

## Diiodmethan

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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.

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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 (CO<sub>2</sub>), 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

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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)

according to Regulation (EC) No 1907/2006

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

Breakthrough time (maximum wearing time) &gt; 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: &gt; 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/cm<sup>3</sup>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 (CO<sub>2</sub>), 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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according to Regulation (EC) No 1907/2006

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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.