DIETHYLENE GLYCOL DIMETHYL ETHER
CAS No 111-96-6

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

1.1 Product identifiers
   Product name  : Diethylene Glycol Dimethyl Ether
   CAS-No.       : 111-96-6

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Identified uses : Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet
   Company       : Central Drug House (P) Ltd
                   7/28 Vardaan House
                   New Delhi -110002
                   INDIA
   Telephone     : +91 11 49404040
   Email         : care@cdhfinechemical.com

1.4 Emergency telephone number
   Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
   Classification according to Regulation (EC) No 1272/2008
   Flammable liquids (Category 3), H226
   Reproductive toxicity (Category 1B), H360
   For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements
   Labelling according Regulation (EC) No 1272/2008
   Pictogram
   Signal word  : Danger
   Hazard statement(s)
   H226         : Flammable liquid and vapour.
   H360         : May damage fertility or the unborn child.
   Precautionary statement(s)
   P201         : Obtain special instructions before use.
   P210         : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry powder or dry sand to extinguish.

Supplemental Hazard information (EU)
EUH019 May form explosive peroxides.

Restricted to professional users.

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances
Synonyms : 2-Methoxyethyl ether
            ‘Diglyme’
            Dimethyldiglycol
            Bis(2-methoxyethyl) ether

Formula : C₆H₁₂O₃
Molecular weight : 134.18 g/mol
CAS-No. : 111-96-6
EC-No. : 203-924-4
Index-No. : 603-139-00-0

Hazardous ingredients according to Regulation (EC) No 1272/2008
Component Classification Concentration
Bis(2-methoxyethyl)ether Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EJ) No. 1907/2006 (REACH)
CAS-No. 111-96-6 Flam. Liq. 3; Repr. 1B; H226, <= 100%
EC-No. 203-924-4 H360
Index-No. 603-139-00-0

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.
4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures
5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

SECTION 6: Accidental release measures
6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage
7.1 Precautions for safe handling
Avoid exposure - obtain special instructions before use. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Storage class (TRGS 510): Flammable liquids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection
8.1 Control parameters

<table>
<thead>
<tr>
<th>Derived No Effect Level (DNEL)</th>
<th>Health effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Area</td>
<td>Exposure routes</td>
<td></td>
</tr>
<tr>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
</tr>
<tr>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
</tr>
<tr>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
</tr>
</tbody>
</table>
**Predicted No Effect Concentration (PNEC)**

<table>
<thead>
<tr>
<th>Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>9.43 mg/l</td>
</tr>
<tr>
<td>Soil</td>
<td>1.72 mg/kg</td>
</tr>
<tr>
<td>Marine water</td>
<td>0.64 mg/l</td>
</tr>
<tr>
<td>Fresh water</td>
<td>6.4 mg/l</td>
</tr>
<tr>
<td>Marine sediment</td>
<td>2.74 mg/kg</td>
</tr>
<tr>
<td>Fresh water sediment</td>
<td>27.4 mg/kg</td>
</tr>
<tr>
<td>Onsite sewage treatment plant</td>
<td>50 mg/l</td>
</tr>
</tbody>
</table>

**8.2 Exposure controls**

**Appropriate engineering controls**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment**

**Eye/face protection**
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body Protection**
Impervious clothing, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

a) Appearance       Form: clear, liquid  
                      Colour: colourless
b) Odour            No data available
c) Odour Threshold   No data available
d) pH               No data available
e) Melting point/freezing point  Melting point/range: -64 °C - lit.
f) Initial boiling point and boiling range  162 °C - lit.
g) Flash point      57 °C - closed cup
h) Evaporation rate No data available
i) Flammability (solid, gas) No data available
j) Upper/lower flammability or explosive limits
   Upper explosion limit: 17.4 %(V)
   Lower explosion limit: 1.5 %(V)

k) Vapour pressure
   0.6 hPa at 20 °C
   0.99 hPa at 25 °C
   7.7 hPa at 50 °C

l) Vapour density
   4.63 - (Air = 1.0)

m) Relative density
   0.943 g/cm3 at 25 °C

n) Water solubility
   No data available

o) Partition coefficient: n-octanol/water
   No data available

p) Auto-ignition temperature
   No data available

q) Decomposition temperature
   No data available

r) Viscosity
   No data available

s) Explosive properties
   No data available

t) Oxidizing properties
   No data available

9.2 Other safety information
Relative vapour density
4.63 - (Air = 1.0)

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
Heat, flames and sparks.

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions.
- Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 5,400 mg/kg(Bis(2-methoxyethyl)ether)

Skin corrosion/irritation
No data available(Bis(2-methoxyethyl)ether)

Serious eye damage/eye irritation
No data available(Bis(2-methoxyethyl)ether)
**Respiratory or skin sensitisation**  
No data available(Bis(2-methoxyethyl)ether)

**Germ cell mutagenicity**  
No data available(Bis(2-methoxyethyl)ether)

**Carcinogenicity**  
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**  
Laboratory experiments have shown teratogenic effects.(Bis(2-methoxyethyl)ether)  
Presumed human reproductive toxicant(Bis(2-methoxyethyl)ether)  
Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.(Bis(2-methoxyethyl)ether)

**Specific target organ toxicity - single exposure**  
No data available(Bis(2-methoxyethyl)ether)

**Specific target organ toxicity - repeated exposure**  
No data available

**Aspiration hazard**  
No data available(Bis(2-methoxyethyl)ether)

**Additional Information**  
RTECS: KN3339000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Bis(2-methoxyethyl)ether)

**SECTION 12: Ecological information**

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(Bis(2-methoxyethyl)ether)

12.5 **Results of PBT and vPvB assessment**  
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 **Other adverse effects**  
No data available

**SECTION 13: Disposal considerations**

13.1 **Waste treatment methods**

**Product**  
Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**  
Dispose of as unused product.
SECTION 14: Transport information

14.1 UN number
ADR/RID: 3271          IMDG: 3271          IATA: 3271

14.2 UN proper shipping name
ADR/RID: ETHERS, N.O.S. (Bis(2-methoxyethyl)ether)
IMDG: ETHERS, N.O.S. (Bis(2-methoxyethyl)ether)
IATA: ETHERS, N.O.S. (Bis(2-methoxyethyl)ether)

14.3 Transport hazard class(es)
ADR/RID: 3             IMDG: 3             IATA: 3

14.4 Packaging group
ADR/RID: III           IMDG: III           IATA: III

14.5 Environmental hazards
ADR/RID: no            IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use

15.2 Chemical safety assessment
A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

EUH019 May form explosive peroxides.
H226 Flammable liquid and vapour.
H360 May damage fertility or the unborn child.

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.