



SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 09/16/2015

Version 1.1

SECTION 1. Identification

Product identifier

Product number	IX0185
Product name	Iodomethane
CAS-No.	74-88-4

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

Identified uses	Reagent for analysis
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Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation 290 Concord Road, Billerica, MA 01821, United States of America General Inquiries: +1-978-715-4321 Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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SECTION 2. Hazards identification

GHS Classification

Acute toxicity, Category 3, Oral, H301
Acute toxicity, Category 3, Inhalation, H331
Acute toxicity, Category 4, Dermal, H312
Skin irritation, Category 2, H315
Eye irritation, Category 2A, H319
Carcinogenicity, Category 2, H351
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system, H335
For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

Hazard pictograms



Signal Word

Danger

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Hazard Statements

H301 + H331 Toxic if swallowed or if inhaled.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.

Precautionary Statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash 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 protective gloves/ eye protection/ face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P322 Specific measures (see supplemental first aid instructions on this label).
P330 Rinse mouth.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Formula	CH ₃ I (Hill)
Molar mass	141.94 g/mol

Hazardous ingredients

Chemical Name (Concentration)

CAS-No.

iodomethane (>= 90 % - <= 100 %)

74-88-4

Exact percentages are being withheld as a trade secret.

SECTION 4. First aid measures

Description of first-aid measures

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General advice

First aider needs to protect himself.

Inhalation

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

Skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Consult a physician.

Eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist.

Ingestion

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

irritant effects, Cough, Shortness of breath, Lung edema, Nausea, Vomiting, somnolence, Impairment of vision, Unconsciousness, Coma, cardiac arrest

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Not combustible.

Ambient fire may liberate hazardous vapors.

Fire may cause evolution of:

hydrogen iodide

Advice for firefighters

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

SECTION 7. Handling and storage

Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapors/aerosols.

Observe label precautions.

Conditions for safe storage, including any incompatibilities

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Store at room temperature.

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SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Ingredients

Basis	Value	Threshold limits	Remarks
<i>iodomethane 74-88-4</i>			
ACGIH	Time Weighted Average (TWA): Skin designation:	2 ppm	Can be absorbed through the skin.
NIOSH/GUIDE	Recommended exposure limit (REL): Skin designation:	2 ppm 10 mg/m ³	Can be absorbed through the skin.
OSHA_TRANS	PEL: Skin designation:	5 ppm 28 mg/m ³	Can be absorbed through the skin.
Z1A	Time Weighted Average (TWA): Skin designation (Final Rule Limit applies):	2 ppm 10 mg/m ³	Can be absorbed through the skin.

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

Eye/face protection

Safety glasses

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Other protective equipment:

protective clothing

Respiratory protection

required when vapors/aerosols are generated.

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Iodomethane

SECTION 9. Physical and chemical properties

Physical state	liquid
Color	colorless
Odor	ether-like
Odor Threshold	No information available.
pH	5.2 at 25 °C (25 °C)
Melting point	-66 °C
Boiling point/boiling range	42 °C (42 °C) at 1,013 hPa
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	8.5 %(V)
Upper explosion limit	66 %(V)
Vapor pressure	540 hPa at 25 °C (25 °C)
Relative vapor density	4.89
Density	2.28 g/cm ³ at 20 °C (20 °C)
Relative density	No information available.
Water solubility	8.66 g/l at 20 °C (20 °C) Method: OECD Test Guideline 105
Partition coefficient: n-octanol/water	log Pow: 1.57 OECD Test Guideline 107 Bioaccumulation is not expected.
Autoignition temperature	No information available.
Decomposition temperature	> 270 °C (> 270 °C)

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Iodomethane

Viscosity, dynamic

0.5 mPa.s
at 20 °C (20 °C)

Explosive properties

Not classified as explosive.

Oxidizing properties

none

SECTION 10. Stability and reactivity

Reactivity

See below

Chemical stability

Decomposes on exposure to light.

Stabilizer

Copper

Possibility of hazardous reactions

Risk of explosion with:

phosphines, sodium, Strong oxidizing agents, strong alkalis

Exothermic reaction with:

Oxygen

Conditions to avoid

Heating (decomposition).

Exposure to moisture.

Exposure to air.

Incompatible materials

no information available

Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Eye contact, Skin contact

Target Organs

Eyes

Skin

Respiratory system

Central nervous system

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Product name

Iodomethane

Acute oral toxicity

absorption

LD50 Rat: 79.84 mg/kg

OECD Test Guideline 401

Acute inhalation toxicity

LC50 Rat: 4.076 mg/l/691 ppm; 4 h ; vapor

US-EPA

Symptoms: mucosal irritations, Cough, Shortness of breath, Lung edema, Possible damages:;
damage of respiratory tract

absorption

Acute dermal toxicity

absorption

Acute toxicity estimate : 1,100.1 mg/kg

Expert judgment

Skin irritation

Rabbit

Result: Irritations

OECD Test Guideline 404

Causes skin irritation.

Eye irritation

Rabbit

Result: Eye irritation

OECD Test Guideline 405

Causes serious eye irritation.

Sensitization

Maximization Test (GPMT) Guinea pig

Result: Does not cause skin sensitization.

Method: OECD Test Guideline 406

Repeated dose toxicity

Subchronic toxicity

Genotoxicity in vivo

In vivo micronucleus test

Mouse

Result: negative

(ECHA)

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Product name

Iodomethane

Genotoxicity in vitro

Ames test

Escherichia coli/Salmonella typhimurium

Result: negative

Method: US-EPA

(ECHA)

Mutagenicity (mammal cell test): chromosome aberration.

Result: positive

Method: US-EPA

(ECHA)

CMR effects

Carcinogenicity:

Suspected of causing cancer.

Specific target organ systemic toxicity - single exposure

May cause respiratory irritation.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC

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

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

After absorption:

Systemic effects:

Nausea, Vomiting, somnolence, Impairment of vision, Unconsciousness, Coma, cardiac arrest

Possible effects to:

Central nervous system, Liver, Kidney

This substance should be handled with particular care.

SECTION 12. Ecological information

Ecotoxicity

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Product name

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Toxicity to fish

semi-static test LC50 *Oncorhynchus mykiss* (rainbow trout): 1.4 mg/l; 96 h

Analytical monitoring: yes

OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

semi-static test LC50 *Daphnia magna* (Water flea): 0.57 mg/l; 48 h

Analytical monitoring: yes

OECD Test Guideline 202

Toxicity to algae

static test EC50 *Pseudokirchneriella subcapitata* (algae): 1.69 mg/l; 72 h

Analytical monitoring: yes

OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

semi-static test NOEC *Daphnia magna* (Water flea): 0.16 mg/l; 21 d

Analytical monitoring: yes

OECD Test Guideline 211

Persistence and degradability

Biodegradability

0 %; 14 d; aerobic

OECD Test Guideline 301D

Not biodegradable.

Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: 1.57

OECD Test Guideline 107

Bioaccumulation is not expected.

Mobility in soil

No information available.

Other adverse effects

Henry constant

532 Pa·m³/mol

at 25 °C (25 °C)

Method: (experimental)

(HSDB) Distribution preferentially in air.

Additional ecological information

Biological effects:

Possible decomposition products in case of hydrolysis are: Methanol

Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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SECTION 14. Transport information

Land transport (DOT)

UN number UN 2644
Proper shipping name METHYL IODIDE
Class 6.1
Packing group I
Environmentally hazardous --

Air transport (IATA)

UN number UN 2644
Proper shipping name METHYL IODIDE
Class 6.1
Packing group I
Environmentally hazardous --
Special precautions for user yes
Not permitted for transport

Sea transport (IMDG)

UN number UN 2644
Proper shipping name METHYL IODIDE
Class 6.1
Packing group I
Environmentally hazardous --
Special precautions for user yes
EmS F-A S-A

SECTION 15. Regulatory information

United States of America

SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

Ingredients

iodomethane 74-88-4 98 %

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

Ingredients

iodomethane

US State Regulations

Massachusetts Right To Know

Ingredients

iodomethane

Pennsylvania Right To Know

Ingredients

iodomethane

New Jersey Right To Know

Ingredients

iodomethane

California Prop 65 Components

WARNING: this product contains a chemical known in the State of California to cause cancer.

Ingredients

iodomethane

Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Labeling

Hazard pictograms



Signal Word

Danger

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Hazard Statements

H301 + H331 Toxic if swallowed or if inhaled.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention

P273 Avoid release to the environment.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Full text of H-Statements referred to under sections 2 and 3.

H301	Toxic if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Revision Date 09/16/2015

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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