

## Chemical Safety Data Sheet MSDS / SDS

## Dimethyl sulfoxide-d6

Revision Date:2024-11-23 Revision Number:1

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

**Product identifier**

Product name : Dimethyl sulfoxide-d6  
CBnumber : CB8372604  
CAS : 2206-27-1  
EINECS Number : 218-617-0  
Synonyms : DMSO-d6,DIMETHYL SULFOXIDE-D6

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 400-158-6606

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## SECTION 2: Hazards identification

**GHS Label elements, including precautionary statements****Precautionary statements**

P403+P235 Store in a well-ventilated place. Keep cool.

**Hazard statements**

H227 Combustible liquid

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## SECTION 3: Composition/information on ingredients

**Substance**

Product name : Dimethyl sulfoxide-d6  
Synonyms : DMSO-d6,DIMETHYL SULFOXIDE-D6  
CAS : 2206-27-1  
EC number : 218-617-0  
MF : C2D6OS

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## SECTION 4: First aid measures

### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### Indication of any immediate medical attention and special treatment needed

No data available

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## SECTION 5: Firefighting measures

### Special hazards arising from the substance or mixture

Carbon oxides Sulfur oxides Combustible.

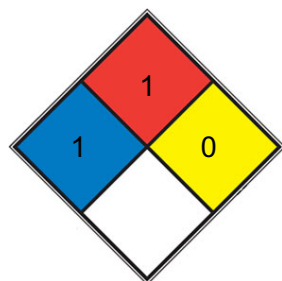
### Advice for firefighters

No data available

### Further information

No data available

### NFPA 704



☒ HEALTH 1 Exposure would cause irritation with only minor residual injury (e.g. [acetone](#), sodium bromate, potassium chloride)

Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion

☒ FIRE 1 can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. [mineral oil](#), ammonia)

☒ REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N2](#))

☐ SPEC.

☐ HAZ.

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

For personal protection see section 8.

## Environmental precautions

No data available

## Methods and materials for containment and cleaning up

No data available

## Reference to other sections

For disposal see section 13.

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# SECTION 7: Handling and storage

## Precautions for safe handling

For precautions see section 2.2.

## Conditions for safe storage, including any incompatibilities

No data available

## Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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# SECTION 8: Exposure controls/personal protection

## control parameter

### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

## Exposure controls

### Personal protective equipment

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: Chloroprene

Minimum layer thickness: 0,6 mm Break through time: 480 min

Material tested: Camapren? (KCL 722 / Aldrich Z677493, Size M)

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,2 mm Break through time: 30 min

Material tested: Dermatril? P (KCL 743 / Aldrich Z677388, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved  
Chemical Book

gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### Control of environmental exposure

Prevent product from entering drains.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Appearance	colorless liquid
Odour	characteristic
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	Melting point: 20,2 °C
Initial boiling point and boiling range	189 °C - lit.
Flash point	88 °C
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	Upper explosion limit: 63 %(V) Lower explosion limit: 1,8 %(V)
Vapour pressure	2,5 hPa at 20 °C
Vapour density	No data available
Relative density	1,19 g/mL at 25 °C
Water solubility	at 20 °C soluble
Partition coefficient: n-octanol/water	log Pow: -1,35 - (Lit.), Bioaccumulation is not expected.
Autoignition temperature	No data available
Decomposition temperature	>190 °C -
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
Explosive properties	No data available
Oxidizing properties	No data available

### Other safety information

No data available

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## SECTION 10: Stability and reactivity

### Reactivity

No data available

### Chemical stability

No data available

## Possibility of hazardous reactions

Risk of explosion with:

acetylidene organic halides perchlorates Acid chlorides

nonmetallic halides iron(III) compounds nitrates

fluorides chlorates hydrides perchloric acid

Oxides of phosphorus Nitric acid

silver compounds silicon compounds silanes

acid halides

Exothermic reaction with:

boron compounds oxyhalogenic compounds Potassium

sodium

Strong oxidizing agents phosphorus halides strong reducing agents Acid chlorides

Strong acids silver salt nitrogen dioxide

Risk of ignition or formation of inflammable gases or vapours with: potassium permanganate

## Conditions to avoid

No data available

## Incompatible materials

various plastics, Metals

## Hazardous decomposition products

In the event of fire: see section 5

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# SECTION 11: Toxicological information

## Information on toxicological effects

### Acute toxicity

LD50 Oral - Rat - male and female - 28.300 mg/kg (OECD Test Guideline 401)

LC0 Inhalation - Rat - male and female - 4 h - > 5,33 mg/l (OECD Test Guideline 403)

LD50 Dermal - Rat - 40.000 mg/kg Remarks:

(RTECS)

### Skin corrosion/irritation

Skin - Rabbit

Result: slight irritation - 4 h (OECD Test Guideline 404)

### Serious eye damage/eye irritation

Eyes - Rabbit

Result: slight irritation (OECD Test Guideline 405)

### Respiratory or skin sensitization

(OECD Test Guideline 406)

In animal experiments: - Mouse Result: negative

(OECD Test Guideline 429)

### **Germ cell mutagenicity**

Ames test

Salmonella typhimurium Result: negative

Mutagenicity (mammal cell test):

Result: negative

Mutagenicity (mammal cell test): chromosome aberration. Result: negative

OECD Test Guideline 474 Rat - male and female Result: negative

### **Carcinogenicity**

Carcinogenicity - No indication of carcinogenic activity. (IUCLID)

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

### **Reproductive toxicity**

**Specific target organ toxicity - single exposure Specific target organ toxicity - repeated exposure Aspiration hazard**

### **Toxicity**

LD50 orally in Rabbit: 14500 mg/kg LD50 dermal Rat 40000 mg/kg

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## **SECTION 12: Ecological information**

### **Toxicity**

#### **Toxicity to fish**

static test LC50 - Danio rerio (zebra fish) - > 25.000 mg/l - 96 h (OECD Test Guideline 203)

#### **Toxicity to daphnia and other aquatic invertebrates**

static test EC50 - Daphnia magna (Water flea) - 24,6 mg/l - 48 h (OECD Test Guideline 202)

#### **Toxicity to algae**

static test EC50 - Pseudokirchneriella subcapitata (green algae) -

17.000 mg/l - 72 h (OECD Test Guideline 201)

#### **Toxicity to bacteria**

EC10 - Pseudomonas putida - 7.100 mg/l - 16 h

Remarks: (IUCLID)

EC50 - activated sludge - 10 - 100 mg/l - 30 min Remarks: (IUCLID)

### **Persistence and degradability**

Biodegradability aerobic - Exposure time 28 d

Result: 31 % - Not readily biodegradable. (OECD Test Guideline 301D)

### **Bioaccumulative potential**

### **Mobility in soil**

### **Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and

very bioaccumulative (vPvB) at levels of 0.1% or higher.

#### Other adverse effects

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## SECTION 13: Disposal considerations

#### Waste treatment methods

#### Product

No data available

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## SECTION 14: Transport information

#### UN number

ADR/RID: - IMDG: - IATA: -

#### UN proper shipping name

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods

#### Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

#### Packaging group

ADR/RID: - IMDG: - IATA: -

#### Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

#### Special precautions for user

No data available

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## SECTION 15: Regulatory information

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

##### Regulations on the Safety Management of Hazardous Chemicals

China Catalog of Hazardous chemicals 2015:Not Listed. website: <https://www.mem.gov.cn/>

##### Measures for Environmental Management of New Chemical Substances

Vietnam National Chemical Inventory:Not Listed. website: <https://chemicaldata.gov.vn/>

United States Toxic Substances Control Act (TSCA) Inventory:Not Listed. website: <https://www.epa.gov/>

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: <https://emb.gov.ph/>

New Zealand Inventory of Chemicals (NZIoC):Listed. website: <https://www.epa.govt.nz/>

Korea Existing Chemicals List (KECL):Listed. website: <http://ncis.nier.go.kr>

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: <https://echa.europa.eu/>

EC Inventory:Listed.

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: <https://www.mee.gov.cn/>

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## SECTION 16: Other information

### Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

CAS: Chemical Abstracts Service

EC50: Effective Concentration 50%

IATA: International Air Transportation Association

IMDG: International Maritime Dangerous Goods

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

STEL: Short term exposure limit

TWA: Time Weighted Average

### References

【1】CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

【2】ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

【3】ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

【4】eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

【5】ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

【6】Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

【7】HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

【8】IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

【9】IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

【10】Sigma-Aldrich, website: <https://www.sigmaaldrich.com/>

#### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.