SAFETY DATA SHEET

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

1.1 Product identifiers

<table>
<thead>
<tr>
<th>Product name</th>
<th>Chloromethyl methyl ether</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Number</td>
<td>100331</td>
</tr>
<tr>
<td>Brand</td>
<td>Aldrich</td>
</tr>
<tr>
<td>Index-No.</td>
<td>603-075-00-3</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>107-30-2</td>
</tr>
</tbody>
</table>

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

Identified uses: Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company: Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone: +1 314 771-5765
Fax: +1 800 325-5052

1.4 Emergency telephone

Emergency Phone #: 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

- Flammable liquids (Category 2), H225
- Acute toxicity, Oral (Category 4), H302
- Acute toxicity, Inhalation (Category 1), H330
- Acute toxicity, Dermal (Category 4), H312
- Carcinogenicity (Category 1A), H350

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

2.2 GHS Label elements, including precautionary statements
SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms: Methyl chloromethyl ether

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Lachrymator.
Methoxymethyl chloride
MOM chloride

<table>
<thead>
<tr>
<th>Formula</th>
<th>C₂H₅ClO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular weight</td>
<td>80.51 g/mol</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>107-30-2</td>
</tr>
<tr>
<td>EC-No.</td>
<td>203-480-1</td>
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<td>Index-No.</td>
<td>603-075-00-3</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorodimethyl ether</td>
<td>Flam. Liq. 2; Acute Tox. 4; Acute Tox. 1; Acute Tox. 4; Carc. 1A; H225, H302, H330, H312, H350</td>
<td>&lt;= 100 %</td>
</tr>
</tbody>
</table>

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
First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Consult a physician.

In case of eye contact
After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: immediately make victim drink water (two glasses at most). 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
Water Foam Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Carbon oxides
Hydrogen chloride gas
Combustible.
Pay attention to flashback. Vapors are heavier than air and may spread along floors.
Development of hazardous combustion gases or vapours possible in the event of fire.
Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information
Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling
Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.
Advice on protection against fire and explosion
Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage stability
Recommended storage temperature
2 - 8 °C
Hydrolyzes readily.

Storage class
Storage class (TRGS 510): 3: 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

Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

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

Skin protection
required

Body Protection
Flame retardant antistatic protective clothing.

Respiratory protection
required when vapours/aerosols are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Control of environmental exposure
Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- **a)** Appearance: Form: liquid
- **b)** Odor: No data available
- **c)** Odor Threshold: No data available
- **d)** pH: No data available
- **e)** Melting point/freezing point: No data available
- **f)** Initial boiling point and boiling range: 55 - 57 °C (131 - 135 °F) - lit.
- **g)** Flash point: 16 °C (61 °F) - closed cup
- **h)** Evaporation rate: No data available
- **i)** Flammability (solid, gas): No data available
- **j)** Upper/lower flammability or explosive limits: No data available
- **k)** Vapor pressure: 954.6 hPa at 55 °C (131 °F)
  244.6 hPa at 20 °C (68 °F)
- **l)** Vapor density: No data available
- **m)** Density: 1.06 g/mL at 25 °C (77 °F) - lit.
  Relative density: No data available
- **n)** Water solubility: No data available
- **o)** Partition coefficient: n-octanol/water: No data available
- **p)** Autoignition temperature: No data available
- **q)** Decomposition temperature: No data available
- **r)** Viscosity: No data available
- **s)** Explosive properties: No data available
- **t)** Oxidizing properties: none

9.2 Other safety information
No data available
SECTION 10: Stability and reactivity

10.1 Reactivity
Vapors may form explosive mixture with air.

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
Warming.

10.5 Incompatible materials
Oxidizing agents

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - 500.01 mg/kg
LC50 Inhalation - Rat - 4 h - 66 ppm - gas

Remarks: Lungs, Thorax, or Respiration: Chronic pulmonary edema.
Blood: Hemorrhage.
LD50 Dermal - 1,100 mg/kg
No data available

Skin corrosion/irritation
Remarks: No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
Human carcinogen.
IARC: 1 - Group 1: Carcinogenic to humans (Chlorodimethyl ether)
NTP: Known - Known to be human carcinogen (Chlorodimethyl ether)
OSHA: OSHA specifically regulated carcinogen (Chlorodimethyl ether)

Reproductive toxicity
No data available
No data available

Specific target organ toxicity - single exposure
No data available

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

**Aspiration hazard**
No data available

### 11.2 Additional Information

RTECS: KN6650000
Cough, Shortness of breath, Headache, Nausea, Vomiting
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

### 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

#### 12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

#### 12.6 Endocrine disrupting properties
No data available

#### 12.7 Other adverse effects
No data available

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

**Product**
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.
SECTION 14: Transport information

**DOT (US)**
UN number: 1239  Class: 6.1I (3)  Packing group: I
Proper shipping name: Methyl chloromethyl ether
Reportable Quantity (RQ): 10 lbs
Poison Inhalation Hazard: Hazard Zone A

**IMDG**
UN number: 1239  Class: 6.1 (3)  Packing group: I
EMS-No: F-E, S-D
Proper shipping name: METHYL CHLOROMETHYL ETHER

**IATA**
UN number: 1239  Class: 6.1 (3)
Proper shipping name: Methyl chloromethyl ether
IATA Passenger: Not permitted for transport
IATA Cargo: Not permitted for transport

SECTION 15: Regulatory information

**SARA 302 Components**
Chlorodimethyl ether  CAS-No.  107-30-2  Revision Date  1993-04-24

**SARA 313 Components**
The following components are subject to reporting levels established by SARA Title III, Section 313:
Chlorodimethyl ether  CAS-No.  107-30-2  Revision Date  1993-04-24

**SARA 311/312 Hazards**
Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**
Chlorodimethyl ether  CAS-No.  107-30-2  Revision Date  1993-04-24

**Pennsylvania Right To Know Components**
Chlorodimethyl ether  CAS-No.  107-30-2  Revision Date  1993-04-24

**California Prop. 65 Components**
, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.Chlorodimethyl ether  CAS-No.  107-30-2  Revision Date  2007-09-28
SECTION 16: Other information

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. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Version: 6.6 Revision Date: 06/15/2023 Print Date: 12/02/2023