

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.07.2017

Revision: 26.07.2017

## 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** dimethyl carbonate
- **Article number:** 1324
- **CAS Number:**  
616-38-6
- **EC number:**  
210-478-4
- **Index number:**  
607-013-00-6
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Solvent for various applications
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
H. Möller GmbH & Co. KG  
Bürgerkamp 1  
D-48565 Steinfurt  
Tel.: 02551/9340-0  
Fax: 02551/9340-60
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:** Giftnotruf Mainz - 24 Stunden Notdienst - Tel.: +49 (0) 6131/19240

## 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02

- **Signal word** Danger
- **Hazard statements**  
H225 Highly flammable liquid and vapour.
- **Precautionary statements**

|                |   |
|----------------|---|
| P210           | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.      |
| P240           | Ground/bond container and receiving equipment.  |
| P241           | Use explosion-proof electrical/ventilating/lighting equipment.                                      |
| P280           | Wear protective gloves/protective clothing/eye protection/face protection.                          |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P501           | Dispose of contents/container in accordance with local/regional/national/international regulations. |
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterisation: Substances**
- **CAS No. Description**  
616-38-6 dimethyl carbonate
- **Identification number(s)**
- **EC number:** 210-478-4
- **Index number:** 607-013-00-6

### 4 First aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Carbon monoxide (CO)  
carbon dioxide
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.
- **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 disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.

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- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Respiratory protection:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
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.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
- Form: Fluid
- Colour: Colourless
- **Odour:** Characteristic
- **Odour threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
- Melting point/freezing point: 4 °C

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|   |   |
|---|---|
| <b>Initial boiling point and boiling range:</b> 90.5 °C |   |
| · <b>Flash point:</b>                                   | 16 °C   |
| · <b>Ignition temperature:</b>                          |   |
| · <b>Decomposition temperature:</b>                     | Not determined.   |
| · <b>Auto-ignition temperature:</b>                     | Not determined.   |
| · <b>Explosive properties:</b>                          | Product is not explosive. However, formation of explosive air/vapour mixtures are possible. |
| · <b>Explosion limits:</b>                              |   |
| <b>Lower:</b>   | Not determined.   |
| <b>Upper:</b>   | Not determined.   |
| · <b>Vapour pressure at 20 °C:</b>                      | 56 hPa  |
| · <b>Density at 20 °C:</b>                              | 1.07 g/cm <sup>3</sup>  |
| · <b>Relative density</b>                               | Not determined.   |
| · <b>Vapour density</b>                                 | Not determined.   |
| · <b>Evaporation rate</b>                               | Not determined.   |
| · <b>Solubility in / Miscibility with water:</b>        | Not miscible or difficult to mix.   |
| · <b>Partition coefficient: n-octanol/water:</b>        | Not determined.   |
| · <b>Viscosity:</b>                                     |   |
| <b>Dynamic:</b>   | Not determined.   |
| <b>Kinematic:</b>                                       | Not determined.   |
| · <b>Other information</b>                              | No further relevant information available.  |

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Strong oxidizing agents
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

|        |      |                    |
|--------|------|--------------------|
| Oral   | LD50 | 6000 mg/kg (mouse) |
| Dermal | LD50 | > 5000 mg/kg (rat) |

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/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.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.

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- **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.



### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation** Disposal according to local regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- |  |   |
|--|---|
| · <b>UN-Number</b>                         |   |
| · <b>ADR, IMDG, IATA</b>                   | 1161  |
| · <b>UN proper shipping name</b>           |   |
| · <b>ADR</b>                               | 1161 DIMETHYL CARBONATE   |
| · <b>IMDG, IATA</b>                        | DIMETHYL CARBONATE  |
| · <b>Transport hazard class(es)</b>        |   |
| · <b>ADR</b>                               |   |
|  |  |
| · <b>Class</b>                             | 3 (F1) Flammable liquids.   |
| · <b>Label</b>                             | 3   |
| <hr style="border-top: 1px dashed #000;"/> |   |
| · <b>IMDG, IATA</b>                        |   |
|  |  |
| · <b>Class</b>                             | 3 Flammable liquids.  |
| · <b>Label</b>                             | 3   |

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|   |  |
|---|--|
| · <b>Packing group</b><br>· <b>ADR, IMDG, IATA</b>  | II   |
| · <b>Environmental hazards:</b><br>· <b>Marine pollutant:</b>   | No   |
| · <b>Special precautions for user</b><br>· <b>Danger code (Kemler):</b><br>· <b>EMS Number:</b>                     | Warning: Flammable liquids.<br>33<br>F-E,S-D |
| · <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>   | Not applicable.                              |
| · <b>Transport/Additional information:</b>  |  |
| · <b>ADR</b><br>· <b>Limited quantities (LQ)</b><br>· <b>Transport category</b><br>· <b>Tunnel restriction code</b> | LQ4<br>2<br>D/E                              |
| · <b>UN "Model Regulation":</b>   | UN 1161 DIMETHYL CARBONATE, 3, II            |

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category P5c FLAMMABLE LIQUIDS**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 40
- **Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Product safety department
- **Contact:** Mrs. Steyer
- **Abbreviations and acronyms:**  
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
 ICAO: International Civil Aviation Organisation  
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 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)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 Flam. Liq. 2: Flammable liquids – Category 2