Section 1: Identification

Common Name/Trade Name	DIMETHYL SULFOXIDE (DMSO)	
Supplier Information	Letco Medical, LLC 1316 Commerce Drive NW Decatur, AL 35601 1 (800) 239-5288 +1 (734) 843-4693	**IN CASE OF EMERGENCY:** Chemtrec 1 (800) 424-9300 **(24 hours)** NSW Poisons Information Centre: 131 126 (24 hours)
Distributor Name	Bella Corp Trading Pty Ltd 6/34 Dominions Road, Ashmore QLD 4214, Australia Telephone: 07 5597 4169 Email: bellacorp@bellacorp.com.au	
Product Synonym(s)	Methyl sulphoxide Methane, 1,1'-sulfinylbis DMSO. Restrictions on use: DO NOT USE for human/animal body internal administration by oral, injection, infusion.	
Relevant Use(s) of Product	Manufacture or Compounding of Substances	

Section 2: Hazards Identification

Classification of Substance or Mixture	Flammable Liquids, Category 4	
Signal Word	Warning	
Hazard Statement(s)	H227	Combustible liquid
Pictogram(s)	N/A	
Precautionary Statement(s)	P210 P235 P264 P280 P305+P351+P338 P370+P378 P403+P235 P403 P501	Keep away from heat/sparks/open flames/hot surfaces – No smoking. Keep cool. Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. continue rinsing. In case of fire Use dry chemical powder, chemical for water-soluble liquid, carbon dioxide, dry sand or mist water for extinction. Store in a well-ventilated place. Keep cool. Store in a well-ventilated place. Dispose of contents/container to an approved waste disposal plant.
Hazards Not Otherwise Classified	Not applicable.	
Ingredient(s) with Unknown Toxicity	None.	

Section 3: Composition/Information on Ingredients

Chemical Name	Methane, 1,1'-sulfinylbis-
Common Name	Dimethyl Sulfoxide
CAS Number	67-68-5
Impurities and/or Stabilizing Additives	No data available

Section 4: First Aid Measures

General Advice	Specific Information for the doctor or physician: See Chapter 11 for information on toxicology. Protective measures for a first aid person: Protect yourself by wearing rubber gloves and air-tight safety goggles.
If Inhaled	If inhaled: Call a poison center or doctor if you feel unwell. Remove person to fresh air and keep comfortable for breathing.
In Case of Skin Contact	If on skin (or hair): Wash with soap and plenty of water. Get medical advice/attention.
In Case of Eye Contact	If in eyes: Remove contact lenses if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists, get medical advice/attention.
If Swallowed	If swallowed: Immediately call a POISON CENTER or a doctor. Rinse mouth. Do NOT induce vomiting.
Most Important Symptoms and Effects	No data available.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media	Suitable Extinguishing Media: Dry chemical powder, chemical for water-soluble liquid, carbon dioxide, dry sand or mist water should be used. Prohibited extinguishing media: For cooling, mist water can be used, but Do NOT use direct water jet.
Special Hazards Arising From the Substance/Mixture	Specific Hazards under fire: In case of fire or explosion, do not inhale smoke or vapor. Specific fire-fighting measures: Extinguish from the windward side of fire with safe distance. Remove ignition source if possible to do so without danger. Evacuate people to safe area except firefighting personnel.
Special PPE and/or Precautions for Firefighters	Firefighters should wear proper protective equipment.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures	Ventilate until collection of material is completed. Forbid unauthorized personnel to enter. Wear proper protective equipment. Special attention is needed to avoid unintentional skin absorption.
Methods and Materials Used for Containment	Prevent effluence from entering sewers, drains or lower areas.
Cleanup Procedures	In case of small spill, absorb it into sand or sawdust. Absorb small amount of residue into dry sand, soil or sawdust. Shut of fall ignition sources; No flares, smoking or flames in area. Prepare extinguishers before catching fire. Consult an expert on the disposal of collected material.

Section 7: Handling and Storage

Precautions for Safe Handling	Keep container tightly closed. Keep cool. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. When it is coagulated, heat to 20-40Â°C using heater or warm water and melt uniformly before the usage. Keep away from ignition such as heat / spark / fire / high temperature. - No smoking. Take preventive measures against static discharge.
Conditions for Safe Storage	Store in a well-ventilated place. Protect from sunlight. Keep cool. Dispose of contents/container in accordance with local/ regional/national/international regulations.

Section 8: Exposure Controls/Personal Protection

Components with Workplace Control Parameters	Control value: Not Available
Appropriate Engineering Controls	Handle this material only in a totally sealed equipment. Handle under well-ventilated condition. Make available emergency shower and eye wash in the work area. Do NOT eat, drink or smoke at work. Wash hands with soap after use.
PPE - Eye/Face Protection	Safety glasses Safety goggles Safety mask
PPE - Skin Protection	Wear protective gloves.
PPE - Body Protection	Protective clothes Protective boots Apron
PPE - Respiratory Protection	Gas mask for organic materials

Section 9: Physical and Chemical Properties

Appearance	Colorless liquid.
Upper/Lower Flammability or Explosive Limits	Explosion limits: Upper explosion limit: 28.5 vol% Lower explosion limit: 2.6 vol%
Odor	Odorless
Vapor Pressure	0.56hPa (20°C)
Odor Threshold	Not available
Vapor Density	Relative vapor density 2.7 (Air = 1.0)
pH	Not available.
Relative Density	1.1g/cm^3 (20°C)
Melting Point/Freezing Point	18.5°C
Solubility	Solubility in water: 1,000g/L @ 25°C (77°F) completely soluble
Initial Boiling Point and Boiling Range	189°C (1013hPa)
Flash Point	87°C (Closed Cup) 95°C (Open cup)
Evaporation Rate	Not available.
Flammability (Solid, Gas)	Flammable liquid.
Partition Coefficient	-1.35
Auto-Ignition Temperature	300 - 302 C
Decomposition Temperature	Not available.
Viscosity	Not available.

Section 10: Stability and Reactivity

Reactivity	Contact with incompatible materials. Sources of ignition. Exposure to heat.
Chemical Stability	This product is considered a stable material under anticipated normal conditions of storage and handling.
Possibility of Hazardous Reactions	Reacts violently with strong oxidants such as perchlorates. The substance decomposes on heating or on burning, producing toxic fumes including sulfur oxides.
Conditions to Avoid	Incompatible with oxidizing agent and reducing agent.
Incompatible Materials	Oxidizing materials Reducing materials
Hazardous Decomposition Products	Prolonged heating above 150°C (302°F) can cause rapid, exothermic decomposition. Hazardous decomposition products: Toxic fumes of Sulfur oxides

Section 11: Toxicological Information

Acute Toxicity - LD50 Oral	[Oral] LD50: 28,300mg/kg bw (rat) [Inhalation] LC0: >5,330mg/m^3 (rat, 4h) [Dermal] LD50: ca.40,000mg/kg bw (rat)
Acute Toxicity - Inhalation	Inhalation: > 5330 mg/m^3 (rat); 4H May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Exposure to high concentrations of Dimethyl sulfoxide could cause lowering of consciousness. Repeated exposure to DMSO vapors did not cause any irritation to the respiratory tract; however the exposure to high concentrations in the form of an aerosol induced an irritation of the upper airways after repeated exposure.
Acute Toxicity - Dermal	Dermal: 40000 mg/kg (rat) May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching. Dimethyl sulfoxide may accelerate skin absorption of other materials. A skin irritation assay performed in rabbit (OECD 404) revealed no more than a very slight or well-defined erythema, which disappeared in 3 days.
Acute Toxicity - Eye	Slightly irritating (rabbit)
Skin Corrosion/Irritation	Slightly irritating (rabbit)
Serious Eye Damage/Irritation	Category 2, Causes serious eye irritation.
Respiratory or Skin Sensitization	Not a sensitizer (guinea pig)
Germ Cell Mutagenicity	in Vitro: negative (Bacteria, Ames test) negative (Mammal cell, Chinese hamster, Ovary) negative (Mammal cell, Mouse, Lymphoma cell) in Vivo: negative (micronucleus test, rat) negative (dominant lethal test, Mouse) negative (sister chromatid exchange test, Mouse) We judge that the classification is not possible, by following the GHS classification guidance.
Carcinogenicity IARC	negative
Carcinogenicity ACGIH	negative
Carcinogenicity NTP	negative
Carcinogenicity OSHA	negative
Reproductive Toxicity	[Oral] NOAEL: 1,000 mg/kg bw/day (rat) [Dermal] NOAEL: 2.783 mg/L air (rat)
Specific Target Organ Toxicity - Single Exposure	Special attention needed when toxic materials present in Dimethyl sulphoxide because of enhanced skin absorption.
Specific Target Organ Toxicity - Repeated Exposure	[Oral] NOAEL: 1,000 mg/kg bw/day (rat) [Inhalation] NOAEC: 2.783 mg/L air (rat) [Dermal] NOAEL: 8,910 mg/kg bw/day (monkey)
Aspiration Hazard	Not Available

Section 12: Ecological Information

Toxicity	fish: LC50 25 g/L (Danio rerio, 96h) aquatic invertebrates: EC50 24.6 g/L (Daphnia magna, 48h) algae: EC50 17 g/L (Pseudokirchnerella subcapitata, 72h)
Persistence and Degradability	under test conditions no biodegradation observed (OECD Guideline 301 D) ready biodegradability: 3.1% after 14 days (O2 consumption)
Bio-accumulative Potential	under test conditions no biodegradation observed (OECD Guideline 301 D) ready biodegradability: 3.1% after 14 days (O2 consumption)
Mobility in Soil	biodegradation in soil: >60% after 12 weeks (DMSO reduction to DMS)
Other Adverse Effects	Not available.

Section 13: Disposal Considerations

Waste Treatment Methods Product	Dispose of contents/container in accordance with local/regional/national/international regulations. These products and their containers must be disposed of/treated in accordance with applicable regulations, or must be entrusted to the licensed company by clarifying the right data. Regulation about cautions on waste in Japan: Please comply with your country or local regulations on this Product.
Waste Treatment Methods Packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.
Special Precautions Landfill or Incinerations	No data available
Other Information	No data available

Section 14: Transport Information

UN Number	NA1993
UN Proper Shipping Name	NA1993, COMBUSTIBLE LIQUIDS, N.O.S. (Dimethyl sulfoxide), Combustible liquid, PG III
Transport Hazard Class(es)	Combustible liquid.
Packaging Group	III
Environmental Hazards	No data available.

Section 15: Regulatory Information

Please comply with your country or local regulations on this Product. EC No.: 200-664-3 OSHA: Dimethyl sulfoxide

Section 16: Other Information

Additional Information	N/A
Prepared By	Scarlotte Smith
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