

MATERIAL SAFETY DATA SHEET

Ref. No. : LS3534	Issue date : October 2003	Issued by LABSCAN ASIA
-------------------	---------------------------	------------------------

PRODUCT NAME : DIMETHYLSULPHOXIDE

COMPANY DETAILS

Company Name LABSCAN ASIA CO., LTD.
Address 24 Rama 1 Road, Pathumwan, Bangkok 10330 Thailand
Tel. / Fax Tel : 662-613-7911-4 Fax : 662-613-7915
Emergency Tel. Tel : 662-613-7911-4
Other Information **Ireland** : Labscan Limited
 T26 Stillorgan Industrial Park, Stillorgan Co. Dublin, Ireland
 Tel. : 353-1-295-2684 Fax : 353-1-295-2685
 Labscan Asia Co., Ltd. does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product for any intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Labscan Asia Co., Ltd. with respect to any kill or judgement or advice in relation to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Labscan Asia Co., Ltd. is limited to the replacement or supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

HAZARDS IDENTIFICATION

Product Name	DIMETHYLSULPHOXIDE		
Proper Shipping Name	DIMETHYLSULPHOXIDE		
Other Names	<u>Name</u>	<u>Grade</u>	<u>Labscan Code</u>
	DIMETHYLSULPHOXIDE	AR	A3534
	DIMETHYLSULPHOXIDE	HPLC	C2534
	DIMETHYLSULPHOXIDE	ANHYDRO	H6534
	DIMETHYLSULPHOXIDE	SPECTRO	S7534
	DMSO		
	METHYL SULFOXIDE		
UN No.	Not regulated		
D.G. Class	Not regulated		
Packaging Group	Not regulated		
Hazchem Code	Not regulated		
Poisons schedule	S6		
EEC-No	Not regulated		
Class	Xi; R36/38		
CAS-No	67-68-5		
Weight	100%		
Most important hazards	Vapors are flammable.		
Specific hazards	High concentration of vapors may induce unconsciousness, dizziness, headache. DMSO is easily resorbed by skin. Thermal decomposition can lead to release of irritating gases and vapours.		

MATERIAL SAFETY DATA SHEET

Ref. No. : LS3534

Issue date : October 2003

Issued by LABSCAN ASIA

PRODUCT NAME : DIMETHYLSULPHOXIDE

FIRST AID

General advice: Show this safety data sheet to the doctor in attendance.

Inhalation: Move to fresh air in case of accidental inhalation of vapors or decomposition products. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth-to-mouth or mouth to nose. Use suitable instruments/apparatus. Consult a physician if necessary.

Skin contact: Remove contaminated clothing immediately and wash affected skin with soap and water. Wash contaminated clothing before re-use. If skin irritation persists, call a physician.

Eye contact: If the substance has got into the eyes, immediately wash out with plenty of water for at least 10 minutes. Keep eye wide open while rinsing. Consult a physician for severe cases.

Ingestion: Rinse mouth. Do not induce vomiting without medical advice. Consult a physician for severe cases. Never give anything by mouth to an unconscious person.

FIRE-FIGHTING MEASURES

Suitable extinguishing media:
Extinguish with carbon dioxide, dry chemical, foam or water spray.

Extinguishing media which must not be used for safety reasons:
Do not use a solid water stream as it may scatter and spread fire.

Specific hazards:
Vapors may form explosive mixture with air.
Thermal decomposition can lead to release of irritating gases and vapors.

Special protective equipment for firefighters:
Wear a positive-pressure supplied-air respirator / full protective flameproof clothing.

Specific methods:
Standard procedure for chemical fires.
Water mist may be used to cool closed containers.

Hazchem Code:
Not regulated

ACCIDENTAL RELEASE MEASURES

Personal precautions: Evacuate personnel to safe areas. Avoid contact with skin, eyes and clothing. Do not breathe dust or spray mist. Remove all sources of ignition. Wear a positive-pressure supplied-air respirator. Shut off leaks if without risk.

Environmental precautions: Contain or absorb leaking liquid with sand or earth. Prevent liquid entering sewers, basements and work pits; vapor may create explosive and toxic atmosphere. If substance has entered a water course or sewer or contaminated soil or vegetation, advise police.

Methods for cleaning up: Absorb in earth or sand or other suitable material. Transfer to covered steel drums). Dispose of a special waste in compliance with local and national regulation.

MATERIAL SAFETY DATA SHEET

Ref. No. : LS3534

Issue date : October 2003

Issued by LABSCAN ASIA

PRODUCT NAME : DIMETHYLSULPHOXIDE

SAFE HANDLING AND STORAGE INFORMATION

Handling: Use only in areas provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges.

Storage: Keep container tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Electrical equipment should be protected to the appropriate standard. Purge open drums with nitrogen before resealing.

EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name DIMETHYL SULPHOXIDE	National occupational exposure limits IRL OEL : Not regulated.
---	--

Engineering measures to reduce exposure:
The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Ventilation hoods and fans required when working with organic solvents or in hot melt applications.

Personal protection equipment:

- Respiratory protection:** In case of insufficient ventilation wear suitable respiratory equipment.
- Hand protection:** Butylrubber gloves.
- Eye protection:** Goggles giving complete protection to eyes.
- Skin and body protection:** Chemical-proof suit / flame retardant antistatic protective clothing, heavy duty work shoes.

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Wash hands and face before breaks and immediately after handling the products.

PHYSICAL DATA AND OTHER PROPERTIES

Formula	(CH ₃) ₂ SO
Form	Liquid,
Colour	Colourless,
Odour	Not significant
Boiling point/range	189°C
Melting point/range	18.5°C
Decomposition temperature	>190°C
Flash point	87°C closed cup
Autoignition temperature	300-302°C
Explosion limits	lower 2.6 vol. %, Upper 63.0 vol. %
Vapor pressure	(20°C) 0.55 hPa
Relative density	> = 1.10
Bulk density	1100 kg/m ³

Continued on next page

MATERIAL SAFETY DATA SHEET

Ref. No. : LS3534	Issue date : October 2003	Issued by LABSCAN ASIA
-------------------	---------------------------	------------------------

PRODUCT NAME : DIMETHYLSULPHOXIDE

Solubility

Water solubility	completely	g/l
	Miscible	
Solubility in other solvents	alcohols, Ether, aromatic, hydrocarbons.	
Partition coefficient (n-octanol/water)	Log P _{ow} = -1.35	
Viscosity	(20°C) 2.14 mPa.s	

STABILITY AND REACTIVITY

Stability:	Stable at normal conditions.
Conditions to avoid:	Keep away from heat and sources of ignition. Prolonged heating at temperatures above 150°C
Materials to avoid:	Strong oxidizers, alkali metals and alkaline earth metals may cause fires or explosions, highly halogenated compounds, strong acids and oxidizing agent.
Hazardous decomposition products:	Burning produces obnoxious and toxic fumes sulfur oxides.

TOXICOLOGICAL INFORMATION

Acute toxicity	<p>Inhalation: Not harmful by inhalation. No-observed-effect level (NOEL) rats = at 2.9 mg/l (24h)</p> <p>Skin contact: The substance can be readily absorbed through intact skin. LD50/dermal/rat = 40,000 mg/kg. (approx.)</p> <p>Eye contact: Slightly Irritating to eyes.</p> <p>Ingestion: Not harmful if swallowed. LD50/oral/rat = 14,500 mg/kg.</p>
Sensitization:	Slightly irritating to eyes, skin.
Long term toxicity:	No hazards to be especially mentioned.
Chronic toxicity:	Repeated or prolonged exposure may cause irritation of eyes and skin, mucous, membranes, dizziness, headache.

ECOLOGICAL INFORMATION

Mobility:	Not volatile.
Persistence / degradability:	Readily biodegradable (94% after 27 days).
Bio accumulation:	Bio accumulation not significant log P _{ow} = 1.35.
Ecotoxicity:	Ecological injuries are not know or expected under normal use not harmful to fish; LC/96h = (35200 – 50600) mg/l.

MATERIAL SAFETY DATA SHEET

Ref. No. : LS3534

Issue date : October 2003

Issued by LABSCAN ASIA

PRODUCT NAME : DIMETHYLSULPHOXIDE

DISPOSAL CONSIDERATIONS

Waste from residues / unused products:

If recycling is not practicable, dispose of in compliance with local regulations.

Can be incinerated, when in compliance with local regulations.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal.

Empty containers can be land filled after cleaning when in compliance with local regulations.

TRANSPORT INFORMATION

UN-No.....	Not regulated	Marine pollutant.....	not applicable
ADR/RID			
Class.....	Not regulated		
IMO			
Class.....	Not regulated		
ICAO			
Class.....	Not regulated		

REGULATORY INFORMATION

Classification according to European directive on classification of hazardous preparations 90/492/EEC

Contains DIMETHYLSULPHOXIDE

Symbol(s) None

R – phrase(s) R36/38

- Irritating to eyes and skin.

S – phrase(s) S26

- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Recommended restrictions:

Take notice of labels and material safety data sheets for the working chemicals.

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Recommended use:

General purpose solvent.

CONTACT POINT

Contact Australia : Lomb Scientific (Aust) Pty, Ltd.
20 Mangrove Lane, Taren Point, N.S.W. Australia 2229
Tel : 612-853-66200, 612-8536-6218
Fax : 612-853-66250

