MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

Product form: Substance
CAS-No.: 5614-37-9
Product code: 03139
Chemical structure:

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

1.2.1. Relevant identified uses
Industrial/Professional use spec: Industrial
For professional use only

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]
Flammable liquids, Category 2: H225
Acute toxicity (oral), Category 4: H302
Serious eye damage/eye irritation, Category 2: H319
Skin corrosion/irritation, Category 2: H315

Full text of H statements: see section 16
Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
F; R11
Xn; R22
Xi; R36
Xi; R38
Full text of R--phrases: see section 16

Adverse physicochemical, human health and environmental effects
No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]
Hazard pictograms (CLP): GHS02 GHS07
Signal word (CLP): Danger
Hazard statements (CLP): H225 - Highly flammable liquid and vapour.
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
Precautionary statements (CLP): P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances
Name: CYCLOPENTYL METHYL ETHER AR
CAS-No.: 5614-37-9
Full text of R- and H-statements: see section 16

3.2. Mixtures
Not applicable
SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: Assure fresh air breathing. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

First-aid measures after skin contact: Wash with plenty of water/…. Wash contaminated clothing before reuse. Get medical advice/attention.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion: Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.

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

Symptoms/effects after skin contact: Causes skin irritation.

Symptoms/effects after eye contact: Causes serious eye irritation.

Symptoms/effects after ingestion: Harmful if swallowed.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Highly flammable liquid and vapour.

Explosion hazard: May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

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: Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: On land, sweep or shovel into suitable containers. Collect spillage.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed: Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling: Keep away from sources of ignition - No smoking. Use only non-sparking tools. Avoid contact with skin and eyes. Do not breathe vapours. Take precautionary measures against static discharge.

Hygiene measures: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.

Storage conditions: Keep in fireproof place. Keep container tightly closed.

Incompatible materials: Heat sources.

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

Hand protection: Protective gloves

Eye protection: Chemical goggles or safety glasses

Skin and body protection: Wear suitable protective clothing

Respiratory protection: [In case of inadequate ventilation] wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Molecular mass: 100.16 g/mol

Colour: Clear Colorless.

Odour: No data available

Odour threshold: No data available

pH: No data available

Relative evaporation rate (butylacetate=1): No data available

Melting point: -140 °C

Freezing point: No data available

Boiling point: 106 °C

Flash point: -1 °C

Auto-ignition temperature: 180 °C

Decomposition temperature: No data available
### SECTION 10: Stability and reactivity

#### 10.1. Reactivity
No additional information available

#### 10.2. Chemical stability
Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions
No additional information available

#### 10.4. Conditions to avoid
Open flame. Heat. Sparks.

#### 10.5. Incompatible materials
No additional information available

#### 10.6. Hazardous decomposition products
May release flammable gases.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Oral: Harmful if swallowed.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
Reproductive toxicity: Not classified
STOT-single exposure: Not classified
STOT-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
CYCLOPENTYL METHYL ETHER AR (5614-37-9)

<table>
<thead>
<tr>
<th></th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYCLOPENTYL METHYL ETHER AR (5614-37-9)</td>
<td>1.59</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 hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information: Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

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

14.1. UN number
UN-No. (ADR): 3271
UN-No. (IMDG): 3271
UN-No. (IATA): 3271
**CYCLOPENTYL METHYL ETHER AR**

**Safety Data Sheet**

<table>
<thead>
<tr>
<th>UN-No. (ADN)</th>
<th>: 3271</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-No. (RID)</td>
<td>: 3271</td>
</tr>
</tbody>
</table>

### 14.2. UN proper shipping name

- **Proper Shipping Name (ADR)** : ETHERS, N.O.S.
- **Proper Shipping Name (IMDG)** : ETHERS, N.O.S.
- **Proper Shipping Name (IATA)** : Ethers, n.o.s.
- **Proper Shipping Name (ADN)** : ETHERS, N.O.S.
- **Proper Shipping Name (RID)** : ETHERS, N.O.S.

#### Transport document description

- **Transport document description (ADR)** : UN 3271 ETHERS, N.O.S., 3, II, (D/E)
- **Transport document description (IMDG)** : UN 3271 ETHERS, N.O.S., 3, II
- **Transport document description (IATA)** : UN 3271 Ethers, n.o.s., 3, II
- **Transport document description (ADN)** : UN 3271 ETHERS, N.O.S., 3, II
- **Transport document description (RID)** : UN 3271 ETHERS, N.O.S., 3, II

### 14.3. Transport hazard class(es)

#### ADR

- **Transport hazard class(es) (ADR)** : 3
- **Danger labels (ADR)**

#### IMDG

- **Transport hazard class(es) (IMDG)** : 3
- **Danger labels (IMDG)**

#### IATA

- **Transport hazard class(es) (IATA)** : 3
- **Hazard labels (IATA)**

#### ADN

- **Transport hazard class(es) (ADN)** : 3
- **Danger labels (ADN)**

#### RID
CYCLOPENTYL METHYL ETHER AR
Safety Data Sheet

Transport hazard class(es) (RID) : 3
Danger labels (RID) : 3

14.4. Packing group
Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II

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
Classification code (ADR) : F1
Special provisions (ADR) : 274
Limited quantities (ADR) : 1l
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02, R001
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T7
Portable tank and bulk container special provisions (ADR) : TP1, TP8, TP28
Tank code (ADR) : LGBF
Vehicle for tank carriage : FL
Transport category (ADR) : 2
Special provisions for carriage - Operation (ADR) : S2, S20
Hazard identification number (Kemler No.) : 33
Orange plates : 33
Tunnel restriction code (ADR) : D/E
EAC code : 3YE

- Transport by sea
Special provisions (IMDG) : 274
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP1, TP8, TP28
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-D
Stowage category (IMDG) : B
CYCLOPENTYL METHYL ETHER AR
Safety Data Sheet

MFAG-No : 127;128

- Air transport
PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
Special provisions (IATA) : A3
ERG code (IATA) : 3L

- Inland waterway transport
Classification code (ADN) : F1
Special provisions (ADN) : 274
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

- Rail transport
Classification code (RID) : F1
Special provisions (RID) : 274
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02, R001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T7
Portable tank and bulk container special provisions (RID) : TP1, TP8, TP28
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 33

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
CYCLOPENTYL METHYL ETHER AR is not on the REACH Candidate List
CYCLOPENTYL METHYL ETHER AR is not on the REACH Annex XIV List
15.1.2. National regulations

Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BlmSchV
Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen
The substance is not listed

SZW-lijst van mutagene stoffen
The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding
The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid
The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling
The substance is not listed

Denmark

Classification remarks
Emergency management guidelines for the storage of flammable liquids must be followed

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-statements:

<table>
<thead>
<tr>
<th>Acute Tox. 4 (Oral)</th>
<th>Acute toxicity (oral), Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation, Category 2</td>
</tr>
<tr>
<td>Flam. Liq. 2</td>
<td>Flammable liquids, Category 2</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation, Category 2</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour.</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>R11</td>
<td>Highly flammable</td>
</tr>
<tr>
<td>R22</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>R36</td>
<td>Irritating to eyes</td>
</tr>
<tr>
<td>R38</td>
<td>Irritating to skin</td>
</tr>
<tr>
<td>F</td>
<td>Highly flammable</td>
</tr>
<tr>
<td>Xi</td>
<td>Irritant</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.