Material Safety Data Sheet

2-PROPOXY ETHYL CHLORIDE

Section 1 - Product and Company Information

Substance	: 2-PROPOXY ETHYL CHLORIDE, 2- Chloroethyl n-propyl ether, 1-chloro-2-propoxy ethane
Trade Name	: 2-Propoxy 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

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

Flammable liquids (Category 3)
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
Flammable. Harmful by inhalation, in contact with skin and if swallowed.

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

Pictogram

Signal Word Danger

Hazard statement(s)

H226	Flammable liquid and vapor.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.

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Precautionary statement(s)

P210	Keep away form heat/sparks/open flames/hot surfaces-No smoking.
P280	Wear protective gloves/protective clothing.

According to European Directive 67/548/EEC as amended.

Hazard symbol(s)

R-phrase(s)

R10	Flammable.
R18	In use, may form flammable/explosive vapour-air mixture
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.

S-phrase(s)

S16	Keep away from source of ignition. No smoking.
S23	Do not breathe vapour.
S36/37	Wear suitable protective clothing and gloves.

Section 3 – Composition / Information on Ingredients

Product Name	CAS No.	EC No.	Mol. Formula	Mol. Weight.
2-Propoxy Ethyl Chloride	42149-74-6	255-685-0	$C_5H_{11}ClO$	122.60 g/mol

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

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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

Keep container tightly closed in a cool, dry and well-ventilated place, keep away from the source of heat and incompatible substances. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Specific end uses
No data available

Section 8 - Exposure Controls / Personal Protection

Control parameters
Components with workplace control parameters

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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)

Section 9 - Physical and Chemical Properties

Form	: Liquid
Color	: Colorless to pale yellow
pH	: Slightly acidic
BP/BP Range	: 129-132 ^{0}C
MP/MP Range	: - 50 ^{0}C
Flash Point	: 29^{o} C Method: Closed Up
Flammability	: Flammable
Autoignition Temp	: 190 ^{0}C
Oxidizing Properties	: No data available
Explosive Properties	: No data available
Explosive Limits Lower	: No data available
Vapor Pressure	: No data available
SG/Density	: 0.97 g/ml at 25^{0}C
Refractive index	: 1.415-1.417
Water Solubility	: Slightly Soluble in water

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Section 10 - Stability and Reactivity

Reactivity
No data available

Chemical stability
Stable at recommended conditions of storage.

Possibility of hazardous reactions
No data available

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

Incompatible materials
Strong oxidizing agents, strong bases

Hazardous decomposition products
Carbon monoxide, Hydrogen chloride.

Section 11 - Toxicological Information

Information on toxicological effects
Acute toxicity
Skin Rat LC50: 4000 mg/kg
Oral Rat LD50: 204 mg/kg
Inhalation LC50 3 mg/L/4 H

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

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Specific target organ toxicity-repeated exposure
No data available

Aspiration hazard
No data available

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

Section 12 - Ecological Information

Eco toxicity: ECO Daphnia magna 300 mg/L/4 H
Bioaccumulation: No data available
Biodegradation: Biodegradable in soil and water, 46% after 28 days.

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. : 1992
Hazard Class : 3
Packing Group : II
Proper Shipping Name : ETHERS, N.O.S (2-Propoxy Ethyl Chloride)

IMDG
UN No. : 1992
Hazard Class : 3
Packing Group : II
Proper Shipping Name : ETHERS, N.O.S (2-Propoxy Ethyl Chloride)
Marin Pollutant : No

IATA
UN No. : 1992
Hazard Class : 3
Packing Group : II
Proper Shipping Name : ETHERS, N.O.S (2-Propoxy Ethyl Chloride)

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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