MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC index no</td>
<td>603-027-00-1</td>
</tr>
<tr>
<td>EC no</td>
<td>203-473-3</td>
</tr>
<tr>
<td>CAS No</td>
<td>107-21-1</td>
</tr>
<tr>
<td>Product code</td>
<td>00132</td>
</tr>
</tbody>
</table>

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture: Laboratory chemicals, Manufacture of substances

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai - INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.4. Emergency telephone number

Emergency number: + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acute toxicity (oral), H302
Category 4

Full text of classification categories and H statements: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC
Xn; R22
Full text of R-phrases: see section 16
2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Hazard pictograms (CLP)</th>
<th><img src="image" alt="" /></th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal word (CLP)</td>
<td>Warning</td>
</tr>
<tr>
<td>Hazard statements (CLP)</td>
<td>H302 - Harmful if swallowed</td>
</tr>
</tbody>
</table>

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

<table>
<thead>
<tr>
<th>Name</th>
<th>ETHANEDIOL AR</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS No</td>
<td>107-21-1</td>
</tr>
<tr>
<td>EC no</td>
<td>203-473-3</td>
</tr>
<tr>
<td>EC index no</td>
<td>603-027-00-1</td>
</tr>
</tbody>
</table>

Full text of R- and H- phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after ingestion: Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).

Unsuitable extinguishing media: Do not use a heavy water stream.
5.2. Special hazards arising from the substance or mixture
No additional information available

5.3. Advice for firefighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Use personal protective equipment as required.
Emergency procedures: Stop release.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

6.4. Reference to other sections
No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Do not get in eyes, on skin, or on clothing.
Hygiene measures: Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store in original container. Keep container tightly closed. Store in a dry place. Protect from moisture.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Exposure controls
No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Liquid
### ETHANEDIOL AR

**Safety Data Sheet**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Clear syrupy.</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>1</td>
</tr>
<tr>
<td>Melting point</td>
<td>-13 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>196 - 198</td>
</tr>
<tr>
<td>Flash point</td>
<td>111 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>3980 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>0.11 hPa at 20 °C</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>2.14</td>
</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: Completely miscible</td>
</tr>
<tr>
<td>Log Pow</td>
<td>-1.36</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>0.032 - 0.153 vol %</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available
10.6. Hazardous decomposition products
No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity:
- Oral: Harmful if swallowed.

Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Not classified
Respiratory or skin sensitisation: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
Specific target organ toxicity (single exposure): Not classified
Specific target organ toxicity (repeated exposure): Not classified
Aspiration hazard: Not classified

Potential adverse human health effects and symptoms:
- Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity
No additional information available

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>ETHANEDIOL AR (107-21-1)</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-1.36</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment
No additional information available
### 12.6. Other adverse effects
No additional information available

### SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

Product/Packaging disposal recommendations: Dispose of contents/container to...

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

**14.1. UN number**

| UN-No. (ADR) | Not applicable |
| UN-No. (IMDG) | Not applicable |
| UN-No.(IATA) | Not applicable |
| UN-No.(ADN) | Not applicable |
| UN-No. (RID) | Not applicable |

**14.2. UN proper shipping name**

| Proper Shipping Name (ADR) | Not applicable |
| Proper Shipping Name (IMDG) | Not applicable |
| Proper Shipping Name (IATA) | Not applicable |
| Proper Shipping Name (ADN) | Not applicable |
| Proper Shipping Name (RID) | Not applicable |

**14.3. Transport hazard class(es)**

**ADR**

Transport hazard class(es) (ADR): Not applicable

**IMDG**

Transport hazard class(es) (IMDG): Not applicable

**IATA**

Transport hazard class(es) (IATA): Not applicable

**ADN**

Transport hazard class(es) (ADN): Not applicable

**RID**

Transport hazard class(es) (RID): Not applicable

**14.4. Packing group**

| Packing group (ADR) | Not applicable |
| Packing group (IMDG) | Not applicable |
| Packing group (IATA) | Not applicable |
| Packing group (ADN) | Not applicable |
| Packing group (RID) | Not applicable |

**14.5. Environmental hazards**

| Dangerous for the environment | No |
| Marine pollutant | No |
| Other information | No supplementary information available |
14.6. Special precautions for user

- Overland transport
  No data available

- Transport by sea
  No data available

- Air transport
  No data available

- Inland waterway transport
  No data available

- Rail transport
  No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions
ETHANEDIOL AR is not on the REACH Candidate List
ETHANEDIOL AR is not on the REACH Annex XIV List

15.1.2. National regulations

Germany
AwSV/VwVwS Annex reference : Water hazard class (WGK) 1, slightly hazardous to water (Classification according to VwVwS, Annex 2; WGK No 105)

Denmark
Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment
No additional information available

SECTION 16: Other information
Full text of R-, H- and EUH-phrases:

<table>
<thead>
<tr>
<th>Acute Tox. 4 (Oral)</th>
<th>Acute toxicity (oral), Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>R22</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>Xn</td>
<td>Harmful</td>
</tr>
</tbody>
</table>

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.