

**Safety data sheet  
according to 1907/2006/EC**

Printing date 18.02.2015



Version Nr: 1

Revision: 18.02.2015

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

- **1.1 Product identifier**
- Trade name **Diiodomethane**
- CAS Number:  
75-11-6
- EC number:  
200-841-5
- **1.2 Relevant identified uses of the substance or mixture and uses advised against** None.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
**SUPPLIER:**  
KERN & Sohn GmbH  
Ziegelei 1  
D-72336 Balingen  
Deutschland / Germany
- **Informing department:** Kern & Sohn GmbH; +49 (0) 7433 9933-155; daniel.junger@kern-sohn.com
- **1.4 Emergency telephone number:**  
GIZ-Nord, Göttingen, Germany  
Member of EPECS Network  
EMERGENCY NUMBER: +49 551 19240

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Eye Dam. 1 H318 Causes serious eye damage.  
Acute Tox. 4 H302 Harmful if swallowed.  
Skin Irrit. 2 H315 Causes skin irritation.  
STOT SE 3 H335 May cause respiratory irritation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
Xn; Harmful  
R22: Harmful if swallowed.  
Xi; Irritant  
R36/37/38: Irritating to eyes, respiratory system and skin.
- **Information concerning particular hazards for human and environment:** void
- **Classification system:**  
The classification is in line with current EU lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**  
  
GHS05 GHS07
- **Signal word** Danger

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**· Hazard statements**

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

**· Precautionary statements**

- P261 Avoid breathing mist/vapours/spray.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P271 Use only outdoors or in a well-ventilated area.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor.
- P405 Store locked up.

**· 2.3 Other hazards****· Results of PBT and vPvB assessment**

- **PBT:** No data available
- **vPvB:** No data available

**SECTION 3: Composition/information on ingredients****· 3.1 Substances**

- **CAS No. Designation:**  
75-11-6 diiodomethane; di-iodomethane; methylene iodide
- **Identification number(s):**
- **EC number:** 200-841-5

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

- Personal protection for the First Aider.
- Remove contaminated clothing.
- Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- If unconscious, place in recovery position and seek medical advice.

**· After inhalation**

- Take affected persons into the open air and position comfortably
- Supply fresh air. If required, provide artificial respiration. Keep patient warm.

With symptoms:

- Seek medical treatment.

**· After skin contact**

- Remove contaminated clothing.
- Wash off with plenty of water.
- Or better;
- Wash with water and soap and rinse thoroughly.
- If skin irritation continues, consult a doctor.

**· After eye contact**

- Use eye protection.
- Rinse opened eye for several minutes under running water. Then consult Oculist.

**· After swallowing**

- Rinse out mouth and then drink (two glasses at the most) water.
- Do not induce vomiting.

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Seek medical treatment.

Turn a vomiting person on the side if lying on the back.

If vomiting occurs, the head should be kept low.

**· 4.2 Most important symptoms and effects, both acute and delayed**

Irritations after contact with eyes, skin and mucous membrane.

After inhalation:

Irritating to respiratory tract.

Coughing

Breathing difficulty (dyspnea)

After swallowing:

Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Nausea

Vomiting

Headache

Somnolence.

Possible other symptoms are currently not known.

**· Information for doctor** The toxicological properties of this material have not been fully investigated.**· Danger**

Irritation on eyes, skin and respiratory tract.

Harmful if swallowed.

Danger of pulmonary oedema.

May cause liver damage.

There are at present no indications to further acute dangers for the health.

Further health dangers cannot be excluded however.

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

Elemental assistance.

Decontamination.

Treat symptomatically and supportively.

**SECTION 5: Firefighting measures****· 5.1 Extinguishing media****· Suitable extinguishing agents**

The product is not flammable.

Use fire fighting measures that suit the environment.

**· For safety reasons unsuitable extinguishing agents** Water with a full water jet.**· 5.2 Special hazards arising from the substance or mixture**

Formation of toxic and corrosive gases during heating or in case of fire.

Can be released in case of surrounding fire:

Carbon monoxide and carbon dioxide.

Hydrogen iodide (HI)

**· 5.3 Advice for firefighters****· Protective equipment:**

Wear self-contained breathing apparatus.

Wear full protective suit.

**· Additional information**

Collect contaminated fire fighting water separately. It must not enter drains.

Cool endangered containers with water spray jet.

Heating causes a rise in pressure, risk of bursting.

Damp down gases/fumes/haze with water spray jet.

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

Wear protective equipment. Keep unprotected persons away.  
Use breathing protection against the effects of fumes/dust/aerosol.  
Ensure adequate ventilation  
Bring persons out of danger.

**· 6.2 Environmental precautions:**

Do not allow to enter sewage systems, water bodies, groundwater or soil.  
Inform respective authorities in case product reaches water, sewage system or soil.

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

Ensure adequate ventilation.  
Absorb with liquid-binding material (sand, diatomite, universal binders).  
Clean up affected area.  
May be recycled or disposed of in appropriate containers  
Dispose of contaminated material as waste according to item 13.

**· 6.4 Reference to other sections**

See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

**SECTION 7: Handling and storage****· 7.1 Precautions for safe handling**

Keep containers tightly closed.  
Prevent formation of aerosols.  
Ensure good ventilation/exhaustion at the workplace.

**· Hygiene measures:**

Keep away from foodstuffs, beverages and feedingsstuff.  
Instantly remove any soiled and impregnated garments.  
Wash hands during breaks and at the end of the work.  
Do not inhale gases / fumes / aerosols.  
Avoid contact with the eyes and skin.  
Do not eat, drink or smoke while working.

**· Information about protection against explosions and fires:**

The product is not flammable  
No special measures required.

**· 7.2 Conditions for safe storage, including any incompatibilities****· Storage****· Requirements to be met by storerooms and containers:**

Store in original container if possible.  
Prevent any penetration into the ground.

**· Information about storage in one common storage facility:**

Store away from foodstuffs.  
Do not store together with materials/products which can form dangerous chemical reactions.  
See point 10: stability and reactivity.

**· Further information about storage conditions:**

Store in a dry place. Store in a closed container.  
Protect from heat and direct sunlight.  
Store container in a well ventilated position.  
Protect from humidity and keep away from water.  
Protect from the effects of light.

**· Recommended storage temperature: +5 °C - +25 °C**

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- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
- **Components with critical values that require monitoring at the workplace:** Not required.
- **DNELs** No data available
- **PNECs** No data available
- **Additional information:** The lists that were valid during the compilation were used as basis.

**8.2 Exposure controls****Personal protective equipment****General protective measures:**

The usual precautionary measures should be adhered to in handling the chemicals.

**Breathing equipment:**

If used in closed systems or well-ventilated area breathing protection is not necessary.

Required when vapours, aerosol or mist are generated.



In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

Filter A.

**Protection of hands:**

Chemical-protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Check protective gloves prior to each use for their proper condition.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Preventive skin protection by use of skin-protecting agents is recommended.

**Material of gloves**

Full contact:

eg Butyl rubber, BR

Recommended thickness of the material:  $\geq 0,5$  mm

eg Fluorocarbon rubber (Viton)

Recommended thickness of the material:  $\geq 0,4$  mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

ASK THE MANUFACTURER FOR SUITABLE MATERIAL.

**Penetration time of glove material**

Full contact.

Permeation time:  $> 480$  min (8h) EN 374

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Not suitable are gloves made of the following materials:**

Strong gloves

Leather gloves

eg Natural rubber, NR

eg Nitrile rubber, NBR

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PVC gloves

· **Eye protection:**



Safety glasses with side protection.

· **Body protection:**

Apron

Boots

or

Suitable chemical protection suit.

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

**SECTION 9: Physical and chemical properties**

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· <b>Form:</b>	Fluid
· <b>Colour:</b>	colourless
· <b>Smell:</b>	characteristic
· <b>Odour threshold:</b>	No data available

· **pH-value:** No data available

· **Change in condition**

· <b>Melting point/Melting range:</b>	5-8 °C
· <b>Boiling point/Boiling range:</b>	182 °C

· **Flash point:** 110 °C

· **Ignition temperature:** Not applicable

· **Decomposition temperature:** Not applicable

· **Danger of explosion:** Product does not present an explosion hazard.

· **Critical values for explosion:**

· <b>Lower:</b>	Not applicable
· <b>Upper:</b>	Not applicable

· **Vapour pressure:** No data available

· **Vapour Density (air=1):** 9,25

· **Density at 20 °C** 3,325 g/cm<sup>3</sup>

· **Vapour density** Not determined.

· **Solubility in / Miscibility with  
Water at 25 °C:** 0,8 g/l

· **Partition coefficient (n-octanol/water):** 2,3 log POW

· **Viscosity:**

· <b>dynamic:</b>	No data available
· <b>kinematic:</b>	No data available

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**· 9.2 Other information**

No further relevant information available.

**SECTION 10: Stability and reactivity****· 10.1 Reactivity****· 10.2 Chemical stability****· Conditions to be avoided:**

No decomposition if used and stored according to specifications.

To avoid thermal decomposition do not overheat.

Moisture-sensitive

Air and light sensitive.

**· 10.3 Possibility of hazardous reactions**

Explosive reactions with:

Alkali metals

Reacts with strong oxidising agents.

Reacts with strong alkali (lyes).

Reacts with zinc.

**· 10.4 Conditions to avoid** No further relevant information available.**· 10.5 Incompatible materials:** No further relevant information available.**· 10.6 Hazardous decomposition products:**

Poisonous gases/vapours

Corrosive gases/vapours

Inflammable gases/vapours

Can be released in case of surrounding fire:

Carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>)

Hydrogen iodide (HI)

**SECTION 11: Toxicological information****· 11.1 Information on toxicological effects****· Acute toxicity:****· LD/LC50 values that are relevant for classification:** No data available**· Primary irritant effect:****· on the skin:**

Results from bioassays are not available.

Irritant effect.

**· on the eye:**

Results from bioassays are not available.

Irritant effect.

**· Sensitisation:**

Results from bioassays are not available.

No sensitizing effect known.

**· Subacute to chronic toxicity:****mutagenic activity:**

Bacterial mutagenicity - Ames-Test: negative (Lit.).

**carcinogenic activity:**

No data available

IARC (International Agency for Research on Cancer )

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

**teratogenic activity:**

No data available

**fertility impairment:**

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No data available

· **Additional toxicological information:**

Harmful if swallowed.

Causes serious eye irritation.

Causes skin irritation.

May cause respiratory irritation.

Further hazardous properties cannot be excluded.

Further hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

The substance / product should be handled with the care usual when dealing with chemicals.

· **Acute effects (acute toxicity, irritation and corrosivity)** May cause respiratory irritation.**SECTION 12: Ecological information**· **12.1 Toxicity**· **Aquatic toxicity:** No data available· **Terrestrial toxicity:** No data available· **12.2 Persistence and degradability** No data available· **12.3 Bioaccumulative potential**

Due to the distribution coefficient n-octanol/water a worth-mentioning accumulation in organisms is not expected [log P(o/w) 1-4].

· **12.4 Mobility in soil** No data available· **Additional ecological information:**· **General notes:**

Quantitative data on the ecological effect of this product are not available.

At present there are no ecotoxicological assessments.

Do not allow product to reach ground water, water bodies, sewage system or soil.

· **12.5 Results of PBT and vPvB assessment**· **PBT:** No data available· **vPvB:** No data available· **12.6 Other adverse effects** No further relevant information available.**SECTION 13: Disposal considerations**· **13.1 Waste treatment methods**· **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

· **European waste catalogue**

A waste code in accordance with the European Waste Catalogue (EWC) may not be assigned to this product since it admits of a classification only when the consumer uses it for some purpose. In agreement with the waste code must be determined regional waste disposal authority or company.

· **Uncleaned packagings:**· **Recommendation:** Disposal must be made according to official regulations.**SECTION 14: Transport information**· **14.1 UN-Number**· **ADR, ADN, IMDG, IATA**

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· <b>14.2 UN proper shipping name</b> · <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.3 Transport hazard class(es)</b> · <b>ADR, ADN, IMDG, IATA</b> · <b>Class</b>	Void
· <b>14.4 Packing group</b> · <b>ADR, IMDG, IATA</b>	Void
· <b>14.5 Environmental hazards:</b>	Not applicable.
· <b>14.6 Special precautions for user</b>	Not applicable.
· <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.
· <b>UN "Model Regulation":</b>	-

**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **TSCA (Toxic Substances Control Act):** Substance is listed.
- **National regulations**
- **Information on occupational restrictions:**  
Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work  
Council Directive 92/85/EEC Employment restrictions concerning pregnant and lactating women must be observed.
- **Major Accident Hazard - Seveso Directive 96/82/EC:** not regulated
- **Other regulations, limitations and prohibitive regulations**
- **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer** not regulated
- **Regulation (EC) No 850/2004 on persistent organic pollutants and amending Directive 79/117/EEC**  
not regulated
- **Substances of very high concern (SVHC) according to REACH, Article 57**  
This product contains no SVHC above the legal limit of concentration  $\geq 0,1\%$  (w / w)
- **REGULATION (EU) No 649/2012 concerning the export and import of dangerous chemicals (PIC procedure):**  
not regulated
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

These statements solely describe the safety demands of the product and base according to the best of our belief on our today's knowledge. They, however, do not represent any assurance towards properties of the product within the sense of liability, resp. guaranty regulations and thus are given without any obligation.

- **Abbreviations and acronyms:**  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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*IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**DNEL: Derived No-Effect Level (REACH)**PNEC: Predicted No-Effect Concentration (REACH)**Lit.: Literatur**Acute Tox. 4: Acute toxicity, Hazard Category 4**Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2**Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1**STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3***Sources***Information of distributor.**European chemical Substances Information System**<http://esis.jrc.ec.europa.eu/>**ECHA Classification and Labelling**[echa.europa.eu/de/view-article/-/journal\\_content/07005f81-abf1-4081-973b-6c7c526c39df](http://echa.europa.eu/de/view-article/-/journal_content/07005f81-abf1-4081-973b-6c7c526c39df)**GESTIS - Substance Database**<http://gestis.itrust.de>**MSDS of different manufacturers.**Environmental Health and Toxicology National Library of Medicine TOXNET.**<http://sis.nlm.nih.gov/enviro.html>*

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