



VIJAY
Petrochem Pvt. Ltd.

FREEZE-ON

Dimethyl Ether DME - Pure

Safety Data Sheet

This SDS conforms to the Globally Harmonised System (GHS)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION	
Product name	Dimethyl Ether (DME) - Aerosol Grade
Chemical Name	Dimethyl Ether
Other means of identification	DME, DIMETHYL ETHER, dimethyl ether, Dimethylether
Recommended Intended Purpose	Chemical intermediate, Aerosol propellants, Foaming (blowing) agents.
Company Information	Vijay Petrochem Private Limited Khasra.No. :2137/1750, 2139/1751 & 2169/1750, Syau industrial Area, Govindgarh, Jaipur, Rajasthan 303712, India Cellphone: +91 96805-21212 Email: info@vijaypetrochem.com Website: www.vijaypetrochem.com
Emergency Telephone	+91 96805-21212 Rapid Spill Response - 24 hours, 7 days a week

SECTION 2. HAZARDS IDENTIFICATION			
Classification of the substance - GHS classification as published through ECHA			
Hazard Classification	Category	Hazard Statement	
Flammable Gas	1	H220	Extremely flammable gas.
Flammable Liquids	1	H224	Extremely flammable liquid and vapour
Gases under pressure	2.2	H280	Contains gas under pressure; may explode if heated
Eye Irritant	2	H319	Serious eye damage / eye irritant
Skin Irritant	2	H315	Skin corrosion / irritant
STOT		H336	May cause drowsiness or dizziness
Hazard Pictograms			
Signal Word	Danger		
Precautionary Statements			
General:	P101 P102 P103	If medical advice is needed, have product container or label at hand Keep out of reach of children Read carefully and follow all instructions	
Prevention	P210 P280 P261 P262	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing gas Do not get in eyes, on skin, or on clothing	
Response	P377 P318 P304+P340	Leaking gas fire: Do not extinguish, unless leak can be stopped safely. If exposed or concerned, get medical advice. IF INHALED: Remove person to fresh air and keep comfortable for breathing.	

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	P302 + P336+ P315 P381	IF ON SKIN: Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention. Eliminate all ignition sources if safe to do so
Storage	P410 + P403 P405	Protect from sunlight. Store in a well-ventilated place. Store locked up.
Disposal	P501	Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.
Main Hazard	This substance is an extremely flammable gas.	
Other Hazards	An asphyxiant at high concentrations – oxygen depletion can be fatal.	

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

CAS No	EC No	Name
115-10-6	204-065-8	Dimethyl ether
UN Number:	1033	

SECTION 4. FIRST AID MEASURES

General information	Never give anything by mouth to an unconscious person. When symptoms persist or in all cases of doubt seek medical advice.
In case of inhalation	Inhalation: Remove from exposure, lie down. Move to fresh air. Keep patient warm and at rest. Artificial respiration and/or oxygen may be necessary. Consult a physician.
In case of skin contact	Skin contact: Take off all contaminated clothing immediately. Flush area with lukewarm water. Do not use hot water. If frostbite has occurred, call a physician.
In case of eye contact	Eye contact: Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.
In case of ingestion	Ingestion: Is not considered a potential route of exposure.
Treatment (Advice to doctor)	Treatment: Do not give adrenaline or similar drug

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water spray, Foam, Dry chemical, Carbon dioxide (CO ₂),
Unsuitable extinguishing media	Not applicable
Special hazards arising from the substance	Pressure build-up Vapours may form explosive mixtures with air. Under conditions giving incomplete combustion, hazardous gases produced may consist of: Carbon oxides
Special protective equipment for fire-fighters	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
Additional information	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool containers / tanks with water spray.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Evacuate personnel to safe areas. Ventilate the area. Refer to protective measures listed in section handling and storage and inspection exposure controls/personal protection.
Environmental precautions	Should not be released into the environment.
Methods and material for containment and cleaning up	Evaporates.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling	Avoid breathing vapours or mist. Avoid contact with skin, eyes and clothing. Provide sufficient air exchange and/or exhausting work rooms. For personal protection see section exposure controls/personal protection.
Advice on protection against fire and explosion	Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. No sparking tools should be used. Take measures to prevent the build-up of electrostatic charge. Keep away from heat and sources of ignition. Keep away from open flames, hot surfaces and sources of ignition. When using do not smoke.
Requirements for storage rooms and vessels	Requirements for storage areas and containers: Keep containers tightly closed in a cool, well-ventilated place. Store in original container.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Type Form of exposure: TWA
Control parameters 1 920 mg/m³
1 000 ppm
Update 02 / 2006
Basis EU ELV

Type Form of exposure: TWA
Control parameters 766 mg/m³
400 ppm
Update 2007
Basis EH40 WEL

Type Form of exposure: STEL
958 mg/m³
500 ppm
Update 2007
Basis EH40 WEL



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Exposure controls	As vapourised DME is a simple asphyxiant, avoid any areas where spillage has taken place. Only enter once testing has proved the atmosphere to be safe.
Respiratory protection	For rescue and maintenance work in storage tanks use self-contained breathing apparatus. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.
Hand protection	Heat insulating gloves
Eye protection	Safety glasses Additionally wear a face shield where the possibility exists for face
Skin and body protection	contact due to splashing, spraying or airborne contact with this material.
Hygiene measures	Lightweight protective clothing Handle in accordance with good industrial hygiene and safety practice. When using do not smoke
Engineering Controls	Ensure adequate ventilation, especially in confined areas.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquified gas
Colour	Colourless
Odour	Almost odourless.
pH	Not applicable
Freezing point	-141 °C
Boiling point	-24.8 °C
Flash point	-41 °C
Flammability	Extremely flammable
Lower Explosion Limit	3.3 %(V)
Upper explosion limit	18.6 %(V)
Auto-ignition temperature	350 0C (235 0C,BAM, DIN 51 794)
Density	668 kg/m ³ at 20 °C Liquid
Log Pow	0.07 at 25 °C
Vapour pressure	470 kPa at 25 °C
Relative vapour density	1040 kPa at 50 °C
Solubility : Water	1.59 (Air = 1.0) 328 g/l at 20 °C at 410kPaLiquefied gas, Closed system
Solubility in other solvents	Organic solvents

SECTION 10. STABILITY AND REACTIVITY

Reactivity	Vapours may form explosive mixture with air.
Chemical Stability	Relatively stable
Conditions to avoid	Temperature : > 52 °C
Incompatible materials	Oxygen, Oxidizing agents, Acid anhydrides, Strong acids, Carbon monoxide, Acetic anhydride, Powdered metals
Hazardous decomposition products.	formaldehyde, Carbon dioxide (CO ₂), Carbon monoxide, Methanol

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified

SECTION 12. ECOLOGICAL INFORMATION

No ecological damage caused by this product.

SECTION 13. DISPOSAL CONSIDERATIONS

Product: Can be used after re-conditioning. In accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

Contaminated packaging: Empty pressure vessels should be returned to the supplier.

SECTION 14. TRANSPORT INFORMATION

UN Pictogram

Flammable Gas



Land and inland navigation transport ADR/RID

UN No. 1033, Shipping Name Dimethyl ether, ERG No. 115, Class 2.1, Hazchem Warning 2-Flammable gas

Marine transport IMDG

MDG 1073, Shipping Name Dimethyl ether, ERG No. 115, Class 2.1, Hazchem Warning Flammable gas.

Air transport ICAO/IATA-DGR

ICAO/IATA Code 1033, Class 2.1, Packaging instructions: Cargo: 200, Passenger: Forbidden, Maximum quantity allowed: Cargo: 150 kg, Passenger: Forbidden

Special precautions for user

The protective measures listed in Sections 6, 7 and 8 of the Safety Data Sheet have to be considered.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

Occupational Health and Safety Act, Hazardous Chemical Agents Regulations

SANS 11014:2010 Edition 1

SANS 10228:2012 Edition 6

SANS 10234:2019 Edition 2

SUPPLEMENT TO SANS 10234 Edition 1

National Road Traffic Act

Dangerous Goods Regulations

SECTION 16. OTHER INFORMATION

SELECTED BIBLIOGRAPHY

1. Data sheets as supplied by various Suppliers and Manufacturers
2. Emergency Response Handbook - Annex A of SABS 0232-3
3. GHS Purple booklet
4. Handling Chemicals Safety, 2nd. Ed. Dutch Association of Safety Experts, Dutch Chemical Industry Association, Dutch Safety Institute, 1980
5. NIOSH Pocket Guide to Chemical Hazards, NIOSH, June 1990
6. ECHA
7. Occupational Health and Safety Act, Hazardous Chemical Agents Regulations
8. SANS 11014:2010 Edition 1
9. SANS 10228:2012 Edition 6
10. SANS 10234:2019 Edition 2
11. SUPPLEMENT TO SANS 10234 Edition 1
12. National Road Traffic Act
13. Dangerous Goods Regulations

Wording of the R/S-phrases specified

R12 – Extremely Flammable
R18 – In use may form flammable explosive vapour-air mixture.
R44 – Risk of explosion if heated under confinement.
S2 Keep out of reach of children
S3 Keep in cool place
S9 Keep container in well ventilated place
S15 Keep away from heat
S29 Do not empty into drains
S16 Keep away from sources of ignition
S33 Keep away from static discharge
S41 in case of fire and/or explosion do not breath fumes
Refer to SANS 10265 for explanation of the above.

Disclaimer:

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.