



Safety Data Sheet

For Compliance with OSHA 29 CFR 1910.1200 and ANSI Z400.1-1998

Dimethyl Sulfoxide USP (DMSO)

30-1612

Section 1: Identification

Product Name Dimethyl Sulfoxide USP (DMSO)
Commercial Name Enviro S®
Product Use Solvent for manufacture of pharmaceuticals, fine chemicals and polymers
Restrictions On Use Not available
Product Code 30-1612
Company PCCA
9901 South Wilcrest
Houston, TX 77099
Phone: 1-800-331-2498
Fax: 1-800-874-5760
In case of emergency contact:
CHEMTREC (24hr) 1-800-424-9300

Section 2: Hazard(s) Identification

OSHA Haz Com: Not available.
CFR 1910.1200
Signal Word NON-HAZARDOUS
Hazard Statement(s) Not available.
Pictogram(s) or Symbol(s)

Precautionary Statement(s):

Prevention Not available.
Response Not available
Storage Not available
Disposal Not available.

Section 3: Composition/Information on Ingredients

Substance/Mixture Substance
Components Dimethyl sulfoxide USP (DMSO)
% By Weight 100
CAS# 67-68-5
Molecular Weight 78.13 g/mole
Chemical Formula C₂H₆OS
Synonym(s) Dimethyl sulfoxide, methyl sulfoxide.

Mixtures				
Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
			Not available.	ORAL (LD50):Acute: 14500mg/kg [Rat].7920 mg/kg[Mouse].

Section 4: First-Aid Measures

Inhalation	Supply fresh air.
Skin Contact	Generally the product does not irritate the skin.
Eye Contact	Rinse opened eye for several minutes under running water. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	Rinse mouth. Do NOT induce vomiting.
Symptoms/Effects	
Acute	Coughing Gastric or intestinal disorders
Delayed	Coughing Gastric or intestinal disorders
Immediate Medical Attention	
Not available.	

Section 5: Fire-Fighting Measures**Suitable Extinguishing Media**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire extinguishing methods suitable to surrounding conditions.

Unsuitable Extinguishing Media

Water with full jet

Products of Combustion

Carbon monoxide Carbon dioxide Sulphur oxides (SO_x)

Firefighters Special Equipment and Precautions

Wear self-contained respiratory protective device. Cool endangered receptacles with water spray. Collect contaminated fire fighting water separately. It must not enter the sewage system.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation. Keep away from ignition sources. Wear protective clothing. Environmental precautions: Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water. Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of the material collected according to regulations.

Section 7: Handling and Storage

Precautions for safe handling: Ensure good ventilation/exhaustion at the workplace. · Information about fire and explosion protection: Keep ignition sources away - Do not smoke. Conditions for safe storage, including any incompatibilities · Storage: · Requirements to be met by storerooms and receptacles: Store only in the original receptacle. · Information about storage in one common storage facility: Do not store together with oxidising and acidic materials. · Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles. Store receptacle in a well ventilated area.

Section 8: Exposure Controls/Personal Protection

Exposure Limits	The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Engineering Controls	Not available.

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Personal Protection

Individual protection measures, such as personal protective equipment · General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Do not eat, drink, smoke or sniff while working. The usual precautionary measures are to be adhered to when handling chemicals. · Respiratory protection: Not necessary if room is well-ventilated. Use suitable respiratory protective device when high concentrations are present. Only during spraying without adequate removal by suction. · 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. · Material of gloves 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. Butyl rubber, BR Nitrile rubber, NBR Recommended thickness of the material: ? 0.75 mm · Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. · Eye/face protection Tightly sealed goggles · Body protection: Protective work clothing

Section 9: Physical and Chemical Properties

Appearance	Clear colorless fluid		
Odor	Odourless		
Odor Threshold	No available		
Melting Point	18.5 °C	pH	Not available.
Freezing Point	Not available	Vapor Pressure	0.56 hPa (EU Method A.4)
Boiling Point/Range	189 °C	Vapor Density	2.7 (Air = 1)
Decomposition temperature	190 C	Viscosity	Not available.
Partition Coefficient: n-octanol/water	-1.35 logPow (20 °C, pH 7)	Evaporation Rate	Not available.
Flash Point	87 °C (ASTM D93)	Autoignition temperature	300-302 °C (572-575 °F)
Flammability	Not available	Flammability or Explosive Limits:	
		Lower	2.6 Vol %
		Upper	28.5 Vol %
Solubility(ies)	1000 g/L (calc.)		
Other	Density at 20 °C: 1.1 g/cm ³ (EU Method A.3)		

Section 10: Stability and Reactivity

Reactivity	Not available.
Chemical Stability	No decomposition if used and stored according to specifications.
Hazardous Polymerization	No dangerous reactions known.
Conditions to Avoid	Keep away from heat and direct sunlight
Incompatible Materials	Strong oxidizing agents Perchlorates
Hazardous Decomposition Products	No dangerous decomposition products known

Section 11: Toxicological Information

RTECS	Not available.
Acute Toxicity	LD/LC50 values relevant for classification: Oral LD50 28300 mg/kg (Rat) (OECD Guideline 401) Dermal LD50 40000 mg/kg (Rat) Inhalative LC0 > 5.33 mg/L (Rat) (OECD Guideline 403, inhalation:vapour) 4 h
Skin Corrosion/Irritation	Not available
Serious Eye Damage/Irritation	Not available.
Respiratory or Skin Sensitization	Not available.
Germ Cell Mutagenicity	Not available.
Carcinogenicity	Not available.
Reproductive Toxicity	Not available.
Routes of Entry	Not available.
Symptoms Related to Exposure	Not available.

Potential Health Effects

Not available.

Target Organ(s)

Not available.

Section 12: Ecological Information**Ecotoxicity**

Aquatic toxicity: LC50 (96h) (static) > 25000 mg/L (Fish) (OECD Guideline 203, Danio rerio) nominal EC50 (48h) (static) 24600 mg/L (Daphnia) (OECD Guideline 202, Daphnia magna) EC50 (0,5h) (static) 10 - 100 mg/L (Bacteria) (ISO 8192, activated sludge) EC50 (72h) (static) 17000 mg/L (Algae) (OECD Guideline 201, Pseudokirchneriella subcapitata) nominal

Persistence and Degradability

Not readily biodegradable 31 % (28 d, OECD Guideline 301D)

Bioaccumulative Potential

Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected. 3.16 BCF (QSAR)

Mobility in Soil

0.64 log Koc (QSAR)

Other Adverse Effects

Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.

Section 13: Disposal Considerations**Waste Disposal**

Must be specially treated adhering to official regulations.

Disposal of Container

Disposal must be made according to official regulations. Water, if necessary together with cleansing agents

Other Considerations

Not available

Section 14: Transport Information**DOT Classification**

Not available.

Section 15: Regulatory Information**Regulations**

Directive 2012/18/EU · Named dangerous substances - ANNEX I Substance is not listed. Directive 2012/18/EU · Named dangerous substances - ANNEX I Substance is not listed. DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II Substance is not listed. · REGULATION (EU) 2019/1148 · Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3)) Substance is not listed. · Annex II - REPORTABLE EXPLOSIVES PRECURSORS Substance is not listed. · Regulation (EC) No 273/2004 on drug precursors Substance is not listed. · Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors Substance is not listed

Other

Not available.

Section 16: Other Information



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US /CANADIAN Label Statements: **WARNING! COMBUSTIBLE LIQUID AND VAPOR HIGH VAPOR CONCENTRATIONS MAY CAUSE DROWSINESS** Store away from heat and light. Distill with caution. Keep away from heat and flame. Avoid breathing high vapor concentrations. Keep container tightly closed. Use with adequate ventilation and proper protective equipment given elsewhere in this MSDS. **FIRST AID:** If inhaled, move to fresh air. Treat symptomatically. Get medical attention if symptoms persist. **IN CASE OF FIRE:** Eliminate all ignition sources. Flush spill area with water spray. Prevent runoff from entering drains, sewers, and streams. Since emptied containers retain product residue, follow label warnings even after container is emptied. **CAUTION: FOR MANUFACTURING, PROCESSING OR REPACKAGING BY TRAINED PERSONNEL**

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