

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier:

METHYL IODIDE

IUPAC name: Iodomethane

CAS number: 74-88-4

EC number: 200-819-5

Index number: 602-005-00-9

Registration number: 01-2119488645-23-0001

1.2. Relevant identified uses of the substance and uses advised against:

Laboratory chemicals. Chemical intermediate and methylating agent in the production of substances. For industrial use.

Process category (PROC)

PROC 1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Sector of end use

SU 8: Manufacture of bulk, large scale chemicals (including petroleum products)

SU 9: Manufacture of fine chemicals

1.3. Details of the supplier of the safety data sheet:

Vinyl Kereskedelmi és Szolgáltató Kft.

3524 Miskolc, Adler K. u. 19.

Tel.: +36 46 432 633

Branch in Budapest:

1097 Budapest, Illatos u. 19-23.

Tel.: +36 1 282-6768

Telefax: +36 1 282-6769

E-Mail: info@vinyl.hu

1.3.1. Responsible person: -

E-Mail: ehsq@vinyl.hu

1.4. Emergency telephone number:

Public Toxicological Health Service (ETTSZ)

1096 Budapest, Nagyvárad tér 2.

Tel.: 06 1 476 6464, 06 80 201 199 (0-24 h)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance:

Classification according to Regulation 1272/2008/EC (CLP):

Acute toxicity (oral), Hazard Category 3 – H301

Acute toxicity (inhalation), Hazard Category 3 – H331

Acute toxicity (dermal), Hazard Category 4 – H312

Skin corrosion/irritation, Hazard Category 2 – H315

Carcinogenicity, Hazard Category 2 – H351

Specific target organ toxicity - Single exposure, Hazard Category 3, Respiratory tract irritation – H335

Warning H statements:

H301 – Toxic if swallowed.

H331 – Toxic if inhaled.

H312 – Harmful in contact with skin.

H315 – Causes skin irritation.

H351 – Suspected of causing cancer.

H335 – May cause respiratory irritation.

2.2. Label elements:

IUPAC name: Iodomethane

CAS number: 74-88-4

EC number: 200-819-5



DANGER

Warning H statements:**H301 + H331** - Toxic if swallowed or if inhaled.**H312** - Harmful in contact with skin.**H315** - Causes skin irritation.**H335** - May cause respiratory irritation.**H351** - Suspected of causing cancer.**Precautionary P 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/ vapours/spray.**P280** - Wear protective gloves/protective clothing/eye protection/face protection.**P301 + P310** - IF SWALLOWED: Immediately call a POISON CENTER/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.**P312** - Call a POISON CENTER/ doctor, if you feel unwell.**P405** - Store locked up.2.3. Other hazards:

Vesicant. Rapidly absorbed through skin.

Iodomethane is not classified as PBT/vPvB.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS3.1. Substance:

Description: mono-constituent substance, organic

IUPAC name: Iodomethane

Chemical name: methyl iodide

CAS number: 74-88-4

EC number: 200-819-5

Formula: CH₃I

Molar mass: 141,94 g/mol

Purity: > 99 %

Impurities: < 1 %

SECTION 4: FIRST AID MEASURES4.1. Description of first aid measures:

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

IN CASE OF INGESTION:

Measures:

- Never give an unconscious person anything by mouth.
- Rinse mouth thoroughly with water.
- Seek medical advice.

IN CASE OF INHALATION:

Measures:

- If breathed in, move person into fresh air.
- If not breathing, give artificial respiration.
- If breathing is difficult, give oxygen.
- First aider needs to ensure self-protection!
- Consult a physician.

IN CASE OF SKIN CONTACT:

Measures:

- Remove contaminated clothing immediately.
- Wash the skin with soap and water.
- Seek medical advice.

IN CASE OF EYE CONTACT:

Measures:

- In case of contact with eyes flush with plenty of flowing water holding eyelids apart and moving the eyeballs (for at least 15 minutes).
- Obtain medical help.

4.2. **Most important symptoms and effects, both acute and delayed:**

Irritating to respiratory system and skin; can damage the lungs. May cause eye contact burns and conjunctivitis. May cause coughing, sore throat, skin or eye pain and redness. Dangerous for the central nervous system. Evidence of a carcinogenic effect. Harmful if swallowed. Causes gastrointestinal irritation, toxic effects on the liver and kidneys. May cause nausea, dizziness, headache, blurred vision, weakness, drowsiness, ataxia, confusion, spasms, narcosis, cause pulmonary oedema. The effects (in particular the diseases of the central nervous system) may even occur after several days or weeks after exposure.

4.3. **Indication of any immediate medical attention and special treatment needed:**

No data available.

SECTION 5: FIRE-FIGHTING MEASURES5.1. **Extinguishing media:**5.1.1. **Suitable extinguishing media:**

Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

The material is not combustible.

Use agent most appropriate to extinguish surrounding fire.

5.1.2. **Unsuitable extinguishing media:**

None known.

5.2. **Special hazards arising from the substance or mixture:**

Will decompose at high temperatures by generating hazardous substances (hydrogen iodide, carbon oxides, toxic fumes), reacts violently with oxygen, represents a risk of explosion.

5.3. **Advise for fire fighters:**

Use water spray to cool unopened containers.

Use self-contained breathing apparatus and suitable protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES6.1. **Personal precautions, protective equipment and emergency procedures:**6.1.1. **For non-emergency personnel:**

Keep unprotected people away, allow only well trained experts wearing suitable protective clothing to abide in the field of accident.

Use proper personal protective equipment as listed in section 8.

6.1.2. **For emergency responders:**

Wear respiratory protection.

Avoid breathing vapours, mist or gas.

Ensure adequate ventilation.

Evacuate the area of all non-essential personnel.

6.2. **Environmental precautions:**

Dispose of spillage and waste (product/packaging) in accordance with all applicable environmental laws. Do not allow the substance and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.

6.3. **Methods and material for containment and cleaning up:**

Collect the spilled material with non-combustible inert absorbent, then place into a suitable chemical waste container for removal/disposal.

6.4. **Reference to other sections:**

For further and detailed information see section 8 and 13.

SECTION 7: HANDLING AND STORAGE

- 7.1. Precautions for safe handling:
 Observe conventional hygiene precautions.
 Obtain special instructions before use.
 Read all safety precautions and understand.
 Avoid contact with eyes and skin.
 Avoid breathing mist/vapours.
 Do not eat or smoke during work time or at the application site.
 Wash hands before breaks and at end of work.
 Remove contaminated clothing immediately.
 Wash the skin with plenty of water.
 Handle in accordance with good industrial hygiene and safety practices.
 Technical measures:
 In relation to the use at work a professional risk assessment must be carried out.
 Precautions against fire and explosion:
 No special measures required.
- 7.2. Conditions for safe storage, including any incompatibilities:
 Technical measures and storage condition:
 Store in cool, dry, well-ventilated area away from sources of heat and direct sunlight.
 Keep container tightly closed.
 Incompatible materials: none known.
 Packaging material: no special prescriptions.
- 7.3. Specific end use(s):
 No specific instructions available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION8.1. Control parameters:

Occupational exposure limit values:

The substance is not regulated with exposure limit value.

| DNEL | | Routes of exposure | Exposure frequency | Remarks: |
|-------------------|-------------------|--------------------|--|-------------------|
| Worker | Consumer | | | |
| no data available | no data available | Dermal | Short term (acute) Long term (repeated) | no data available |
| no data available | no data available | Inhalative | Short term (acute) Long term (repeated) | no data available |
| no data available | no data available | Oral | Short term (acute) Long term (repeated) | no data available |

| PNEC | | | Exposure frequency: | Remarks: |
|-------------------|-------------------|-------------------|---|-------------------|
| Water | Soil | Air | | |
| no data available | no data available | no data available | Short term (single use) Long term (continuous) | no data available |
| no data available | no data available | no data available | Short term (single use) Long term (continuous) | no data available |
| no data available | no data available | no data available | Short term (single use) Long term (continuous) | no data available |

8.2. Exposure controls:

In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

8.2.1. Appropriate engineering controls:

In pursuance of work is proper foresight needed to avoid leaking onto clothes and floors and to avoid contact with eyes and skin.

The work area should be well-ventilated.

Safety shower, quick-drench eyewash should be available.

- 8.2.2. Individual protection measures, such as personal protective equipment:
Do not smoke, drink or eat in areas where this product is stored or handled.
Avoid contact with skin, eyes or clothing.
Wash hands before and immediately after handling the product.
Remove contaminated clothing.
Wash off affected skin with plenty of water.
Handle in accordance with good industrial hygiene and safety practice.
1. Eye/face protection: use appropriate face shield or tightly fitting safety goggles (EN 166).
 2. Skin protection:
 - a. Hand protection: 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 EU Directive 89/686/EEC and the standard EN 374 derived from it.
 - b. Other: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
 3. Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH(US) or CEN(EU).
 4. Thermal hazard: None known.
- 8.2.3. Environmental exposure controls:
Do not allow into drains, watercourses or the ground.
At the place of use of the material, a risk assessment must be carried out.
The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions an expert's advice should be sought out before deciding upon further protective measures.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

| Parameter | Test method: | Remarks: |
|---|--------------|---|
| 1. Appearance: | | |
| | | colourless liquid (turns yellow, red or brown when exposed to light or moisture) |
| 2. Odour: | | sweet, pungent |
| 3. Odour threshold: | | no data available |
| 4. pH value: | | no data available |
| 5. Melting point/ freezing point: | | -66 °C |
| 6. Initial boiling point/boiling range: | | 41-43 °C |
| 7. Flash point: | | no data available |
| 8. Evaporation rate: | | no data available |
| 9. Flammability (solid, gas): | | no data available |
| 10. Upper/lower flammability or explosive limits: | | 66 Vol. % - 8,5 Vol. % |
| 11. Vapour pressure: | | 50 - 54 kPa 166 kPa |
| | | 20 °C 55 °C |
| 12. Vapour density: | | 4,90 20 °C |
| 13. Relative density: | | air = 1 2,28 g/cm ³ |
| 14. Solubility(ies): | | 25 °C 20 °C |
| | | water: 14 - 20 g/l, soluble in Ethanol, Ether |
| 15. Partition coefficient: n-octanol/water: | | log Pow: 1,51- 1,69 |
| 16. Self-ignition temperature: | | 20 °C no data available |
| 17. Degradation temperature: | | no data available |
| 18. Viscosity: | | 0,5 mPa.s; 0,606 cp |
| 19. Explosive properties: | | 0 °C no data available |
| 20. Oxidizing properties: | | no data available |

9.2. Other information:

*: Yellowed by moisture; exposure to light: red and brown.
The relative density of the vapor / air mixture (air = 1): 2.9 (20 ° C)
Refractive index: 1.529 to 1.531

SECTION 10: STABILITY AND REACTIVITY10.1. Reactivity:

None known.

10.2. Chemical stability:

At normal temperature and general conditions of work stable.

10.3. Possibility of hazardous reactions:

None known.

10.4. Conditions to avoid:

Direct sunlight and humidity.

10.5. Incompatible materials:

Strong oxidizing agents, strong bases, oxygen, silver chlorite, sodium- and trialkylphosphines.

10.6. Hazardous decomposition products:

Carbon monoxide, irritating and toxic fumes and gases (carbon dioxide, hydrogen iodide, iodine).

SECTION 11: TOXICOLOGICAL INFORMATION11.1. Information on toxicological effects:

Acute toxicity: Toxic if swallowed or if inhaled. Harmful in contact with skin.

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Suspected of causing cancer.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure: May cause respiratory irritation.

STOT-repeated exposure: Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

11.1.1. For substances subject to registration, brief summaries of the information derived from the test conducted:

No data available.

11.1.2. Relevant toxicological properties of the hazardous substances:

LD50 Rat, oral 76 mg/kg

LD50 Guinea pig, dermal 800 mg/kg

LC50 Rat, inhalativ 1300 mg/m³/4 h

Corrosion / irritation to the skin: causes severe skin irritation on rabbits.

Serious eye damage / irritation: causes serious eye irritation on rabbits.

Respiratory or skin: Can cause by inhalation or through skin adsorption allergic respiratory and skin reactions. Irritating to mucous membranes and upper respiratory tract, can harm the lungs.

Carcinogenicity: the product can be classified as a carcinogen by IARC, OSHA, ACGIH, NTP, or EPA. Animal data have shown limited evidence of a carcinogenic effects.

IARC: Group 3 - 3: can not be determined whether it is carcinogenic to humans.

11.1.3. Information on likely routes of exposure:

Ingestion, inhalation, skin contact, eye contact.

11.1.4. Symptoms related to the physical, chemical and toxicological characteristics:

Acute health effects:

Nausea, dizziness, headache, blurred vision, weakness, drowsiness, ataxia, confusion, convulsions, anaesthesia, pulmonary oedema. The effects (in particular the diseases of the central nervous system) may even occur after several days or weeks after exposure.

Chronic health effects:

Nausea, dizziness, headache, blurred vision, weakness, drowsiness, ataxia, confusion, convulsions, anaesthesia, pulmonary oedema. The effects (in particular the diseases of the central nervous system) may even occur after several days or weeks after exposure.

11.1.5. Delayed and immediate effects as well as chronic effects from short and long-term exposure:

Toxic if swallowed or inhaled.

Harmful in contact with skin.

Causes skin irritation.

Can cause respiratory irritation.

Suspected of causing cancer

- 11.1.6. Interactive effects:
No data available.
- 11.1.7. Absence of specific data:
No information.
- 11.1.8. Other information:
No data available.

SECTION 12: ECOLOGICAL INFORMATION

- 12.1. Toxicity:
No data available.
- 12.2. Persistence and degradability:
The aerobic biodegradability was examined in a closed cup with an exposure time of 28 days. It was observed that 16% of the material is not readily biodegradable.
- 12.3. Bioaccumulation potential:
No data available.
- 12.4. Mobility in soil:
No data available.
- 12.5. Results of PBT and vPvB assessment:
Iodomethane is not classified as PBT/vPvB.
- 12.6. Other adverse effects:
No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

- 13.1. Waste treatment methods:
Disposal according to the local regulations.
- 13.1.1. Information regarding the disposal of the product:
No special recommendation from the manufacturer.
Residues, contaminated product and not reusable solutions should be disposed of via a licensed disposal company. The packaging of this product must be treated accordingly.
The collected material should be disposed of as hazardous waste.
Do not empty into drains.
European Waste Code:
No appropriate EWC code can be given for the substance, since the identification of the proper code can be done with the method of use defined by the user of the substance. The European waste code number has to be determined after a discussion with a specialist dealing with waste disposal.
- 13.1.2. Information regarding the disposal of the packaging:
Dispose according to the relevant regulations.
- 13.1.3. Physical/chemical properties that may affect waste treatment options shall be specified:
None known.
- 13.1.4. Sewage disposal:
None known.
- 13.1.5. Special precautions for any recommended waste treatment:
No data available.

SECTION 14: TRANSPORT INFORMATION

- 14.1. UN Number:
UN2644
- 14.2. UN proper shipping name:
METHYL IODIDE
- 14.3. Transport hazard class(es):
Kemler number (hazard number): 66
Label: 6.1
Class: 6.1
Classification code: T1
- 14.4. Packaging group:
I
- 14.5. Environmental hazard:
Marine pollutant: no.
- 14.6. Special precautions for user:
ADR Tunnel restriction code: C/D, toxic by inhalation, IMDG EmS: F-A, S-A,
- 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code:
Not applicable.

SECTION 15: REGULATORY INFORMATION15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

15.2. Chemical safety assessment: no information available.**SECTION 16: OTHER INFORMATION**

Information regarding the revision of the safety data sheet:

The safety data sheet has been revised according to Regulation (EU) 2015/830 (Section 1-16).

Changes compared to the previous version: Section 1.2., 2.1., 2.3., 3.1., 11.1., 12.5.

There is no change in the hazard classification compared to the previous version.

Full text of the abbreviations in the safety data sheet:

DNEL: Derived no effect level. PNEC: Predicted no effect concentration. CMR effects: carcinogenicity, mutagenicity and toxicity for reproduction. PBT: Persistent, bioaccumulative and toxic. vPvB: Very Persistent, Very Bioaccumulative. n.d.: not defined. n.a.: not applicable.

Key literature references and sources for data: the previous version of the safety data sheet (07. 04. 2016, version 4).

Relevant H-Phrases (number and full text) of Section 2 and 3:

H301 – Toxic if swallowed.

H301 + H331 - Toxic if swallowed or if inhaled.

H312 – Harmful in contact with skin.

H315 – Causes skin irritation.

H331 – Toxic if inhaled.

H335 – May cause respiratory irritation.

H351 – Suspected of causing cancer.

Training advice: no data available.

This safety data sheet had been prepared on the basis of information provided by the manufacturer/supplier and conform to the relevant regulations.

The information, data and recommendations contained herein are provided in good faith, obtained from reliable sources and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information. The SDS shall be used only as a guide for handling the product; in the course of handling and using the product other considerations may arise or be required.

Users are cautioned to determine the appropriateness and applicability of the above information to their particular circumstances and purposes and assume all risk associated with the use of this product. It is the responsibility of the user to fully comply with local, national and international regulations concerning the use of this product.

Safety data sheet was prepared by: ToxInfo Kft.

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