

Chemical Safety Data Sheet MSDS / SDS

Methyl Iodide-13C,d2

Revision Date:2026-03-21 Revision Number:1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name : Methyl Iodide-13C,d2
CBnumber : CB22102072
CAS : 207507-22-0
Synonyms : Iodomethane-13C,d2;Iodomethane-¹³C,d₂

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.
Uses advised against : none

Company Identification

Company : Chemicalbook
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone : 010-86108875

SECTION 2: Hazards identification

GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

Precautionary statements

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P202 Do not handle until all safety precautions have been read and understood.

Hazard statements

H351 Suspected of causing cancer

H335 May cause respiratory irritation

H315 Causes skin irritation

H312 Harmful in contact with skin

SECTION 3: Composition/information on ingredients

Substance

Product name	: Methyl iodide-13C,d2
Synonyms	: Iodomethane-13C,d2;Iodomethane- ¹³ C,d ₂
CAS	: 207507-22-0
MF	: H13CD2I

SECTION 4: First aid measures

General advice

First aiders need to protect themselves. Show this safety data sheet to the doctor in attendance.

If inhaled

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

In case of skin contact

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

In case of eye contact

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

If swallowed

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.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Protection of first-aiders

For personal protection see section 8.

Notes to physician

No data available

SECTION 5: Firefighting measures

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.

Specific hazards during fire fighting

Not combustible. Ambient fire may liberate hazardous vapours.

Hazardous combustion products

Carbon oxides Hydrogen iodide

Specific extinguishing methods

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

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.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection 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. Dispose of properly. Clean up affected area.

SECTION 7: Handling and storage

Handling

Advice on safe handling

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

Avoidance of contact

Strong oxidizing agents Strong bases Oxygen

Storage

Further information on storage conditions

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

Storage class

6.1B, Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

Recommended storage temperature

2 - 8 °C

Packaging material

SECTION 8: Exposure controls/personal protection

control parameter

Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

Engineering measures

No data available

Personal protective equipment

Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type

Filter type AX

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Safety glasses

Skin and body protection

protective clothing

Hand protection

Material

Fluorinated rubber

Break through time

480 min

Glove thickness

0.7 mm

Protective index

Full contact

Manufacturer

Vitoject® (KCL 890 / Aldrich Z677698, Size M)

Material

Fluorinated rubber

Break through time

480 min

Glove thickness

0.7 mm

Protective index

Splash contact

Manufacturer

Vitoject® (KCL 890 / Aldrich Z677698, Size M)

Manufacturer

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

Remarks

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

liquid

Color

No data available

Odor

No data available

Odor Threshold

No data available

pH

No data available

Melting point/ range

-66.5 °C

Boiling point/boiling range

42 °C

Method: lit.

Flash point

No data available

Evaporation rate

No data available

Flammability (solid, gas)

No data available

Flammability (liquids)

The product is not flammable.

Burning rate

No data available

Self-ignition

Not applicable

Upper explosion limit / Upper flammability limit

Not applicable

Lower explosion limit / Lower flammability limit

Not applicable

Vapor pressure

No data available

Relative vapor density

No data available

Relative density

2.327 g/mL at 25 °C

Density

2.327 g/mL (25 °C) 2.327 g/cm³ (25 °C)

Water solubility

No data available

Partition coefficient: n-octanol/water

No data available

Autoignition temperature

Not applicable

Decomposition temperature

No data available

Viscosity, dynamic

No data available

Viscosity, kinematic

No data available

Flow time

No data available

Explosive properties

No data available

Oxidizing properties

No data available

Molecular weight

144.89 g/mol

Particle characteristics Particle size

No data available

SECTION 10: Stability and reactivity**Reactivity**

No data available

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

May discolor on exposure to light.

Conditions to avoid

no information available

Incompatible materials

Strong oxidizing agents Strong bases Oxygen

Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Mixture Acute toxicity**

Oral: No data available

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

Dermal: No data available

Skin corrosion/irritation

Remarks: Mixture causes skin irritation.

Serious eye damage/eye irritation

Classified based on available data. For more details, see section 2

Respiratory or skin sensitization

Classified based on available data. For more details, see section 2

Germ cell mutagenicity

Classified based on available data. For more details, see section 2

Carcinogenicity

Evidence of a carcinogenic effect.

Reproductive toxicity

Classified based on available data. For more details, see section 2

Specific target organ toxicity - single exposure

Mixture may cause respiratory irritation.

Specific target organ toxicity - repeated exposure

Classified based on available data. For more details, see section 2

Aspiration hazard

Classified based on available data. For more details, see section 2

11.2 Additional Information

Nausea, Dizziness, Headache, Blurred vision, Weakness, Drowsiness, Ataxia., Con- fusion., Convulsions, narcosis, Pulmonary edema. Effects may be delayed., Symp- toms of systemic copper poisoning may include: capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may oc- cur from shock or renal failure. Chronic copper poisoning is typified by hepatic cir- rhosis, brain damage and demyelination, kidney defects, and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been re- ported that copper poisoning has lead to hemolytic anemia and accelerates arterio- sclerosis.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

Components Iodomethane-13C,d2

Acute toxicity

LD50 Oral - Rat - male and female - 79.84 mg/kg (OECD Test Guideline 401)

Remarks: The value is given in analogy to the following substances: iodome- thane

LC50 Inhalation - Rat - male and female - 4 h - 4.076 mg/l - vapour (US-EPA)

Remarks: The value is given in analogy to the following substances: iodome- thane

Acute toxicity estimate Dermal - 1,100.1 mg/kg (Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

The value is given in analogy to the following substances: iodomethane

Skin corrosion/irritation

Skin - Rabbit

Result: Irritations - 4 h (OECD Test Guideline 404)

Remarks: The value is given in analogy to the following substances: iodome- thane

Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation (OECD Test Guideline 405)

Remarks: The value is given in analogy to the following substances: iodome- thane

Respiratory or skin sensitization

Maximisation Test - Guinea pig

Result: negative (OECD Test Guideline 406)

Remarks: The value is given in analogy to the following substances: iodome- thane

Germ cell mutagenicity

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster ovary cells

Result: negative

Remarks: The value is given in analogy to the following substances: iodome- thane

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Remarks: The value is given in analogy to the following substances: iodome- thane

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

Result: positive

Remarks: The value is given in analogy to the following substances: iodome- thane

Method: US-EPA

Species: Mouse - male and female - Bone marrow

Result: negative

Remarks: The value is given in analogy to the following substances: iodome- thane

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

Classified based on available data. For more details, see section 2

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation. - Respiratory system

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

The value is given in analogy to the following substances: iodomethane

Specific target organ toxicity - repeated exposure Aspiration hazard

Classified based on available data. For more details, see section 2

SECTION 12: Ecological information

Ecotoxicity

Components:

Iodomethane-13C,d2:

Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)): 1.4 mg/l End point: mortality Exposure time: 96 h Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes Remarks: The value is given in analogy to the following substances: The value is given in analogy to the following substances: iodomethane NOEC (Oncorhynchus mykiss (rainbow trout)): 0.62 mg/l End point: mortality Exposure time: 96 h Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes Remarks: The value is given in analogy to the following substances: The value is given in analogy to the following substances: iodomethane

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.57 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes Remarks: The value is given in analogy to the following substances: The value is given in analogy to the following substances: iodomethane

Toxicity to algae/aquatic plants

ErC50 (Pseudokirchneriella subcapitata (algae)): 1.69 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes Remarks: The value is given in analogy to the following substances: The value is given in analogy to the following substances: iodomethane

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

NOEC (Daphnia magna (Water flea)): 0.16 mg/l End point: reproduction rate Exposure time: 21 d Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes Remarks: The value is given in analogy to the following substances: The value is given in analogy to the following substances: iodomethane

Persistence and degradability

Components:

Iodomethane-13C,d2:

Biodegradability

aerobic Inoculum: activated sludge Concentration: 100 mg/l Result: Not biodegradable Biodegradation: 0 % Exposure time: 28 d Method: OECD Test Guideline 301F GLP: yes Remarks: The value is given in analogy to the following substances: The value is given in analogy to the following substances: iodomethane

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13: Disposal considerations

Disposal methods

Waste from residues

Offer surplus and non-recyclable solutions to a licensed disposal company.

SECTION 14: Transport information

International Regulations

IATA-DGR

Not permitted for transport

IMDG-Code

UN number : UN 2644

Proper shipping name : METHYL IODIDE

Class : 6.1

Packing group : I

Labels : 6.1

EmS Code : F-A, S-A

Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

JT/T 617

UN number : UN 2644

Proper shipping name : METHYL IODIDE

Class : 6.1

Packing group : I

Labels : 6.1

Environmentally hazardous : no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15: Regulatory information

Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk management measures identified on the SDS as well as the local/national regulations concerning the chemical.

National regulatory information

Law on the Prevention and Control of Occupational Diseases

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)

No. / Code Chemical name / Category Threshold quantity

J5 Acute toxic 500 t

Hazardous Chemicals for Priority Management

Not listed under SAWS

Catalogue of Specially Controlled Hazardous

Not listed Chemicals

List of Explosive Precursors

Not listed

Regulations on Labour Protection in Workplaces where Toxic Substances are Used

Catalogue of Highly Toxic Chemicals

Not listed

Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for Import and Export

Not listed

Measures on the Environmental Administration of New Chemical Substances Registration

Registration/Notification number

B1A222232294

Regulation on the Administration of Precursor Chemicals

Catalogue and Classification of Precursor Chemicals

Not listed

Regulations on the Administration of Controlled Chemicals

List of Controlled Chemicals

Not listed

Regulations of Ozone Depleting Substances Management

List of Controlled Ozone Depleting Substances

Not listed

List of Controlled Ozone Depleting Substances Import and Export

Not listed

Environmental Protection Law

List of Priority Controlled Chemicals

Not listed

List of Key Controlled New Pollutants

Not listed

SECTION 16: Other information

Full text of other abbreviations

ACGIH

USA. ACGIH Threshold Limit Values (TLV)

GBZ 2.1-2007

Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

ACGIH / TWA

8-hour, time-weighted average

GBZ 2.1-2007 / PC-TWA AIC - Australian Invent Transport by Land of Bra bw - Body weight; CMR Standard of the German List (Canada); ECx - Conc associated with x% respo Chemical Substances (Jap response; ERG - Emerge GLP - Good Laboratory P cer; IATA - International Construction and Equipm Half maximal inhibitory c tion; IECSC - Inventory o tional Maritime Dangerou Industrial Safety and H Standardization; KECl - K tration to 50 % of a test (Median Lethal Dose); MA lution from Ships; n.o.s. No Observed (Adverse) E fect Level; NOELR - No Norm; NTP - National Toxi icals; OECD - Organizatio fice of Chemical Safety a and Toxic substance; PIC stances; (Q)SAR - (Quant (EC) No 1907/2006 of th Registration, Evaluation, Accelerating Decompositi Chemical Substance Inve Thailand Existing Chemical States); UN - United Nat Transport of Dangerous WHMIS - Workplace Hazar

Permissible concentration - time weighted average ry of Industrial Chemicals

ANTT - National Agency for il

ASTM - American Society for the Testing of Materials

- Carcinogen, Mutagen or Reproductive Toxicant

DIN nstitute for Standardisation

DSL - Domestic Substances ntration associated with x% response

ELx - Loading rate se

EmS - Emergency Schedule

ENCS - Existing and New n)

ErCx - Concentration associated with x% growth rate cy Response Guide

GHS - Globally Harmonized System

actice

IARC - International Agency for Research on Canir Transport Association

IBC - International Code for the nt of Ships carrying Dangerous Chemicals in Bulk

IC50 ncentration
ICAO - International Civil Aviation Organiza- Existing Chemical Substances in China
IMDG - Interna- Goods
IMO - International Maritime Organization
ISHL alth Law (Japan)
ISO - International Organisation for rea Existing Chemicals Inventory
LC50 - Lethal Concenopulation
LD50 - Lethal Dose to 50% of a test population POL - International Convention for the Prevention of Pol- Not Otherwise Specified
Nch - Chilean Norm
NO(A)EC fect Concentration
NO(A)EL - No Observed (Adverse) Efbserveable Effect Loading Rate
NOM - Official Mexican ology Program
NZIoC - New Zealand Inventory of Chemfor Economic Co-operation and Development
OPPTS - Ofd Pollution Prevention
PBT - Persistent, Bioaccumulative S - Philippines Inventory of Chemicals and Chemical Subtative) Structure Activity Relationship
REACH - Regulation European Parliament and of the Council concerning the uthorisation and Restriction of Chemicals
SADT - Selfn Temperature
SDS - Safety Data Sheet
TCSI - Taiwan tory
TDG - Transportation of Dangerous Goods
TECI s Inventory
TSCA - Toxic Substances Control Act (United ons
UNRTDG - United Nations Recommendations on the oods
vPvB - Very Persistent and Very Bioaccumulative
ous Materials Information System

Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.