

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL DIMETHYL SULFOXIDE

Revision date: 04/14/2023

Product code: 387500US

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1. Identification

Product identifier

NATURAL DIMETHYL SULFOXIDE

Substance name: NATURAL DIMETHYL SULFOXIDE
CAS No: 67-68-5

Recommended use of the chemical and restrictions on use

Use of the substance/mixture

Manufacturing of: - Air care products - Perfumes, fragrances - Pharmaceuticals - Cosmetics, personal care products - Flavouring Substances - Other

Details of the supplier of the safety data sheet

Company name: Axxence Aromatic GmbH
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Place: D-46446 Emmerich am Rhein
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Emergency phone number: +49 2822 68561 99

2. Hazard(s) identification

Label elements

29 CFR Part 1910.1200

Signal word: Warning

Hazard statements

Combustible liquid

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Wear protective gloves/protective clothing/eye protection/face protection.
Store in a well-ventilated place.
Dispose of contents/container to Organic waste.

Hazards not otherwise classified

No information available.

3. Composition/information on ingredients

Substances

Sum formula: C2 H6 O S
Molecular weight: 78,13 g/mol

Hazardous components

CAS No	Components	Quantity
67-68-5	NATURAL DIMETHYL SULFOXIDE	100 %

4. First-aid measures

Description of first aid measures

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After inhalation

Provide fresh air. Remove person to fresh air and keep comfortable for breathing.

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of soap and water.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. Rinse cautiously with water for several minutes.

After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink 1 glass of water. IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

The uses are provided in Section 2.2. Other uses are not recommended unless an assessment is completed, prior to commencement of that use, which demonstrates that the use will be controlled.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically. No data available

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings. In case of fire, use sand, dry chemical powder or alcohol resistant foam.

Specific hazards arising from the chemical

Non-flammable. Vapors may form explosive mixtures with air.

Special protective equipment and precautions for fire-fighters

In case of fire: Wear self-contained breathing apparatus. Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Use water spray/stream to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Use water spray/stream to protect personnel and to cool endangered containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

General advice

Do not breathe gas/vapor/spray. Remove all sources of ignition. Vapors are heavier than air, spread along floors and form explosive mixtures with air.

Environmental precautions

Do not allow to enter into surface water or drains. Do not empty into drains.

Methods and material for containment and cleaning up

For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Use approved industrial vacuum cleaner for removal. Dispose of waste according to applicable legislation.

Reference to other sections

Safe handling: see section 7

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Personal protection equipment (PPE): see section 8

Disposal: see section 13 Disposal: see section 13

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Do not breathe gas/fumes/vapor/spray (appropriate wording to be specified by the manufacturer).

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff. Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Store in a dry place. Store in a closed container. Store in a well-ventilated place.

Keep container tightly closed.

Hints on joint storage

No special measures are necessary.

8. Exposure controls/personal protection

Control parameters

Exposure controls

Appropriate engineering controls

Wash hands before breaks and after work.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Tested protective gloves must be worn EN ISO 374 NBR (Nitrile rubber)

Skin protection

Use of protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Self-contained respirator (breathing apparatus) according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

Environmental exposure controls

Do not allow to enter into surface water or drains.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:

Liquid

Color:

Melting point/freezing point:

18 °C

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Boiling point or initial boiling point and boiling range:	189 °C
Flammability:	not determined
Lower explosion limits:	1,8 vol. %
Upper explosion limits:	42 vol. %
Flash point:	88 °C
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value:	No data available
Viscosity / kinematic: (at 20 °C)	1,95 mm²/s
Water solubility: (at 20 °C)	1000 g/L
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	-1,35
Vapor pressure: (at 20 °C)	0,56 hPa
Vapor pressure: (at 50 °C)	4,04 hPa
Density:	1,10 g/cm³
Bulk density:	No data available
Relative vapour density: (at 20 °C)	2,69

Other information

Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive.

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Evaporation rate: No data available

Solvent content: 0%

Solid content: 0%

Viscosity / dynamic:
(at 20 °C) 2,14 mPa·s

Flow time: No data available

10. Stability and reactivity

Reactivity

No data available

Chemical stability

Stability: Stable

The substance is chemically stable under recommended conditions of storage, use and temperature.

Possibility of hazardous reactions

Hazardous reactions: May occur

No data available

Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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Incompatible materials

Do not mix with acids. Acid chlorides, inorganic Phosphorus compounds Oxidising agent Reducing agent

Hazardous decomposition products

No data available

11. Toxicological information

Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Components					
	Exposure route	Dose		Species	Source	Method
67-68-5	NATURAL DIMETHYL SULFOXIDE					
	oral	LD50 mg/kg	14500	Rat	Toxicology and Applied Phar., 1969	OECD 401
	dermal	LD50 mg/kg	40000	Rabbit	Annals o.t. NY Academy of Science, 1967	

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitizing effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure

Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - repeated exposure

Based on available data, the classification criteria are not met.

Carcinogenicity (OSHA): Not listed.

Carcinogenicity (IARC): Not listed.

Carcinogenicity (NTP): Not listed.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on other hazards

Endocrine disrupting properties

No information available.

Further information

The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

12. Ecological information

Ecotoxicity

The product is not: Ecotoxic.

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

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Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

Other adverse effects

No data available

Further information

Avoid release to the environment.

13. Disposal considerations

Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation. Dispose of contents/container to industrial incineration plant. Delivery to an approved waste disposal company.

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

14. Transport information

U.S. DOT 49 CFR 172.101

Proper shipping name:

No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

UN number or ID number:

No dangerous good in sense of this transport regulation.

UN proper shipping name:

No dangerous good in sense of this transport regulation.

Transport hazard class(es):

No dangerous good in sense of this transport regulation.

Packing group:

No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

UN number or ID number:

No dangerous good in sense of this transport regulation.

UN proper shipping name:

No dangerous good in sense of this transport regulation.

Transport hazard class(es):

No dangerous good in sense of this transport regulation.

Packing group:

No dangerous good in sense of this transport regulation.

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

Special precautions for user

No dangerous good in sense of this transport regulation.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No dangerous good in sense of this transport regulation.

15. Regulatory information

U.S. Regulations

State Regulations

Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other information

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Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route

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(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 Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

UN: United Nations

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate

LL50: Lethal loading, 50%

EL50: Effect loading, 50%

EC50: Effective Concentration 50%

ErC50: Effective Concentration 50%, growth rate

NOEC: No Observed Effect Concentration

BCF: Bio-concentration factor

PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative

RID: Regulations concerning the international carriage of dangerous goods by rail

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)

EmS: Emergency Schedules

MFAG: Medical First Aid Guide

ICAO: International Civil Aviation Organization

MARPOL: International Convention for the Prevention of Marine Pollution from Ships

IBC: Intermediate Bulk Container

VOC: Volatile Organic Compounds

SVHC: Substance of Very High Concern

For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

Other data

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.