Material Safety Data Sheet

2-METHOXY ETHYL CHLORIDE

Section 1 - Product and Company Information

Substance : 2-METHOXY ETHYL CHLORIDE, 2-\text{Chloroethyl methyl ether,} 1-chloro-2-methoxy ethane
Trade Name : 2-Methoxy ethyl chloride
Chemical Family : Chloro alkyl Ethers
Company : Shiva Pharmachem Ltd.
Plot No. 588, Village Luna – 391440
Taluka Padra, District: Vadodara, Gujarat, India.
Phone No. : +91-2662-221021 / 224360
Fax No. : +91-2662-223314
Emergency Information : ----
International emergency number : +91 2662 221021

Section 2 - Hazards Identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 (EU-GHS/CLP)

Flammable liquids (Category 2)
Acute toxicity, inhalation (Category 4)
Acute toxicity, Dermal (Category 4)
Acute toxicity, Oral (Category 4)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Highly flammable. Harmful by inhalation, in contact with skin and if swallowed.

2.2 Label elements
Labeling according Regulation (EC) No 1272/2008 (CLP)

Pictogram

Signal Word

Hazard statement(s)
H225 Highly flammable liquid and vapor.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.
Material Safety Data Sheet

Precautionary statement(s)
P210    Keep away from heat/sparks/open flames/hot surfaces-No smoking.
P280    Wear protective gloves/protective clothing.

Hazard symbol(s)

R-phrase(s)
R11    Highly flammable.
R20/21/22    Harmful by inhalation, in contact with skin and if swallowed.

S-phrase(s)
S36/37    Wear suitable protective clothing and gloves.

2.3 Other hazards None

Section 3 – Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Product Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Mol. Formula</th>
<th>Mol. Weight.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methoxy Ethyl Chloride</td>
<td>627-42-9</td>
<td>210-999-7</td>
<td>C₃H₇ClO</td>
<td>94.54 g/mol</td>
</tr>
</tbody>
</table>

Section 4 – First Aid Measures

Description of first aid measures

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

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

If skin Contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

If eye Contact
In case of contact with eyes, flush with copious amounts of water at least 15 minutes. Assure adequate flushing by separating the eyelids. Consult a physician.

If swallowed
Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Material Safety Data Sheet

Section 5 – Fire Fighting Measures

SUITABLE EXTINGUISHING MEDIA
For small (incipient) fire, use media such as “alcohol” foam, dry chemical, or carbon dioxide. For large fires, apply water form as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special hazard arising form the substance or mixture
Carbon oxides, Hydrogen chloride gas.

Precautions for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Section 6 – Accidental Release Measures

Personal protection, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapors, mists or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

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

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).

Reference to other sections
For disposal see section 13

Section 7 - Handling and Storage

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Keep away form sources of ignition-No smoking. Take measures to prevent the build up of electrostatic charge.

Condition 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.

Store under inert gas.

Specific end uses
No data available

Section 8 - Exposure Controls / Personal Protection

Control parameters
**Material Safety Data Sheet**

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

**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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 Derived from it.

**Body Protection**
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, and 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 and appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of 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).

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**Section 9 - Physical and Chemical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>pH</td>
<td>Slightly acidic</td>
</tr>
<tr>
<td>BP/BP Range</td>
<td>89-90 °C</td>
</tr>
<tr>
<td>MP/MP Range</td>
<td>- 55 °C</td>
</tr>
<tr>
<td>Flash Point</td>
<td>10°C C Method: Closed Up</td>
</tr>
<tr>
<td>Flammability</td>
<td>Highly flammable</td>
</tr>
<tr>
<td>Autoignition Temp</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive Limits Lower</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>SG/Density</td>
<td>1.035 g/ml at 25°C</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.4090</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Slightly Soluble in water</td>
</tr>
</tbody>
</table>
Material Safety Data Sheet

Section 10 - Stability and Reactivity

Reactivity
No data available

Chemical stability
No data available

Possibility of hazardous reactions
No data available

Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight.

Incompatible materials
Strong oxidizing agents, strong bases

Hazardous decomposition products
No data available

Section 11 - Toxicological Information

Information on toxicological effects
Acute toxicity
No data available

Skin corrosion/irritation
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
IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
No data available

Specific target organ toxicity-single exposure
No data available
Material Safety Data Sheet

Specific target organ toxicity-repeated exposure
No data available

Aspiration hazard
No data available

Potential health effects
Inhalation : Harmful inhaled. May cause respiratory tract irritation.
Ingestion : Harmful if swallowed.
Skin : Harmful if absorbed through skin. May cause skin irritation.
Eyes : May cause eye irritation

Section 12 - Ecological Information
No data available

Section 13 - Disposal Considerations

Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packing
Dispose of as unused product.

Section 14 - Transport Information

RID/ADR
UN No. : 3271
Hazard Class : 3
Packing Group : II
Proper Shipping Name: ETHERS, N.O.S (2-Methoxy Ethyl Chloride)

IMDG
UN No. : 3271
Hazard Class : 3
Packing Group : II
Proper Shipping Name: ETHERS, N.O.S (2-Methoxy Ethyl Chloride)
Marin Pollutant : No

IATA
UN No. : 3271
Hazard Class : 3
Packing Group : II
Proper Shipping Name: ETHERS, N.O.S (2-Methoxy Ethyl Chloride)
Material Safety Data Sheet

Section 15 - Regulatory Information

This safety data sheet complies with the requirements of Regulations (EC) No 1907/2006.

Safety, health and environmental regulation/legislation specific for the substance or mixture

No data available

Section 16 - Additional Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Shiva Pharmachem Ltd. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incident, consequential or exemplary damages, howsoever arising, even if Shiva Pharmachem Ltd has been advised of the possibility of such damages.