

Diiodmethan

Revision date: 29.09.2023

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Diiodmethan

Product code:

ORA-A1007

Further trade names

Substance name: diiodomethane

CAS No: 75-11-6

EC No: 200-841-5

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Laboratory chemicals

Equipment maintenance

1.3. Details of the supplier of the safety data sheet

Company name:	KERN & SOHN GmbH	
Street:	Ziegelei 1	
Place:	D-72336 Balingen-Frommern	
Telephone:	+49 (0)7433 9933 0	Telefax: +49 (0)7433 9933 149
e-mail:	info@kern-sohn.com	
Contact person:	Daniel Junger	Telephone: +49 (0)7433 9933 155
e-mail:	daniel.junger@kern-sohn.com	
Internet:	www.kern-sohn.com	

1.4. Emergency telephone number:

GIZ-Nord, Göttingen, Germany +49 551 19240 (24h/7d)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Dam. 1

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Harmful if swallowed.

Causes skin irritation.

Causes serious eye damage.

May cause respiratory irritation.

2.2. Label elements**Regulation (EC) No. 1272/2008****Signal word:** Danger**Pictograms:****Hazard statements**

H302

Harmful if swallowed.

according to Regulation (EC) No 1907/2006

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H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H335 May cause respiratory irritation.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor.
 P405 Store locked up.
 P501 Dispose of waste according to applicable legislation.

Labelling of packages where the contents do not exceed 125 ml
Signal word: Danger

Pictograms:

Hazard statements

H302-H318-H335

Precautionary statements

P101-P102-P280-P305+P351+P338-P310-P405-P501

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients
3.1. Substances
Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
75-11-6	diiodomethane			100 %
	200-841-5			
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3; H302 H315 H318 H335			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures
4.1. Description of first aid measures
General information

First aider: Pay attention to self-protection!
 If unconscious place in recovery position and seek medical advice.

When in doubt or if symptoms are observed, get medical advice.

After inhalation

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. Where appropriate artificial ventilation. Get medical advice/attention.

After contact with skin

Wash with plenty of soap and water. Take off immediately all contaminated clothing and wash it before reuse.

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In case of skin reactions, consult a physician.

After contact with eyes

Protect uninjured eye. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist.

After ingestion

Observe risk of aspiration if vomiting occurs. Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person or a person with cramps. Get medical advice/attention.

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

Irritating to eyes, respiratory system and skin.

Following inhalation: Cough, Dyspnoea.

After ingestion: Nausea, Vomiting, Headache, Pulmonary oedema.

May cause damage to organs. (lung, liver)

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

First Aid, decontamination, treatment of symptoms.

Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO₂), hydrogen iodide, Gases/vapours, toxic, Flammable, corrosive.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Remove persons to safety. Evacuate area.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal. Treat the recovered material as prescribed in the section on waste disposal.

Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

according to Regulation (EC) No 1907/2006

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SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Avoid: aerosol or mist formation.

Advice on protection against fire and explosion

Usual measures for fire prevention.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep/Store only in original container. Keep container tightly closed and in a well-ventilated place. Store in a dry place. Keep locked up. Store in a place accessible by authorized persons only. Do not allow to enter into soil/subsoil.

Hints on joint storage

Do not store together with: Food and feedingstuffs, Alkali metals, Oxidising agent, strong, Alkali (lye), Zinc.

Further information on storage conditions

storage temperature: 5 - 25 °C

Protect against: Contact with air/oxygen, UV-radiation/sunlight, Humidity, Water, Light.

7.3. Specific end use(s)

Laboratory chemicals

Equipment maintenance

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Additional advice on limit values**

To date, no national critical limit values exist.

8.2. Exposure controls**Appropriate engineering controls**

Provide adequate ventilation as well as local exhaust at critical locations.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Protect skin by using skin protective cream. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Do not breathe gas/fumes/vapour/spray. Keep away from food, drink and animal feedingstuffs. Avoid contact with skin, eyes and clothes.

Eye/face protection

Wear eye/face protection. Eye glasses with side protection.

Hand protection

Wear protective gloves.

Suitable material:

Butyl caoutchouc (butyl rubber)

Thickness of the glove material: $\geq 0,5$ mm

FKM (fluoro rubber)

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Thickness of the glove material: $\geq 0,4$ mm

Breakthrough time (maximum wearing time) > 480 min (8 hour(s)) EN ISO 374

Unsuitable material:

Natural fibres (e.g. cotton), NR (natural rubber, natural latex), Leather articles, NBR (Nitrile rubber), PVC (polyvinyl chloride).

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Breakthrough times and swelling properties of the material must be taken into consideration.

Skin protection

Use of protective clothing. Apron, Boots, Chemical protection clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Respiratory protection necessary at: Vapour, aerosol or mist formation.

short-term:

Filtering device (full mask or mouthpiece) with filter: A (Colour: brown; Initial boiling point and boiling range: > 65 °C)

long-term:

Self-contained respirator (breathing apparatus) (DIN EN 133)

Environmental exposure controls

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	characteristic
pH-Value:	not determined

Changes in the physical state

Melting point:	5 - 8 °C
Initial boiling point and boiling range:	182 °C
Flash point:	110 °C

Flammability

Solid:	not applicable
Gas:	not applicable

Explosive properties

The product is not: Explosive.

Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	not applicable

Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable

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Decomposition temperature: not applicable

Oxidizing properties

Odour threshold: not determined

Vapour pressure: not determined

 Density (at 20 °C): 3,325 g/cm³

 Water solubility:
(at 25 °C) 0,8 g/L

Solubility in other solvents

not determined

Partition coefficient: 2,3

Viscosity / dynamic: not determined

Viscosity / kinematic: not determined

Vapour density: (Air = 1) 9,25

Evaporation rate: not determined

9.2. Other information

Odour threshold: not determined

SECTION 10: Stability and reactivity
10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

Moisture-sensitive. Sensitivity to light (photosensitive). Reacts with : Air

10.3. Possibility of hazardous reactions

Violent reaction with: Alkali metals (Danger of explosion)

Reaction with: Alkali (lye), Zinc, Oxidising agent, strong.

10.4. Conditions to avoid

Contact with air/oxygen, UV-radiation/sunlight, Humidity, Water, Light.

10.5. Incompatible materials

Alkali metals, Oxidising agent, strong, Alkali (lye), Zinc.

10.6. Hazardous decomposition products

Gases/vapours, toxic.

Gases/vapours, corrosive

Gases/vapours, flammable

 In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO₂), hydrogen iodide

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

Harmful if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
75-11-6	diiodomethane				
	oral	ATE mg/kg	500		

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Irritation and corrosivity

Causes skin irritation.
Causes serious eye damage.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

May cause respiratory irritation. (diiodomethane)

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.

Practical experience**Other observations**

Following inhalation: Cough, Dyspnoea.
After ingestion: Nausea, Vomiting, Headache, Pulmonary oedema.
May cause damage to organs. (lung, liver)

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
75-11-6	diiodomethane	2,3

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods**Advice on disposal**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. The waste code has to be identified in agreement with the disposal company or the competent authority.

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Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3: diiodomethane

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

Regulation (EC) No. 1005/2009 on substances that lead to the depletion of the ozone layer: not relevant

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Regulation (EC) No 850/2004 [POP-Regulation]: No data available

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 3 - highly water contaminating

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Abbreviations and acronyms

CLP: Classification, labelling and Packaging
 REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 CAS: Chemical Abstracts Service
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
 IMDG: International Maritime Code for Dangerous Goods
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 IATA: International Air Transport Association
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 VOC: Volatile Organic Compounds
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

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Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.