MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

Revision Date : April , 2023

Product Name : DIMETHYL SULPHATE

Other Names : METHYL SULPHATE

Uses : Methylating agent for amines and phenols, polyurethane-based adhesives.

Organisation	Location	Telephone	Ask For
MRUCHEM	219, K-10 Ground, Sarabhai Campus, Bh. Atlantis K-10, Nr. Genda Circle, Vadodara – 390023, India	+91808 7147166	Technical Officer

2. HAZARD IDENTIFICATION

Hazardous according to criteria of NOHSC/ASCC

Dangerous According to the Australian Code for the Transport of Dangerous Goods

Classified as Dangerous Goods According to NZS 5433:1999

VERY TOXIC

Risk Phrases

R45	May cause cancer.
R25:DIMESU	Also toxic if swallowed.
R26:DIMESU	Also very toxic by inhalation.
R34	Causes burns.

Safety Phrases

S53 Avoid exposure - obtain special instructions before use.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

ERMA New Zealand Approval Code : No Data

HSNO Hazard Classification : No Data

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Entity	CAS No.	Proportions (%)
DIMETHYL SULPHATE	[77-78-1]	>99.5

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed

If swallowed, immediately consult a doctor.

Eye

Thoroughly wash with lots of water and cosult a doctor.

Skin

Immediately wash off with water and soap.

Inhaled

Immediately consult a doctor.

Advice to Doctor

Treat according symptoms. Symptoms generally appear only after several hours.

Additional Information

Aggravated medical conditions caused by exposure

No information available.

5. FIRE FIGHTING MEASURES

Extinguishing Media

Fire fighters should wear full protective equipment including self-contained breathing apparatus. Use foam, quenching powder (coal dust) carbon dioxide. Do not use water. Special dangers as a result of the substyance, its products of combustion or the resulting gases. On combustion the hazardous flue gases are: carbon monoxide (CO), Sulphur dioxide (SO2).

Hazards from Combustion Products

Thermal decomposition at >200 deg C. Reactions with water at high temperature. Dangerous decomposition products include Sulphur dioxide.

Special protective precautions and equipment for fire fighters

No Data Available

Flammability Conditions

Inflammable.

Additional Information

Hazchem Code : 2XE

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures

Clean-up personnel should wear protective equipment.

Methods and materials for containment and clean up

Do not disperse the product with water react with caustic soda or ammonia. Clean up wetted surfaces thoroughly with ammonia liquor carry out cleaning operations using gas mask.

7. HANDLING AND STORAGE

Precautions for safe handling

Ensure an eye bath and safety shower are available and ready for use.

Conditions for safe storage, including any incompatibles

Additional specifications for conditions of storage, keep in dry, tightly closed container and store in a cool, well-ventilated place. Store under lock and key. Storage class: 3B Inflammable fluids. Do not transport or store with inflammable substances intructions for protection against fires and explosion. Keep away from sources of ignition The product is inflammable.

Container Type
No Data Available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards

TWA: 0.1 ppm 0.52 mg/m3

Biological Limit Values

No Data Available

Engineering Controls

Ensure adequate ventilation.

Personal Protection

Respiratory protection: Temporary filter equipment: Filter B atmosphere-independent respirator. Hand protection: Rubber gloves. Eye protection: Protective goggles/visual protection. Body protection: Protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless liquid.
Formula	(CH3)2SO4
Odour	No Data Available
Vapour Pressure	0.65 mm Hg (1 atmosphere)
Vapour Density	No data
Boiling Point	188 deg C
Melting Point	Not available deg C
Solubility in water	20 g/l (25 deg C)
Specific Gravity	1.33-1.34 (Water = 1)
Flash Point	Closed Cup 83
pH	Not available ( )
Flammability Limits (as percentage volume in air)	
Lower Explosion Limit	3.6
Upper Explosion Limit	23.3
Ignition Temperature	No Data
Specific Heat Value	No Data
Particle Size	No Data
Volatile Organic Compounds (VOC) content	No Data
Evaporation Rate	No Data
Viscosity	No Data
Percent Volatile	No Data
Octanol/Water partition coefficient	No Data
Saturated Vapour Concentration	No Data
Additional Characteristics	No Data
Flame Propagation/Burning Rate of Solid Materials	No Data
Properties of materials that may initiate or contribute to fire intensity	No Data
Potential for Dust Explosion	No Data
Reactions that Release Flammable Gases	No Data
Fast or Intensely Burning Characteristics	No Data
Non-flammables that could contribute unusual hazards to a fire	No Data
Release of invisible flammable vapours and gases	No Data
Decomposition Temperature	No Data

Additional Information
Solubility in water: 20 g/l ar 20 deg C. Density: 1.33 g/cm3 at 20 deg C. Dynamic Viscosity: 1.81 mPa*s at 20 deg C Feezing point: -32

10. STABILITY AND REACTIVITY

Chemical Stability : No Data

Conditions to avoid : No Data

Incompatible Materials : No Data

Hazardous Decomposition Products : No Data

Hazardous Reactions : No Data

11. TOXICOLOGICAL INFORMATION

Toxicity Data

Acute oral toxicity (LD50): 205 mg/kg (rat) Acute inhalation toxicity (Lc50): 0.045 mg/l Duration of exposure: 4 hours, Species (rat) Irritant effect on the skin: Corrosive, Species (rabbit) Schedule of carcinogenic, genotype altering or hazard transmitting substances TRGS 905 (BMA publication no. 52(4) Hazardous substance V) The product is a category 2 carcinogenic substance causes corrosive burns Can be absorbed through the skin.

Health Effects - Acute

Swallowed

Poisonous if swallowed.

Eye

Produces corrosive burns.

Skin

Produces corrosive burns.

Inhaled

Very toxic if inhaled.

12. ECOLOGICAL INFORMATION

Ecotoxicity : No Data

Persistence and degradability : No Data

Mobility : No Data

Additional information

Environmental fate (exposure) : No Data

Bioaccumulative potential : No Data

13. DISPOSAL CONSIDERATIONS

Disposal

Dispose of in accordance with all local, state and federal regulations.

Special Precautions for land fill or incineration

No Data Available

14. TRANSPORT INFORMATION

UN No.	1595
Shipping Name	DIMETHYL SULPHATE
Dangerous Goods Class	6.1 8 I
Subsidiary Risk	VERY TOXIC
Pack Group	2XE
Precaustion for User	
Hazchem Code	

15. REGULATORY INFORMATION

Poisons Schedule	7
EPG	39
AICS Name	SULFURIC ACID, DIMETHYL ESTER
NZ Toxic Substance	N
Additional information	No Data

16. OTHER INFORMATION

Additional information

Legend to abbreviations and acronyms:

<	less than
>	greater than
AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstracts Service (Registry Number)
CO2	Carbon Dioxide
COD	Chemical Oxygen Demand
ERMA	Environmental Risk Management Authority
HSNO	Hazardous Substance and New Organism
IDLH	Immediately Dangerous to Life and Health
LC50	LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50	LD stands for "Lethal Dose". LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals
Misc	miscible
N/A	Not Applicable
NIOSH	National Institute for Occupational Safety and Health
NOHSC	National Occupational Health and Safety Commission
OECD	Organization for Economic Co-operation and Development
PEL	Permissible Exposure Limit
RCP	Reciprocal Calculation Procedure
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weighted Average
UN	United Nations (number)
cm2	square centimetres
deg C ('C)	degrees Celsius
g	gram
g/cm3	grams per cubic centimetre
g/l	grams per litre
immiscible	liquids are insoluble in each other
kg	kilogram
kg/m3	kilograms per cubic metre
ltr	Litre
m3	cubic metre
mPa.s	milli Pascal per second
mbar	millibar
mg	milligram
mg/24H	milligrams per 24 hours
mg/kg	milligrams per kilogram
mg/m3	milligrams per cubic metre
miscible	liquids form one homogeneous liquid phase regardless of the amount of either component present
mm	millimetre
ppb	parts per billion
ppm	parts per million
ppm/2h	parts per million per 2 hours

ppm/6h	parts per millionper 6 hours
tne	tonne
ug/24H	micrograms per 24 hours
wt	weight

Literature references:

No Data

Sources for data:

No Data

www.mruchem.com

This MSDS summarises Mruchem best knowledge of the health and safety hazard information of the selected substance and how to safely handle the selected substance in the workplace however Mruchem expressly disclaims that the MSDS is a representation or guarantee of the chemical specifications for the substance. Each user should read the MSDS and consider the information in the context of how the selected substance will be handled and used in the workplace including its use in conjunction with other substances.