

SECTION-1: Identification of the substance / mixture and the company / undertaking

Catalogue Number	CS-T-92635
Product Name	Dimethyl Ether
CAS No.	115-10-6
Category	Fine Chemicals
Synonyms	methoxymethane; Dimethyl ether; oxybis-Methane; Methyl ether; 1,1'-Oxybis[methane]; DME; Demeon D; Dimethyl oxide; Dymel A; LPG; Methoxymethane; RE 170; RE 170 (refrigerant); Wood ether
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email sales@clearsynth.com for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Not available

2.2 Label Elements

Signal Word: Warning



Hazard Statement(s)

Code	Statement
H220	Not available
H280	Not available

H336	Not available
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Precautionary Statement(s)

Code	Statement
P203	Not available
P210	Not available
P222	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P377	Not available
P381	Not available
P403	Not available
P410+P403	Not available
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P319	Get medical help if you feel unwell.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Dimethyl Ether

CAS Number : 115-10-6

Molecular Formula : C₂H₆O

Molecular Weight : 46.07

Parent Chemical : Not available

Synonyms : methoxymethane; Dimethyl ether; oxybis-Methane; Methyl ether; 1,1'-Oxybis[methane]; DME; Demeon D; Dimethyl oxide; Dymel A; LPG; Methoxymethane; RE 170; RE 170 (refrigerant); Wood ether

Concentration : Not available

SECTION 4: First aid measures

SECTION 4: First-aid measures

4.1 Description of first aid measures

General advice:

- Remove victim from exposure. Keep at rest in a position comfortable for breathing.
- If symptoms persist or are severe, seek medical attention.
- Show this Safety Data Sheet to medical personnel.

Inhalation:

- Move person to fresh air immediately.
- If breathing is difficult, provide oxygen by trained personnel.
- If not breathing, give artificial respiration by trained personnel.
- Seek medical attention.

Skin contact:

- Rapidly remove contaminated clothing.
- Rinse skin with plenty of water.
- If irritation, redness, or pain occurs, seek medical attention.

Eye contact:

- Rinse cautiously with water for several minutes.
- Remove contact lenses if present and easy to do; continue rinsing.
- Seek medical attention if irritation persists.

Ingestion:

- Ingestion is unlikely due to physical state (gas). If swallowed, rinse mouth.
- Do NOT induce vomiting.
- Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

- May cause dizziness, drowsiness, headache, nausea due to inhalation.
- High concentrations may cause central nervous system depression and asphyxiation by oxygen displacement.
- Contact with rapidly expanding gas or liquefied gas may cause cold burns/frostbite.
- No data available on delayed effects.

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically.
- Monitor respiratory function; provide supportive care as needed.
- Frostbite: warm affected area slowly; do not rub. Seek medical attention.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media:

- Dry chemical, carbon dioxide (CO₂), alcohol-resistant foam.
- Water spray/fog may be used to cool containers and disperse vapors.

Unsuitable extinguishing media:

- Direct water jet may be ineffective and may spread fire.

5.2 Special hazards arising from the substance or mixture

- Extremely flammable gas.
- Vapors may form explosive mixtures with air.

- Vapors may travel to ignition source and flash back.
- Containers may rupture violently when heated.
- Combustion may produce carbon oxides.

5.3 Advice for firefighters

- Wear self-contained breathing apparatus (SCBA) and full protective gear.
- Evacuate area; fight fire from a safe distance.
- Cool exposed cylinders/containers with water spray.
- If safe to do so, stop flow of gas; do not extinguish a leaking gas flame unless leak can be stopped.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Evacuate personnel to safe areas.
- Eliminate all ignition sources; no smoking.
- Provide adequate ventilation.
- Avoid breathing gas/vapors.
- Wear appropriate PPE (see Section 8); use SCBA in confined spaces or where oxygen deficiency is possible.

6.2 Environmental precautions

- Prevent release to drains, sewers, and confined spaces.
- Notify authorities if required by local regulations.

6.3 Methods and material for containment and cleaning up

- Stop leak if it can be done safely.
- Ventilate area.
- Use water spray/fog to reduce vapors and to protect personnel (do not direct water jet at leak source).
- Allow gas to disperse; monitor for flammable atmosphere.

6.4 Reference to other sections

- See Section 8 for exposure controls/personal protection.
- See Section 5 for fire-fighting measures.

SECTION-7: Handling and storage

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Use only with adequate ventilation.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Ground/bond containers and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting equipment where required.
- Avoid breathing gas/vapors; avoid contact with eyes and skin.
- Protect from physical damage.
- Do not puncture or incinerate containers.

7.2 Conditions for safe storage, including any incompatibilities

- Store in a cool, well-ventilated place.

- Keep container tightly closed and secured upright.
- Store away from oxidizing agents and other incompatible materials.
- Protect from direct sunlight and sources of heat.
- Storage temperature: Not available.

7.3 Specific end use(s)

- Not available.

SECTION 8: Exposure controls / personal protection

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits:

- Not available.

Biological limit values:

- Not available.

8.2 Exposure controls

Engineering controls:

- Provide local exhaust and/or general ventilation to maintain concentrations below applicable limits.
- Use gas detection/monitoring where flammable atmospheres or oxygen deficiency may occur.
- Use explosion-proof equipment where required.

Personal protective equipment (PPE):

Eye/face protection:

- Safety glasses with side shields or chemical goggles as appropriate.

Skin protection:

- Wear protective gloves suitable for cold contact if handling liquefied gas.
- Wear protective clothing as needed.

Respiratory protection:

- If ventilation is inadequate or in confined spaces, use an approved air-supplied respirator or SCBA.

Hygiene measures:

- Wash hands after handling.
- Do not eat, drink, or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available

Test	Result
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

SECTION 10: Stability and reactivity

10.1 Reactivity

- Extremely flammable gas; may form explosive mixtures with air.

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

- No data available.

10.4 Conditions to avoid

- Heat, sparks, open flames, hot surfaces.
- Static discharge.
- Confined spaces where flammable mixtures or oxygen deficiency may occur.

10.5 Incompatible materials

- Oxidizing agents.
- No further information available.

10.6 Hazardous decomposition products

- Carbon oxides.
- No data available for additional decomposition products.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- Acute toxicity: DME has very low acute inhalation toxicity. The 4-hour LC50 in rats is 164,000 ppm, and the cardiac sensitization threshold in dogs was greater than 200,000 ppm. In repeated inhalation rat studies of up to two years, DME was not carcinogenic and produced minimal toxicity at 25,000 and 10,000 ppm, and the NOAEC was 2000 ppm. DME was not teratogenic in pregnant rats up to 40,000 ppm; however, slight maternal and fetal toxicity were observed at greater than 5000 ppm. DME was not mutagenic in vitro or in vivo. The primary inhalation exposure finding was reversible CNS depression. LC50 (rat) = 164,000 ppm/4-hr
- Skin corrosion/irritation: No data available.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: DME has very low acute inhalation toxicity. The 4-hour LC50 in rats is 164,000 ppm, and the cardiac sensitization threshold in dogs was greater than 200,000 ppm. In repeated inhalation rat studies of up to two years, DME was not carcinogenic and produced minimal toxicity at 25,000 and 10,000 ppm, and the NOAEC was 2000 ppm. DME was not teratogenic in pregnant rats up to 40,000 ppm; however, slight maternal and fetal toxicity were observed at greater than 5000 ppm. DME was not mutagenic in vitro or in vivo. The primary inhalation exposure finding was reversible CNS depression. /LABORATORY ANIMALS: Acute Exposure/ At 200,000 ppm dimethyl ether causes weak cardiac sensitization in dogs. At 10,000 ppm rats show slight evidence of sedation, and at 50,000 ppm rats are asleep most of the time for exposures longer than 30 min.
- Germ cell mutagenicity: DME has very low acute inhalation toxicity. The 4-hour LC50 in rats is 164,000 ppm, and the cardiac sensitization threshold in dogs was greater than 200,000 ppm. In repeated inhalation rat studies of up to two years, DME was not carcinogenic and produced minimal toxicity at 25,000 and 10,000 ppm, and the NOAEC was 2000 ppm. DME was not teratogenic in pregnant rats up to 40,000 ppm; however, slight maternal and fetal toxicity were observed at greater than 5000 ppm. DME was not mutagenic in vitro or in vivo. The primary inhalation exposure finding was reversible CNS depression.
- Carcinogenicity: DME has very low acute inhalation toxicity. The 4-hour LC50 in rats is 164,000 ppm, and the cardiac sensitization threshold in dogs was greater than 200,000 ppm. In repeated inhalation rat studies of up to two years, DME was not carcinogenic and produced minimal toxicity at 25,000 and 10,000 ppm, and the NOAEC was 2000 ppm. DME was not teratogenic in pregnant rats up to 40,000 ppm; however, slight maternal and fetal toxicity were observed at greater than 5000 ppm. DME was not mutagenic in vitro or in vivo. The primary inhalation exposure finding was reversible CNS depression. Cancer Classification: Group D Not Classifiable as to Human Carcinogenicity
- Reproductive toxicity: DME has very low acute inhalation toxicity. The 4-hour LC50 in rats is 164,000 ppm, and the cardiac sensitization threshold in dogs was greater than 200,000 ppm. In repeated inhalation rat studies of up to two years, DME was not carcinogenic and produced minimal toxicity at 25,000 and 10,000 ppm, and the NOAEC was 2000 ppm. DME was not teratogenic in pregnant rats up to 40,000 ppm; however, slight maternal and fetal toxicity

were observed at greater than 5000 ppm. DME was not mutagenic in vitro or in vivo. The primary inhalation exposure finding was reversible CNS depression.

- STOT-single exposure: No data available.
- STOT-repeated exposure: No data available.
- Aspiration hazard: No data available.

Likely routes of exposure

- DME has very low acute inhalation toxicity. The 4-hour LC50 in rats is 164,000 ppm, and the cardiac sensitization threshold in dogs was greater than 200,000 ppm. In repeated inhalation rat studies of up to two years, DME was not carcinogenic and produced minimal toxicity at 25,000 and 10,000 ppm, and the NOAEC was 2000 ppm. DME was not teratogenic in pregnant rats up to 40,000 ppm; however, slight maternal and fetal toxicity were observed at greater than 5000 ppm. DME was not mutagenic in vitro or in vivo. The primary inhalation exposure finding was reversible CNS depression.

Symptoms related to the physical, chemical and toxicological characteristics

- /HUMAN EXPOSURE STUDIES/ Human subjects were exposed to 50,000, 75,000, 82,000, 100,000, 144,000, or 200,000 ppm for approximately 60 minutes. Exposures were terminated if unconsciousness occurred in the subjects. The number of subjects tested in each group was not reported. ...Clinical symptoms were noted for all concentrations. Effects on reaction times were tested at all dose levels, memory (writing of the Lord's Prayer) was tested at 82,000 and 100,000 ppm, muscular coordination (as exemplified by the act of writing) was observed at 82,000, 100,000, and 144,000 ppm, and typewriting was tested at 100,000 ppm. In human subjects, 50,000 and 75,000 ppm of DME caused feelings of mild intoxication but no objective symptoms beyond slight lack of attention after 12-minutes exposure to the higher concentration. At 82,000 ppm, some incoordination developed after 21.5 minutes, and a complaint was made of indistinct vision. At 100,000 ppm, no objective symptoms occurred during the first 15 minutes. Distinct signs of incoordination developed after 21 minutes of exposure. The experiment continued for 64 minutes, with the subject unable to do simple tasks (i.e., balancing of the head required special effort, estimation of time was lost, simple multiplication and memory were affected). At 144,000 ppm, symptoms first occurred after 7 minutes with the subject losing consciousness after 26 minutes. Inhalation of 200,000 ppm caused unconsciousness in 17 minutes.

SECTION 12: Ecological information

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12.1 Toxicity

- No data available.

12.2 Persistence and degradability

- No data available.

12.3 Bioaccumulative potential

- No data available.

12.4 Mobility in soil

- No data available.

12.5 Results of PBT and vPvB assessment

- Not available.

12.6 Endocrine disrupting properties

- No data available.

12.7 Other adverse effects

- No data available.

SECTION 13: Disposal considerations

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product:

- Dispose of contents/container in accordance with local/regional/national/international regulations.
- Do not discharge into drains, sewers, or confined spaces.
- Do not puncture or incinerate containers.

Contaminated packaging:

- Dispose of empty containers/cylinders through approved channels in accordance with applicable regulations.
- Residual vapors may be flammable.

SECTION 14: Transport information

SECTION 14: Transport information

14.1 UN number

- Not available.

14.2 UN proper shipping name

- Not available.

14.3 Transport hazard class(es)

- Not available.

14.4 Packing group

- Not available.

14.5 Environmental hazards

- Not available.

14.6 Special precautions for user

- Transport and store away from ignition sources.
- Ensure containers are secured and protected from damage.

14.7 Maritime transport in bulk according to IMO instruments

- Not available.

SECTION 15: Regulatory information

SECTION 15: Regulatory information

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

- Regulatory information not available.

15.2 Chemical safety assessment

- Not available.

SECTION 16: Other information

SECTION 16: Other information

Product identifier:

- Product name: Dimethyl Ether
- CAS No.: 115-10-6
- Catalog No.: CS-T-92635

Supplier:

- Clearsynth Labs Ltd., Mumbai, India
- Emergency phone: +91-22-245045900

Other information:

- The information provided is based on data believed to be reliable; however, no warranty is expressed or implied regarding its accuracy or completeness.
- Users should determine suitability for their particular application and comply with all applicable laws and regulations.

Revision date:

- Not available.

DISCLAIMER

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