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-No.</td>
<td>203-480-1</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>107-30-2</td>
</tr>
<tr>
<td>Product code</td>
<td>2763E</td>
</tr>
</tbody>
</table>

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
- Acute toxicity (dermal), Category 4: H312
- Acute toxicity (inhal.), Category 4: H332
- Serious eye damage/eye irritation, Category 2: H319
- Carcinogenicity, Category 1A: H350

Full text of H statements: see section 16
Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
Carc. Cat. 1; R45
F: R11
Xn: R20/21/22
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  GHS08

Signal word (CLP): Danger

Hazard statements (CLP):
H225 - Highly flammable liquid and vapour.
H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled
H319 - Causes serious eye irritation.
H350 - May cause cancer.

Precautionary statements (CLP):
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.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name: CHLOROMETHYL METHYL ETHER For Synthesis
CAS-No.: 107-30-2
EC-No.: 203-480-1

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: Immediately call a POISON CENTER/doctor. Wash with plenty of water/.... Wash contaminated clothing before reuse.

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: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.

Symptoms/effects 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


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

5.2. Special hazards arising from the substance or mixture

Fire hazard: Flammable solid.

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: Collect spillage. On land, sweep or shovel into suitable containers.

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. Avoid contact with skin and eyes. Do not breathe vapours. Provide good ventilation in process area to prevent formation of vapour.

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.

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 container tightly closed. Keep in fireproof place.

Incompatible materials: Heat sources.

Specific end use(s): No additional information available

Exposure controls/personal protection:

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.

Information on basic physical and chemical properties:

Physical state: Liquid
Molecular mass: 80.51 g/mol
Colour: Clear colorless to pale yellow.
Odour: No data available
Odour threshold: No data available
pH: No data available
Relative evaporation rate (butylacetate=1): No data available
Melting point: No data available
Freezing point: No data available
Boiling point: 55 - 57 °C
Flash point: 16 °C
Auto-ignition temperature: No data available
Decomposition temperature: No data available
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Flammability (solid, gas): Flammable solid.
Vapour pressure: 244.6 hPa at 20°C
Relative vapour density at 20 °C: No data available
Relative density: No data available
Density: 1.06 g/ml at 25°C
Solubility: No data available
Log Pow: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive properties: No data available
Oxidising properties: No data available
Explosive limits: No data available

9.2. Other information
No additional information 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
Acute toxicity: Oral: Harmful if swallowed. Dermal: Harmful in contact with skin. Inhalation: Harmful if inhaled.

Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Causes serious eye irritation.
Respiratory or skin sensitisation: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: May cause cancer.
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<table>
<thead>
<tr>
<th>Property</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Potential adverse human health effects and symptoms</td>
<td>Harmful if swallowed. Harmful in contact with skin.</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

12.1. Toxicity
No additional information available

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

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) : 1239
UN-No. (IMDG) : 1239
UN-No. (IATA) : 1239
UN-No. (ADN) : 1239
UN-No. (RID) : 1239
### 14.2. UN proper shipping name

<table>
<thead>
<tr>
<th>Proper Shipping Name (ADR)</th>
<th>METHYL CHLOROMETHYL ETHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name (IMDG)</td>
<td>METHYL CHLOROMETHYL ETHER</td>
</tr>
<tr>
<td>Proper Shipping Name (IATA)</td>
<td>Methyl chloromethyl ether</td>
</tr>
<tr>
<td>Proper Shipping Name (ADN)</td>
<td>METHYL CHLORO-METHYL ETHER</td>
</tr>
<tr>
<td>Transport document description (ADR)</td>
<td>UN 1239 METHYL CHLOROMETHYL ETHER, 6.1 (3), I, (C/D)</td>
</tr>
<tr>
<td>Transport document description (IMDG)</td>
<td>UN 1239 METHYL CHLOROMETHYL ETHER, 6.1 (3), I (&lt; -18°C c.c.)</td>
</tr>
<tr>
<td>Transport document description (IATA)</td>
<td>UN 1239 Methyl chloromethyl ether, 6.1, I</td>
</tr>
<tr>
<td>Transport document description (ADN)</td>
<td>UN 1239 METHYL CHLORO-METHYL ETHER, 6.1 (3), I</td>
</tr>
<tr>
<td>Transport document description (RID)</td>
<td>UN 1239 METHYL CHLOROMETHYL ETHER, 6.1 (3), I</td>
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</tbody>
</table>

### 14.3. Transport hazard class(es)

#### ADR

<table>
<thead>
<tr>
<th>Transport hazard class(es) (ADR)</th>
<th>6.1 (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger labels (ADR)</td>
<td>6.1, 3</td>
</tr>
</tbody>
</table>

#### IMDG

<table>
<thead>
<tr>
<th>Transport hazard class(es) (IMDG)</th>
<th>6.1 (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger labels (IMDG)</td>
<td>6.1, 3</td>
</tr>
</tbody>
</table>

#### IATA

<table>
<thead>
<tr>
<th>Transport hazard class(es) (IATA)</th>
<th>6.1 (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard labels (IATA)</td>
<td>6.1, 3</td>
</tr>
</tbody>
</table>

#### ADN

<table>
<thead>
<tr>
<th>Transport hazard class(es) (ADN)</th>
<th>6.1 (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger labels (ADN)</td>
<td>6.1, 3</td>
</tr>
</tbody>
</table>

#### RID

<table>
<thead>
<tr>
<th>Transport hazard class(es) (RID)</th>
<th>6.1 (3)</th>
</tr>
</thead>
</table>
**CHLOROMETHYL METHYL ETHER For Synthesis**

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| Danger labels (RID) | : 6.1, 3 |

**14.4. Packing group**

| Packing group (ADR) | : I |
| Packing group (IMDG) | : I |
| Packing group (IATA) | : I |
| Packing group (ADN) | : I |
| Packing group (RID) | : I |

**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) | : TF1 |
| Special provisions (ADR) | : 354 |
| Limited quantities (ADR) | : 0 |
| Excepted quantities (ADR) | : E0 |
| Packing instructions (ADR) | : P602 |
| Mixed packing provisions (ADR) | : MP8, MP17 |
| Portable tank and bulk container instructions (ADR) | : T22 |
| Portable tank and bulk container special provisions (ADR) | : TP2, TP35 |
| Tank code (ADR) | : L15CH |
| Tank special provisions (ADR) | : TU14, TU15, TE19, TE21 |
| Vehicle for tank carriage | : FL |
| Transport category (ADR) | : 1 |
| Special provisions for carriage - Loading, unloading and handling (ADR) | : CV1, CV13, CV28 |
| Special provisions for carriage - Operation (ADR) | : S2, S9, S14 |
| Hazard identification number (Kemler No.) | : 663 |
| Orange plates | : 663 1239 |
| Tunnel restriction code (ADR) | : C/D |
| EAC code | : 3WE |
| APP code | : A(fl) |

### - Transport by sea

| Special provisions (IMDG) | : 354 |
| Limited quantities (IMDG) | : 0 |
| Excepted quantities (IMDG) | : E0 |
| Packing instructions (IMDG) | : P602 |
| Tank instructions (IMDG) | : T22 |
### Tank special provisions (IMDG)
- TP2, TP13, TP35

### EmS-No. (Fire)
- F-E

### EmS-No. (Spillage)
- S-D

### Stowage category (IMDG)
- D

### Stowage and handling (IMDG)
- SW2

### Flash point (IMDG)
- below -18°C c.c.

### MFAG-No
- 131

### Air transport
- **PCA Limited quantities (IATA)**: Forbidden
- **PCA limited quantity max net quantity (IATA)**: Forbidden
- **PCA packing instructions (IATA)**: Forbidden
- **PCA max net quantity (IATA)**: Forbidden
- **CAO packing instructions (IATA)**: Forbidden
- **CAO max net quantity (IATA)**: Forbidden
- **ERG code (IATA)**: 6F

### Inland waterway transport
- **Classification code (ADN)**: TF1
- **Special provisions (ADN)**: 354, 802
- **Limited quantities (ADN)**: 0
- **Excepted quantities (ADN)**: E0
- **Equipment required (ADN)**: PP, EP, EX, TOX, A
- **Ventilation (ADN)**: VE01, VE02
- **Number of blue cones/lights (ADN)**: 2

### Rail transport
- **Classification code (RID)**: TF1
- **Special provisions (RID)**: 354
- **Limited quantities (RID)**: 0
- **Excepted quantities (RID)**: E0
- **Packing instructions (RID)**: P602
- **Mixed packing provisions (RID)**: MP8, MP17
- **Portable tank and bulk container instructions (RID)**: T22
- **Portable tank and bulk container special provisions (RID)**: TP2, TP35
- **Tank codes for RID tanks (RID)**: L15CH
- **Special provisions for RID tanks (RID)**: TU14, TU15, TU38, TE21, TE22, TE25
- **Transport category (RID)**: 1
- **Special provisions for carriage - Loading, unloading and handling (RID)**: CW13, CW28, CW31
- **Hazard identification number (RID)**: 663

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

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

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

#### 15.1. EU-Regulations

- No REACH Annex XVII restrictions
- CHLOROMETHYL METHYL ETHER For Synthesis is not on the REACH Candidate List
- CHLOROMETHYL METHYL ETHER For Synthesis is not on the REACH Annex XIV List
15.1.2. National regulations

Germany

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

Netherlands

SZW-lijst van kankerverwekkende stoffen : CHLOROMETHYL METHYL ETHER For Synthesis is 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

Class for fire hazard : Class I-1
Store unit : 1 liter
Classification remarks : F <Flam. Liq. 2>; 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
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

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 (Dermal)</th>
<th>Acute toxicity (dermal), Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Inhalation)</td>
<td>Acute toxicity (inhal.), Category 4</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Carc. 1A</td>
<td>Carcinogenicity, Category 1A</td>
</tr>
<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>H225</td>
<td>Highly flammable liquid and vapour.</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
</tbody>
</table>
### CHLOROMETHYL METHYL ETHER For Synthesis

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<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H312</td>
<td>Harmful in contact with skin.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled.</td>
</tr>
<tr>
<td>H350</td>
<td>May cause cancer.</td>
</tr>
<tr>
<td>R11</td>
<td>Highly flammable</td>
</tr>
<tr>
<td>R20/21/22</td>
<td>Harmful by inhalation, in contact with skin and if swallowed</td>
</tr>
<tr>
<td>R45</td>
<td>May cause cancer</td>
</tr>
<tr>
<td>F</td>
<td>Highly flammable</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.*