**Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013**

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THECOMPANY/UNDERTAKING

**Product Identifier**

**Perihalan Produk:** **Iodomethane**
**Product Description:** **Iodomethane**
**Cat No. :** 31876
**Synonyms** Methyl iodide
**CAS No** 74-88-4
**Molecular Formula** C H3 I

**Relevant identified uses of the substance or mixture and uses advised against**

**Recommended Use** Laboratory chemicals.
**Uses advised against** No Information available

**Company**

Thermo Fisher Scientific Fisher Scientific (M) Sdn Bhd
Hap Seng Business Park, Lot 01-03, 01-04 Aras 1 Unity Square,
No 12, Persiaran Perusahaan, Seksyen 23, 40300 Shah Alam,
Selangor Darul Ehsan, Malaysia.
Main line: +60 3-5525 7888

**Supplier**

**E-mail address** Enquiry.my@thermofisher.com

**Emergency Telephone Number**

Tel: +03-5525 7888
CHEMTREC Malaysia **1-800-815-308** (Malay)
CHEMTREC Malaysia (Kuala Lumpur) **+(60)-327884561** (Malay)

## SECTION 2: HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

| | |
|---|---|
| Acute oral toxicity | Category 3 (H301) |
| Acute dermal toxicity | Category 4 (H312) |
| Acute Inhalation Toxicity - Vapors | Category 3 (H331) |
| Skin Corrosion/Irritation | Category 2 (H315) |
| Carcinogenicity | Category 2 (H351) |
| Specific target organ toxicity - (single exposure) | Category 3 (H335) |

**Label Elements**

**Signal Word** **Danger**

**Hazard Statements**
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H335 - May cause respiratory irritation
H351 - Suspected of causing cancer
H301 + H331 - Toxic if swallowed or if inhaled

**Precautionary Statements**
**Prevention**
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear eye protection/ face protection
**Response**
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P311 - Call a POISON CENTER or doctor
P330 - Rinse mouth
P362 + P364 - Take off contaminated clothing and wash it before reuse
**Storage**
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
**Disposal**
P501 - Dispose of contents/ container to an approved waste disposal plant

**Other Hazards**

Toxic to terrestrial vertebrates
This product does not contain any known or suspected endocrine disruptors

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS No | Weight % |
|---|---|---|
| Methyl iodide | 74-88-4 | >95 |

## SECTION 4: FIRST AID MEASURES

**Description of first aid measures**

**General Advice** Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

**Eye Contact** In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Immediate medical

attention is required.

**Ingestion** Do NOT induce vomiting. Call a physician or poison control center immediately.

**Inhalation** Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. If not breathing, give artificial respiration.

**Self-Protection of the First Aider** Use personal protective equipment as required.

**Most important symptoms and effects, both acute and delayed**

No information available.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

**Extinguishing media**

**Suitable Extinguishing Media**

Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

**Extinguishing media which must not be used for safety reasons**

No information available.

**Special hazards arising from the substance or mixture**

Thermal decomposition can lead to release of irritating gases and vapors.

**Hazardous Combustion Products**

Carbon monoxide (CO), Carbon dioxide ($CO_2$), Hydrogen iodide.

**Advice for fire-fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures**

Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

**Environmental precautions**

Should not be released into the environment. See Section 12 for additional Ecological Information.

**Methods and Material for Containment and Cleaning Up**

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

**Reference to Other Sections**

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

**Precautions for Safe Handling**

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

**Conditions for Safe Storage, Including any Incompatibilities**

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from direct sunlight.

**Specific End Uses**

Use in laboratories.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters**

| Component | Malaysia | ACGIH TLV | OSHA PEL |
|---|---|---|---|
| Methyl iodide | | TWA: 2 ppm<br>Skin | (Vacated) TWA: 2 ppm<br>(Vacated) TWA: 10 mg/m³<br>Skin<br>TWA: 5 ppm<br>TWA: 28 mg/m³ |

| Component | European Union | The United Kingdom | Germany |
|---|---|---|---|
| Methyl iodide | | STEL: 6 ppm 15 min<br>STEL: 36 mg/m³ 15 min<br>TWA: 2 ppm 8 hr<br>TWA: 12 mg/m³ 8 hr<br>Skin | Haut |

**Exposure Controls**

**Engineering Measures**

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Personal protective equipment**

| | |
|---|---|
| **Eye Protection** | Tight sealing safety goggles |
| **Hand Protection** | Protective gloves |
| **Skin and body protection** | Long sleeved clothing |

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

| | |
|---|---|
| **Respiratory Protection** | When workers are facing concentrations above the exposure limit they must use appropriate certified respirators |
| **Recommended Filter type:** | Organic gases and vapours filter Type A Brown conforming to EN14387<br>To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly |

When RPE is used a face piece Fit Test should be conducted

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice

**Environmental exposure controls** No information available

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

| | | |
|---|---|---|
| **Appearance** | Colorless | |
| **Physical State** | Liquid | |
| **Odor** | pungent Characteristic | |
| **Odor Threshold** | No data available | |
| **pH** | No information available | |
| **Melting Point/Range** | -66 °C / -86.8 °F | |
| **Softening Point** | No data available | |
| **Boiling Point/Range** | 42.5 °C / 108.5 °F | 760 mmHg |
| **Flash Point** | No information available | **Method -** No information available |
| **Evaporation Rate** | No data available | |
| **Flammability (solid,gas)** | Not applicable | Liquid |
| **Explosion Limits** | **Lower** 8.5 vol% | |
| | **Upper** 66 vol% | |
| **Vapor Pressure** | No data available | |
| **Vapor Density** | No data available | (Air = 1.0) |
| **Specific Gravity / Density** | 2.280 | |
| **Bulk Density** | Not applicable | Liquid |
| **Water Solubility** | Soluble | |
| **Solubility in other solvents** | No information available | |

**Partition Coefficient (n-octanol/water)**

| **Component** | **log Pow** |
|---|---|
| Methyl iodide | 1.57 |

| | |
|---|---|
| **Autoignition Temperature** | 352 °C / 666 °F |
| **Decomposition Temperature** | No data available |
| **Viscosity** | No data available |
| **Explosive Properties** | No information available |
| **Oxidizing Properties** | No information available |
| **Molecular Formula** | C H3 I |
| **Molecular Weight** | 141.94 |

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity**

None known, based on information available.

### Chemical Stability

Stable under normal conditions. Moisture sensitive. Light sensitive.

### Possibility of Hazardous Reactions

**Hazardous Polymerization** Hazardous polymerization does not occur.
**Hazardous Reactions** None under normal processing.

### Conditions to Avoid

Incompatible products. Excess heat. Exposure to moist air or water. Exposure to light.

### Incompatible Materials

Strong oxidizing agents. Strong bases. oxygen. Metals.

### Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide ($CO_2$). Hydrogen iodide.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

**Product Information**

**(a) acute toxicity;**
**Oral** Category 3
**Dermal** Category 4
**Inhalation** Category 3

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Methyl iodide | 80 mg/kg ( Rat ) | LD50 > 2000 mg/kg ( Rabbit ) | LC50 = 691 ppm ( Rat ) 4 h |

**(b) skin corrosion/irritation;** Category 2

**(c) serious eye damage/irritation;** No data available

**(d) respiratory or skin sensitization;**
**Respiratory** No data available
**Skin** No data available

**(e) germ cell mutagenicity;**

Ames test:; positive; Mutagenic effects have occurred in experimental animals

**(f) carcinogenicity;** Category 2

The table below indicates whether each agency has listed any ingredient as a carcinogen
Limited evidence of a carcinogenic effect

| Component | EU | UK | Germany | IARC |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Methyl iodide | | | Cat. 2 | |

**(g) reproductive toxicity;**

**(h) STOT-single exposure;** Category 3

**Results / Target organs** Respiratory system.

**(i) STOT-repeated exposure;** No data available

**Target Organs** No information available.

**(j) aspiration hazard;** No data available

**Other Adverse Effects** Tumorigenic effects have been reported in experimental animals.

**Symptoms / effects,both acute and delayed** No information available.

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicity effects** Do not empty into drains.

| Component | Freshwater Fish | Water Flea | Freshwater Algae | Microtox |
|---|---|---|---|---|
| Methyl iodide | LC50: = 1.4 mg/L, 96h static-renewal (Oncorhynchus mykiss) | | | |

**Persistence and degradability** Not readily biodegradable

**Persistence** Persistence is unlikely, based on information available.

**Bioaccumulative potential** Bioaccumulation is unlikely

| Component | log Pow | Bioconcentration factor (BCF) |
|---|---|---|
| Methyl iodide | 1.57 | No data available |

**Mobility in soil** The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. Will likely be mobile in the environment due to its volatility. Disperses rapidly in air.

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

**Other adverse effects** No information available

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Waste from Residues/Unused** Waste is classified as hazardous Dispose of in accordance with the European Directives on

**Products** waste and hazardous waste Dispose of in accordance with local regulations

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point.

**Other Information** Waste codes should be assigned by the user based on the application for which the product was used Do not empty into drains

## SECTION 14: TRANSPORT INFORMATION

**IMDG/IMO**

**UN-No** UN2644
**Hazard Class** 6.1
**Packing Group** I
**Proper Shipping Name** METHYL IODIDE

**Road and Rail Transport**

**UN-No** UN2644
**Hazard Class** 6.1
**Packing Group** I
**Proper Shipping Name** METHYL IODIDE

**IATA** FORBIDDEN FOR IATA TRANSPORT

**UN-No** UN2644
**Hazard Class** 6.1
**Packing Group** I
**Proper Shipping Name** METHYL IODIDE, FORBIDDEN FOR IATA TRANSPORT

**Special Precautions for User** No special precautions required

## SECTION 15: REGULATORY INFORMATION

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**International Inventories** X = listed

| Component | EINECS | TSCA | DSL | PICCS | ENCS | ISHL | IECSC | AICS | KECL |
|---|---|---|---|---|---|---|---|---|---|
| Methyl iodide | 200-819-5 | X | X | X | X | X | X | X | KE-21038 |

**National Regulations**

**Persistent Organic Pollutant** This product does not contain any known or suspected substance
**Ozone Depletion Potential** This product does not contain any known or suspected substance

| Component | Persistent Organic Pollutant | Ozone Depletion Potential | Pesticides Act 1974 |
|---|---|---|---|
| Methyl iodide | | | X |

## SECTION 16: OTHER INFORMATION

**Legend**

**CAS** - Chemical Abstracts Service
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**IECSC** - Chinese Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**ENCS** - Japanese Existing and New Chemical Substances
**AICS** - Australian Inventory of Chemical Substances
**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit
**ACGIH** - American Conference of Governmental Industrial Hygienists
**RPE** - Respiratory Protective Equipment
**LC50** - Lethal Concentration 50%
**POW** - Partition coefficient Octanol:Water
**TWA** - Time Weighted Average
**IARC** - International Agency for Research on Cancer
**LD50** - Lethal Dose 50%
**EC50** - Effective Concentration 50%

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road
**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code
**OECD** - Organisation for Economic Co-operation and Development
**BCF** - Bioconcentration factor
**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association
**MARPOL** - International Convention for the Prevention of Pollution from Ships
**ATE** - Acute Toxicity Estimate
**VOC** - (Volatile Organic Compound)

**Key literature references and sources for data**
https://echa.europa.eu/information-on-chemicals
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

| | |
|---|---|
| **Prepared By** | Health, Safety and Environmental Department |
| **Revision Date** | 26-Mar-2025 |
| **Revision Summary** | Not applicable. |

## In accordance with local and national regulations: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

### Disclaimer

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text**

## End of Safety Data Sheet