

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

1.1. Product identifier

Product form	: Substance
Substance name	: DMSO D6
EC-No.	: 218-617-0
CAS-No.	: 2206-27-1
REACH registration No	: 01-212-0801412-72-0000
Product code	: D010, D031, D034, D046, D1010, D310, D334, D346, D510, D531, D610, D231
Type of product	: Pure substance
Formula	: C2D6OS
Synonyms	: (methyl sulfoxide)D6 / di[(-{2}-H3)methyl] sulphoxide / dimethyl sulfoxide-D6 / dimethyl-D6 sulfoxide / methane-d3, sulfinylbis-
BIG No	: 21363

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Chemical substance for research

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Euriso-Top
 Parc des Algorithmes - Bâtiment Homère
 Route de l'Orme
 91194 Saint-Aubin CEDEX - France - FRANCE
 T +33 1 69 41 97 98 - F +33 1 69 41 93 52
eurisolotop@eurisolotop.com - www.eurisolotop.com

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Comment
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS07

CLP Signal word

: Warning

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Hazard statements (CLP)	: H335 - May cause respiratory irritation.
Precautionary statements (CLP)	: P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
DMSO D6	(CAS-No.) 2206-27-1 (EC-No.) 218-617-0 (REACH-no) 01-212-0801412-72-0000	100	Not classified

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents.
First-aid measures after ingestion	: Rinse mouth with water. Call Poison Information Centre (www.big.be/antigif.html). Consult a doctor/medical service if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact	: Slight irritation. ON CONTINUOUS EXPOSURE/CONTACT: Red skin. Skin rash/inflammation. Breath has characteristic odour. Symptoms similar to those listed under ingestion.
Symptoms/effects after eye contact	: Slight irritation. Redness of the eye tissue.
Symptoms/effects after ingestion	: AFTER INGESTION OF HIGH QUANTITIES: Headache. Nausea. Vomiting. Abdominal pain. Dizziness.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. Feeling of weakness. Nausea. Vomiting. Headache. Breath has characteristic odour.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (alcohol-resistant). Water spray if puddle cannot expand.
Unsuitable extinguishing media	: Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

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5.2. Special hazards arising from the substance or mixture

- Fire hazard : DIRECT FIRE HAZARD: Material presenting a fire hazard. INDIRECT FIRE HAZARD: Temperature above flashpoint: higher fire/explosion hazard. Reactions involving a fire hazard: see "Reactivity Hazard".
- Hazardous decomposition products in case of fire : On heating/burning: release of toxic and corrosive gases/vapours (sulphur oxides, carbon monoxide - carbon dioxide).

5.3. Advice for firefighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
- Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat.
- Protection during firefighting : Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Gloves (EN 374). Face shield (EN 166). Protective clothing (EN 14605 or EN 13034).
- Emergency procedures : Mark the danger area. No naked flames. Wash contaminated clothes. In case of reactivity hazard: consider evacuation.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

- For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply.
- Methods for cleaning up : Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite. Scoop absorbed substance into closing containers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from naked flames/heat. Take precautions against electrostatic charges. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Keep container tightly closed.
- Hygiene measures : Observe normal hygiene standards.

7.2. Conditions for safe storage, including any incompatibilities

- Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents, reducing agents, (strong) acids, (strong) bases, halogens, water/moisture.
- Storage area : Store in a dry area. Store at ambient temperature. Keep out of direct sunlight. Ventilation at floor level. May be stored under inert gas. May be stored under nitrogen. Meet the legal requirements.

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Special rules on packaging : SPECIAL REQUIREMENTS: closing, dry, clean, correctly labelled, meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials : MATERIAL TO AVOID: metal, plastics.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Materials for protective clothing:

GIVE GOOD RESISTANCE: butyl rubber, chloroprene rubber, neoprene, tetrafluoroethylene, latex. GIVE POOR RESISTANCE: PVC, PVA, viton, nitrile rubber, natural rubber

Hand protection:

Gloves

Eye protection:

Safety glasses (EN 166)

Skin and body protection:

Protective clothing (EN 14605 or EN 13034)

Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Liquid.

Molecular mass : 84,18 g/mol

Colour : Colourless.

Odour : Almost odourless, Garlic odour.

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butylacetate=1) : No data available

Melting point : 20 °C

Freezing point : No data available

Boiling point : 190 °C

Flash point : 82 °C

Auto-ignition temperature : 270 °C (T3)

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapour pressure : 2,5 hPa (20 °C)

Vapour pressure at 50 °C : 7,5 hPa

Relative vapour density at 20 °C : No data available

Relative density : 1,2

Density : 1190 kg/m³

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Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in chloroform.
Partition coefficient n-octanol/water (Log Pow)	: -2.03
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: ≥ 1.8 vol % ≥ 58 g/m ³
Lower explosive limit (LEL)	: 1.8 vol %

9.2. Other information

VOC content	: 100 %
Other properties	: Gas/vapour heavier than air at 20°C. Clear. Hygroscopic. Slightly volatile.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts violently with many compounds e.g.: with (strong) oxidizers, with (some) halogens compounds and with (some) acids: (increased) risk of fire/explosion.

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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LD50 oral rat	14500 mg/kg (Rat, Oral)
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Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Reproductive toxicity	: Not classified
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STOT-single exposure	: Not classified
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STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Slightly harmful in contact with skin. Slightly irritant to skin. Slightly harmful by inhalation. Slightly irritant to eyes. Caution! Substance is absorbed through the skin.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air	: Photolysis in the air. Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Not harmful to crustacea. Not harmful to fishes. Mild water pollutant (surface water). Inhibition of activated sludge. Not harmful to algae.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

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LC50 fish 1	32300 mg/l (96 h, Salmo gairdneri, Non deuterium form)
EC50 Daphnia 1	58200 mg/l (Daphnia magna, Non deuterium form)
EC50 96h algae (1)	12350 mg/l (Skeletonema costatum, Non deuterium form)

12.2. Persistence and degradability

DMSO D6 (2206-27-1)

Persistence and degradability	Not readily biodegradable in water.
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12.3. Bioaccumulative potential

DMSO D6 (2206-27-1)

BCF fish 1	< 0.4 (Cyprinus carpio, Non deuterium form)
Partition coefficient n-octanol/water (Log Pow)	-2.03
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery.
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Additional information : Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable
UN-No. (ADN) : UN 9003
UN-No. (RID) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Substances with a flash-point above 60 °C and not more than 100 °C
Proper Shipping Name (RID) : Not applicable
Transport document description (ADN) : UN 9003 Substances with a flash-point above 60 °C and not more than 100 °C, 9

14.3. Transport hazard class(es)

ADR
Transport hazard class(es) (ADR) : Not applicable
IMDG
Transport hazard class(es) (IMDG) : Not applicable
IATA
Transport hazard class(es) (IATA) : Not applicable
ADN
Transport hazard class(es) (ADN) : 9
RID
Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

Overland transport
Transport regulations (ADR) : Not subject
Transport by sea
Transport regulations (IMDG) : Not subject
Air transport
Transport regulations (IATA) : Not subject
Inland waterway transport
Carriage permitted (ADN) : T
Rail transport
Transport regulations (RID) : Not subject

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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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

DMSO D6 is not on the REACH Candidate List

DMSO D6 is not on the REACH Annex XIV List

DMSO D6 is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

DMSO D6 is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

VOC content : 100 %

15.1.2. National regulations

Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

No additional information available

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.