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Safety Data Sheet (SDS)

Revision Date:
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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product Name: DMSO (Dimethyl Sulfoxide), Sterile
Product Code: DMSO50, DMSO100
CAS Number: -
EC Number: -

1.2 Details of the supplier of the safety data sheet

Company: EcoTech Biotechnology
Address: Universite Mah. Cat Yolu Cad. Ata Teknokent Sitesi B Blok No: 74/113 Yakutiye Erzurum
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1.3 Product use

For research use only

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance

Flam. Liq. 4 H227 Combustible liquid.

NFPA ratings (scale 0 - 4)

Health = 0

Fire = 2

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 0

Fire = 2

Reactivity = 0

2.2 GHS Label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

Pictogram: None

Signal word: Warning

Hazard statement(s): H227 Combustible liquid.

Precautionary statement(s):

P210 Keep away from flames and hot surfaces. – No smoking.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.

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

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Product Name

DMSO (Dimethyl Sulfoxide), Sterile

Synonyms: -

Concentration: ≥99%

Formula: $(\text{CH}_3)_2\text{SO}$

Molecular Weight: 78.14 g/mol

SECTION 4. FIRST AID MEASURES

Immediately remove any clothing soiled by the product.

4.1 Description of first aid measures

If inhaled: Supply fresh air; consult doctor in case of complaints.

If swallowed: Rinse out mouth. Make victim drink water (maximum of 2 drinking glasses) Laxative: Sodium sulfate (1 tablespoon/ 1/4 L water) If symptoms persist consult doctor.

In case of skin contact: Immediately rinse with water. If skin irritation continues, consult a doctor.

In case of eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released: Carbon monoxide and carbon dioxide Sulfur oxides (SO_x). Beware of backfiring.

5.3 Advice for firefighters

Wear self-contained respiratory protective device.

5.4 Further information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations. Contain escaping vapours with water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Ensure adequate ventilation.

Use personal protective equipment. Avoid formation of dust. Avoid breathing vapours, mist or gas.

For personal protection see section 8.

6.2 Environmental precautions

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and materials for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

7.2 Conditions for safe storage, including any incompatibilities

Keep tightly closed. Protect from light.
Recommended storage room temperature.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Long-term value: 250 ppm

8.2 Exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke. Wash hands, forearms and face after handling.

Personal protective equipment

Eye/face protection: Wear safety glasses with side-shields conforming to European Standard EN166.

Hand protection: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Skin and body protection: Wear laboratory coat or impervious clothing. Choose appropriate body protection according to the amount and concentration of the substance at the work place.

Respiratory protection: Wear suitable respiratory equipment in case of inadequate ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

a) Appearance:	Liquid
b) Odor:	Sulphurous
c) Odor Threshold:	No data available
d) pH:	No data available
e) Melting point point:	18.5 °C (65.3 °F)
f) Initial boiling point:	189 °C (372.2 °F)
g) Flash point:	87 °C (188.6 °F)
h) Evaporation rate:	No data available
i) Flammability (solid, gas):	No data available
j) Upper / lower flammability or explosive limits:	No data available
k) Vapor pressure:	0.556 hPa (0.4 mm Hg)
l) Vapor density:	No data available
m) Relative density:	No data available
n) Solubility(ies):	No data available
o) Partition coefficient: <i>n</i> -octanol / water:	No data available
p) Auto-ignition temperature:	No data available
q) Decomposition temperature:	>190 °C (>374 °F)
r) Viscosity:	2.14 mPas
s) Explosive properties:	No data available
t) Oxidizing properties:	No data available

SECTION 10. STABILITY AND REACTIVITY

Stability and reactivity

Reactivity:	Stable
Chemical stability:	Stable under recommended temperatures and pressures.
Possibility of hazardous reactions:	No dangerous reactions known.
Conditions to avoid:	Heat, sunlight, high temperature
Incompatible materials:	alkali metals, strong oxidants, strong acids
Hazardous decomposition products:	No data available

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

a) Acute toxicity:

Component	LD50 Oral	LD50 Dermal	LD50 Inhalation
Dimethyl Sulfoxide	28300 mg/kg (Rat)	40000 mg/kg (Rat)	-

- b) Skin corrosion / irritation: Slight irritations.
c) Serious eye damage/eye irritation: Slight irritation.
d) Carcinogenicity: Substance is not listed by IARC, NTP or OSHA
e) Reproductive toxicity: No data available
f) STOT - SE: No data available
g) STOT - RE: No data available
h) Aspiration hazard: No data available

11.2 Potential health effects

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

11.3 Additional Information

No additional information is available

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Component	Toxicity
Dimethyl Sulfoxide	EC50 Algae 12000-17000 mg/l -72 h
	EC50 Daphnia magna 24600 mg/l -48 h
	LC50 fish >25000 mg/l -96 h

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No significant accumulation in organisms

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Product

Contact a licensed professional waste disposal service to dispose of this material. Dispose of in accordance with local regulations.

Contaminated packaging

Dispose of as unused product. Do not reuse empty containers.

Section 14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods
IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: No IMDG: No IATA: No

SECTION 15. REGULATORY INFORMATION

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

No information available

15.2 Chemical Safety Assessment

No information available

SECTION 16. OTHER INFORMATION

Key to abbreviations and acronyms

STOT-SE: Specific Target Organ Toxicity - Single Exposure

STOT-RE: Specific Target Organ Toxicity - Repeated Exposure

PBT: Persistent Bioaccumulative and Toxic

vPvB: very Persistent very Bioaccumulative and toxic

ADR: European Agreement concerning the international carriage of Dangerous goods by Road

CAS: Chemical Abstracts Service

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association

IMDG: International Maritime code for Dangerous Goods

REACH: Registration, Evaluation, Authorization and restriction of Chemicals

RID: Regulations concerning the International transport of Dangerous goods by rail