Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 22.12.2014 Version number 3 Revision: 22.12.2014

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

1.1 Product identifier

Trade name: DIMETHYL SULPHOXIDE D6 99.9 Atom%D

Article number: 7915

CAS Number:
2206-27-1
EC number:
218-617-0

Registration number
A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Application of the substance / the mixture Laboratory chemical

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Carl Roth GmbH + Co. KG
Schoemperlenstraße 3-5
76185 Karlsruhe
Germany
Telefon: +49/(0)721 5606-0 Telefax: +49/(0)721 5606-149 E-Mail: sicherheit@carlroth.de

Further information obtainable from: Department Health, Safety and Environment

1.4 Emergency telephone number:
Poison Centre Munich Telefon +49/(0)89 19240

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 Void

Classification according to Directive 67/548/EEC or Directive 1999/45/EC Void

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

2.3 Other hazards
All chemicals are potentially dangerous. They are therefore only be handled by specially trained personnel with the necessary care.

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

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SECTION 3: Composition/information on ingredients

3.1 Chemical characterisation: Substances

CAS No. Description
2206-27-1 di[(2H3)methyl] sulphoxide

Identification number(s)
EC number: 218-617-0
Formula: C_2D_6OS
Molar mass [g/mol]: 84,18

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SECTION 4: First aid measures

4.1 Description of first aid measures

General information:
Remove any clothing soiled by the product.

After inhalation:
After inhalation of vapors / aerosols:
Supply fresh air; if there is any trouble seek medical help.

After skin contact:
Rinse with water
After massive or prolonged skin contact:
Seek medical treatment in case of complaints.

After eye contact:
Rinse opened eye for 10 minutes under running water. If symptoms persist, consult a doctor.

After swallowing:
Rinse out mouth and then drink water.
Seek medical treatment in case of complaints.

4.2 Most important symptoms and effects, both acute and delayed
Irritations
CNS disorders
tiredness
Headache
Nausea

4.3 Indication of any immediate medical attention and special treatment needed
No information available.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: CO2, powder,foam or water spray.

For safety reasons unsuitable extinguishing agents:
For this substance/mixture no limitations of extinguishing agents are given.

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5.2 Special hazards arising from the substance or mixture
Can form explosive gas-air mixtures.

In the event of fire development of hazardous combustion gases or vapours possible.
In case of fire, the following can be released:
Sulphure oxides (SOx)
Carbon monoxide and carbon dioxide

5.3 Advice for firefighters

Protective equipment:
Wear self-contained respiratory protective device.
Additional information Cool endangered receptacles with water spray.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Do not breathe vapour/spray.

6.2 Environmental precautions
Do not allow product to reach sewage system or any water course.

6.3 Methods and material for containment and cleaning up
Absorb with liquid-binding material (e.g. Rotisorb® Art.-Nr. 1710.1).
Clean the affected area carefully.

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 disposal information.

*
SECTION 7: Handling and storage

7.1 Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:
No special requirements.

Information about storage in one common storage facility:
Store away from foodstuffs.

Further information about storage conditions:
Keep container tightly sealed.

Recommended storage temperature: 15 - 25 °C

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

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SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities:

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace: Not required.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:
Do not inhale gases / fumes / aerosols.
Avoid close or long term contact with the skin.
Wash hands before breaks and at the end of work.

Individual protection measures
Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Respiratory protection:

Required when vapours/aerosols are generated. Filter A (colour code: brown).
When selecting your respiratory unit: Consider the "Rules for the use of respiratory protection equipment" (BGR190).

Protection of hands:

Protective gloves
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

Material of gloves
Polychloroprene, thickness: 0,65 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.

Penetration time of glove material
Value for the permeation: Level ≥ 6
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

As protection from splashes gloves made of the following materials are suitable:
Polychloroprene, thickness: 0,65 mm
Value for the permeation: Level ≥ 6

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Eye protection:

Tightly sealed goggles

Body protection:
Protective work clothing

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	Fluid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	No information available.
pH-value:	No information available.
Change in condition	
Melting point/Melting range:	20.2 °C
Boiling point/Boiling range:	190 °C
Flash point:	88 °C
Flammability (solid, gaseous):	No information available
Ignition temperature:	270 °C
Decomposition temperature:	> 190 °C
Self-igniting:	No information available
Danger of explosion:	Not classified als explosive.
Explosion limits:	
Lower:	1.8 Vol %
Upper:	63 Vol %
Oxidizing properties:	No information available.
Vapour pressure at 20 °C:	2.5 hPa
Density at 20 °C:	1.19 g/cm³
Vapour density	No information available
Evaporation rate	No information available
Solubility in / Miscibility with water:	Soluble.
Partition coefficient (n-octanol/water):	-1.35 log POW
Viscosity:	
Dynamic at 20 °C:	2.4 mPas
Kinematic:	No information available.
9.2 Other information	No further relevant information available.

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SECTION 10: Stability and reactivity

10.1 Reactivity
Fumes can combine with air to form an explosive mixture.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:
No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions
Autoignition by autoxidation at large surface area.
Exothermic reaction with:
Alkali metals
Magnesium
Strong acids
strong reducing agents
Danger of explosion with:
Nitric acid
perchloric acid
Strong oxidizing agents
nitrates
acid halides
perchlorates
hydrides

10.4 Conditions to avoid
Heating
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

10.5 Incompatible materials:
various plastics, Metals

10.6 Hazardous decomposition products:
In case of fire: see item 5.
Additional information: Hygroscopic

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:

Oral	LD_{50}	17500 mg/kg (rat)
Dermal	LD_{50}	40000 mg/kg (rat)

Primary irritant effect:

on the skin:
Slight irritations.
Danger through skin adsorption.

on the eye:
Slight irritations

after inhalation:
After inhalation of vapors:
Irritation symptoms in the respiratory tract.
Pulmonary oedema latency period until onset of action.

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Sensitisation:
No sensitising effects known.

CMR effects:
Germ cell mutagenicity:
No information available.
Carcinogenicity:
No information available.
Reproductive toxicity:
No information available.

Aspiration hazard:
No aspiration toxicity classification.

Specific target organ toxicity - single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.
Specific target organ toxicity - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Additional toxicological information:
Systemic effects:
CNS-disorders
Tiredness
Headache
Nausea
Damage of liver and kidneys.

Further information:
The product should be handled with the care usual when dealing with chemicals.

*
SECTION 12: Ecological information

12.1 Toxicity

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

Fish toxicity:	
LC_{50}	42900 mg/l/96 h (Onchorhynchus mykiss)

Daphnia toxicity:	
EC50	16250 mg/l/24 h (daphnia)

12.2 Persistence and degradability
Biodegradation: 3.1%/14d
Not easily biodegradable

12.3 Bioaccumulative potential
Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected (log POW ≤4).

12.4 Mobility in soil
No further relevant information available.

Ecotoxical effects:

Remark:
Do not allow to enter waters, waste water, or soil!

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

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12.6 Other adverse effects
No further relevant information available.

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SECTION 13: Disposal considerations

Waste treatment methods

Recommendation
The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.

Uncleaned packaging:

Recommendation:
Disposal according to official regulations.

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SECTION 14: Transport information

14.1 UN-Number	
ADR, ADN, IMDG, IATA	Void
14.2 UN proper shipping name	
ADR, ADN, IMDG, IATA	Void
14.3 Transport hazard class(es)	
ADR, ADN, IMDG, IATA **Class**	Void
14.4 Packing group	
ADR, IMDG, IATA	Void
14.5 Environmental hazards:	
Marine pollutant:	No
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
ADR **Remarks:**	Not subject to transport regulations.
UN "Model Regulation":	-

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations:

Breakdown regulations:

Waterhazard class:
Water hazard class 1 (Self-assessment): slightly hazardous for water.

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15.2 Chemical safety assessment
A Chemical Safety Assessment has not been carried out.

*
SECTION 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.

Relevant phrases

Department issuing MSDS: Department: Health, Safety and Environment

Contact: Frau Weckemann

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)
ICAO: International Civil Aviation Organisation
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
LD50*: Lethal Dose, 50 percent (Not relevant for classification)
LD50*: Lethal Concentration, 50 percent (Not relevant for classification)

*** Data compared to the previous version altered.**