

ALFAA43681

Iodomethane

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

产品说明: Product Description:	碘甲烷 Iodomethane
Cat No. :	43681
Synonyms	Methyl iodide
CAS No	74-88-4
Molecular Formula	C H3 I
Supplier	Avocado Research Chemicals Ltd. (Part of Thermo Fisher Scientific) Shore Road, Heysham Lancashire, LA3 2XY, United Kingdom Office Tel: +44 (0) 1524 850506 Office Fax: +44 (0) 1524 850608
Emergency Telephone Number	For information US call: 001-800-227-6701 / Europe call: +32 14 57 52 11 Emergency Number US :001-201-796-7100 / Europe : +32 14 57 52 99 CHEMTREC Tel. No. US :001-800-424-9300 / Europe :001-703-527-3887
E-mail address	begel.sdsdesk@thermofisher.com
Recommended Use	Laboratory chemicals.
Uses advised against	No Information available

SECTION 2. HAZARD IDENTIFICATION

Physical State	Appearance	Odor
Liquid	Colorless	pungent Characteristic
Emergency Overview		
Fatal if inhaled. Toxic if swallowed. Toxic in contact with skin. Causes skin irritation. May cause respiratory irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects. Suspected of causing cancer. Sensitivity to light. Moisture sensitive.		

Classification of the substance or mixture

Acute Oral Toxicity	Category 3
Acute Dermal Toxicity	Category 3
Acute Inhalation Toxicity - Vapors	Category 2
Skin Corrosion/Irritation	Category 2
Carcinogenicity	Category 2
Specific target organ toxicity - (single exposure)	Category 3
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 3

Label Elements

Iodomethane



Signal Word

Danger

Hazard Statements

H330 - Fatal if inhaled
 H315 - Causes skin irritation
 H335 - May cause respiratory irritation
 H401 - Toxic to aquatic life
 H412 - Harmful to aquatic life with long lasting effects
 H351 - Suspected of causing cancer
 H301 + H311 - Toxic if swallowed or in contact with skin

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

Physical and Chemical Hazards

None identified.

Health Hazards

Fatal if inhaled. Toxic if swallowed. Toxic in contact with skin. Causes skin irritation. May cause respiratory irritation. Suspected of causing cancer.

Environmental hazards

Toxic to aquatic life. Harmful to aquatic life with long lasting effects. Will likely be mobile in the environment due to its volatility. The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.

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

Iodomethane**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.

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.

Ingestion

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

Most important symptoms and effects

No information available.

Self-Protection of the First Aider

Use personal protective equipment as required.

Notes to Physician

Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES**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.

Specific Hazards Arising from the Chemical

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

Protective Equipment and Precautions for Firefighters

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**

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 for Containment and Clean Up

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

Refer to protective measures listed in Sections 8 and 13.

SECTION 7. HANDLING AND STORAGE

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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.

Storage

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

Specific Use(s)

Use in laboratories

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control Parameters**

Component	China	Taiwan	Thailand	Hong Kong
Methyl iodide	TWA: 10 mg/m ³ Skin	TWA: 2 ppm TWA: 12 mg/m ³	TWA: 5 ppm	-

Component	ACGIH TLV	OSHA PEL	NIOSH	The United Kingdom	European Union
Methyl iodide	TWA: 2 ppm Skin	(Vacated) TWA: 2 ppm (Vacated) TWA: 10 mg/m ³ Skin TWA: 5 ppm TWA: 28 mg/m ³	IDLH: 100 ppm REL = 2 ppm (TWA) REL = 10 mg/m ³ (TWA)	STEL: 6 ppm 15 min STEL: 36 mg/m ³ 15 min TWA: 2 ppm 8 hr TWA: 12 mg/m ³ 8 hr Skin	

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS70 General methods for sampling airborne gases and vapours MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

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 (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Natural rubber	See manufacturers	-	EN 374	(minimum requirement)
Nitrile rubber	recommendations			
Neoprene				
PVC				

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 compatibility, 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

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of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Skin and body protection	Long sleeved clothing
Respiratory Protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly
Large scale/emergency use	Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to EN14387
Small scale/Laboratory use	Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141 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

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
Flash Point	No information available
Evaporation Rate	No data available
Flammability (solid,gas)	Not applicable
Explosion Limits	Lower 8.5 vol% Upper 66 vol%
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity / Density	2.280
Bulk Density	Not applicable
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

760 mmHg

Method - No information available

Liquid

(Air = 1.0)

Liquid

Iodomethane

SECTION 10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions. Moisture sensitive. Light sensitive.
Hazardous Reactions	None under normal processing.
Hazardous Polymerization	Hazardous polymerization does not occur.
Conditions to Avoid	Incompatible products. Excess heat. Exposure to moist air or water. Exposure to light.
Materials to avoid	Strong oxidizing agents. Strong bases. oxygen. Metals.
Hazardous Decomposition Products	Carbon monoxide (CO). Carbon dioxide (CO ₂). Hydrogen iodide.

SECTION 11. TOXICOLOGICAL INFORMATION

Product Information

(a) acute toxicity;

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
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(i) STOT-repeated exposure; No data available

Target Organs	No information available.
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(j) aspiration hazard; No data available

Other Adverse Effects Tumorigenic effects have been reported in experimental animals.**Symptoms / effects,both acute and** No information available

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delayed

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
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

SECTION 13. DISPOSAL CONSIDERATIONS

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

Road and Rail Transport

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

IMDG/IMO

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

IATA FORBIDDEN FOR IATA TRANSPORT

UN-No UN2644

Iodomethane

Proper Shipping Name METHYL IODIDE, FORBIDDEN FOR IATA TRANSPORT
Hazard Class 6.1
Packing Group I

Special Precautions for User No special precautions required

SECTION 15. REGULATORY INFORMATION

International Inventories

X = listed, China (IECSC), Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), Korea (KECL).

Component	The Inventory of Hazardous Chemicals (2015 Edition)	List of dangerous goods GB 12268 - 2012	TCSI	IECSC	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	AICS	KECL
Methyl iodide	X	X	X	X	200-819-5	X	X	X	X	X	X	KE-21038

National Regulations

Component	Toxic Chemical Substances Control Act
Methyl iodide 74-88-4 (>95)	Class I (1 wt%) TRQ = 50 kg

SECTION 16. OTHER INFORMATION

Prepared By Health, Safety and Environmental Department
Creation Date 29-Apr-2010
Revision Date 14-Sep-2025
Revision Summary Not applicable.

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

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

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

PNEC - Predicted No Effect Concentration

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

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ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

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

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