



MATERIAL SAFETY DATA SHEET

Section I – Product Information			
Product Name or Identity:	DIMETHYL SULFOXIDE (DMSO)-90%		
Manufacturer's Name:	Neogen Corporation	Emergency Phone No.:	859 254 1221
	944 Nandino Blvd.	Fax No.:	859 255 5532
	Lexington, KY 40511	e-mail:	inform@neogen.com
Date Prepared or Revised: 11/15/05			

Section II – Hazardous Ingredients / Identity Information			
Hazardous Components (Specific Chemical Identity: Common Names)	OSHA PEL (Permissible Exposure Limits)	ACGIH TLV (Threshold Limit Value)	Toxicity Data LD ₅₀
DIMETHYL SULFOXIDE (DMSO) 90% v/v CAS 67-68-5	Not established	Not established	Oral-Rat 14,500-28,300 mg/kg

Section III – Physical Characteristics	
Boiling Point:: 460°F, 238°C	Specific Gravity (H ₂ O = 1): 1.096
Vapor Pressure (mm Hg.): 0.030 mmHg	Melting Point: N/A
Vapor Density (AIR = 1): N/A	Evaporation Rate (Butyl Acetate = 1): N/A
Solubility in Water: Very Soluble	
Appearance and Odor: Colorless, nearly odorless flammable liquid.	

Section IV – Fire and Explosion Hazard Data	
Flash Point (<i>Method Used</i>): 203°F Open cup	Flammable Limits: LEL (Lower Explosive Limit) – 3.0-3.5% by volume UEL (Upper Explosive Limit) – 42-63% by volume
Extinguishing Media: Water fog, foam. CO ₂ , dry chemical	
Special Fire Fighting Procedures: None	
Unusual Fire and Explosion Hazards: Combustion gases contain sulfur oxides.	

Section V – Reactivity Data			
Stability	Unstable		Conditions to Avoid: N/A
	Stable	X	
Incompatibility (<i>Materials to Avoid</i>): Perchloric acids, perchlorates			
Hazardous Decomposition or Byproducts: Sulfur oxides			
Hazardous Polymerization	May Occur		Conditions to Avoid: N/A
	Will Not Occur	X	

Section VI – Health Hazard Data			
Route(s) of Entry:	Inhalation-Minor	Skin and eyes-On contact	Ingestion-Minor
Health Hazards (<i>Acute and Chronic</i>)	Repeated contact have produced corneal opacity in experimental animals. Avoid contact with eyes and skin.		
Carcinogenicity: NTP- No (National Toxicology Program)	IARC Monographs- No (International Agency for Research in Cancer)	OSHA Regulated- Yes	
Signs and Symptoms of Exposure: DMSO has shown very few symptoms in humans. The most common are nausea, skin rashes and an unusual garlic-onion-oyster smell on body and breath. Inhalation of high vapor concentrations may cause headache, dizziness, and sedation.			
Medical Conditions Generally Aggravated by Exposure:			
Emergency / First Aid Procedures	Ingestion: Drink large amounts of water, Induce vomiting. Seek medical attention.		
	Inhalation: If inhaled, move to fresh air. Seek medical attention if symptoms persist.		
	Eye Contact: Flush eyes with copious amounts of water. Seek medical attention.		
	Skin Contact: Wash with soap and water. Seek medical attention.		

Section VII – Precautions for Safe Handling and Use
Accidental Release Measures: Eliminate all sources of ignition. Flush spill area with water spray. Prevent runoff from entering drains, sewers and streams.
Waste Disposal Method: Soak up spilled material with an absorbent. Dispose of as locally required.
Handling and Storing: Avoid eye and skin contact. Store at room temperature away from sources of ignition.
Other Precautions: DMSO may carry other chemicals dissolved in it through the skin and into the bloodstream. Avoid contact with eyes and skin.

Section VIII – Control Measures		
Respiratory Protection (Specify Type): Do not breathe vapors.		
Ventilation	Local Exhaust: Adequate	Special
	Mechanical (General):	Other
Protective Gloves: Solvent resistant	Eye Protection: Tight fitting safety goggles.	
Other Protective Clothing or Equipment: Avoid contact with skin		
Work / Hygienic Practices: Do not breathe vapors. Do not get in eyes or on the skin or clothing. Avoid prolonged exposure. Wash hands with soap and water after use.		

This document is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. Neogen Corporation shall not be held liable for any damage resulting from handling or from contact with the above product. These suggestions should not be confused with state, municipal or insurance requirements, and constitute NO WARRANTY.