited evidence for the carcinogenicity of methyl iod ide to experimental animals, but no evaluation could be made of the carcinogenicty of methyl iodide to humans.
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. Water danger/protection : WGK 2
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: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: CAS# 74-88-4: waste number U138.

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	METHYL IODIDE				METHYL IODIDE
Hazard Class:	6.1				6.1
UN Number:	UN2644				UN2644
Packing Group:	I				I

Section 15 - 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 Methyl iodide (CAS# 74-88-4, 100 0%),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 Methyl iodide, 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 3 Keep in a cool place.
S 36/37 Wear suitable protective clothing and gloves.
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.

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 OEL-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-FINLAND:TWA 5 ppm (28 mg/m3);STEL 10 ppm (56 mg/m3);Skin OEL-GERMANY;Carcinogen OEL-THE NETHERLANDS:TWA 2 ppm (10 mg/m3);Skin OEL-THE PHILIPPINES:TWA 5 ppm (28 mg/m3);Skin OEL-POLAND:TWA 10 mg/m3 OEL-SWEDEN:TWA 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 10 ppm;Skin OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 6/08/1998
Revision #3 Date: 3/18/2003