



# Alpha Chemika



ISO 9001 QUALITY SYSTEM CERTIFIED ORGANIZATION

**MATERIAL SAFETY DATA SHEET**

**MSDS**

Savgan Heights ; 102 ,B Wing ; R.T.O. Lane ,Andheri (West) Mumbai - 400053 , INDIA

## Section 1 - Chemical Product and Company Identification

### Product Name : EPICHLOROHYDRIN

**Synonyms:** 1-Chloro-2,3-epoxypropane, (±)-Epichlorohydrin, (±)-2-(Chloromethyl)oxirane

**CAS No.:** 106-89-8

**Molecular Weight:** 92.52

**Chemical Formula:** C<sub>3</sub>H<sub>5</sub>

## Section 2 - Composition, Information on Ingredients

| Ingredient      | CAS No   | Percent   | Hazardous |
|-----------------|----------|-----------|-----------|
| Epichlorohydrin | 106-89-8 | 98 - 100% | Yes       |

## Section 3 - Hazardous Identification

### Risk advice to man and the environment

May cause cancer. Flammable. Also toxic by inhalation, in contact with skin and if swallowed. Causes burns. May cause sensitization by skin contact.

## Section 4 - First Aid Measures

### General advice

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

### If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and 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.

## Section 5 - Fire Fighting Measures

**Suitable extinguishing media**

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from 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 protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Further information**

Use water spray to cool unopened containers.

## Section 6 - Accidental Release Measures

**Personal precautions**

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

**Environmental precautions**

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

**Methods for cleaning up**

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

## Section 7 - Handling and Storage

**Handling**

Avoid exposure - obtain special instructions before use. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

**Storage**

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.

## Section 8 - Exposure Controls, Personal Protection

**Personal protective equipment****Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose 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).

**Hand protection**

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

**Eye protection**

Tightly fitting safety goggles. Faceshield (8-inch minimum).

**Skin and body protection**

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

### **Hygiene measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## **Section 9 - Physical and Chemical Properties**

### **Appearance**

Form clear, liquid

Colour colourless

### **Safety data**

pH no data available

Melting point -57 °C

Boiling point 115 - 117 °C

Flash point 32 °C - closed cup

Ignition temperature 415 °C

Lower explosion limit 3,8 %(V)

Upper explosion limit 21 %(V)

Vapour pressure 18,4 hPa at 21,1 °C

Density 1,183 g/mL at 25 °C

Water solubility no data available

Relative vapour

density

3,19

- (Air = 1.0)

## **Section 10 - Stability and Reactivity**

### **Storage stability**

Stable under recommended storage conditions.

### **Conditions to avoid**

Heat. Heat, flames and sparks.

Heat, flames and sparks.

### **Materials to avoid**

acids, Bases, Ammonia, Amines, Sodium/sodium oxides, Zinc, Magnesium, Aluminum, and its alloys, Halides

### **Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas

## **Section 11 - Toxicological Information**

### **Acute toxicity**

LD50 Oral - rat - 90 mg/kg

LC50 Inhalation - rat - 8 h - 250 ppm

LD50 Dermal - rabbit - 515 mg/kg

### **Irritation and corrosion**

Skin - rabbit - Open irritation test - 24 h

Eyes - rabbit - Severe eye irritation

### **Sensitisation**

May cause allergic skin reaction.

### **Chronic exposure**

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

IARC: 2A - Group 2A: Probably carcinogenic to humans (Epichlorhydrin)

May alter genetic material.

### **Signs and Symptoms of Exposure**

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough

### **Potential Health Effects**

**Inhalation** Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Skin** Toxic if absorbed through skin. Causes skin burns.

**Eyes** Causes eye burns.

**Ingestion** Toxic if swallowed. Causes burns.

**Target Organs** Kidney, Liver, Lungs,

## **Section 12 - Ecological Information**

### **Elimination information (persistence and degradability)**

no data available

### **Ecotoxicity effects**

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 10,6 mg/l - 96 h

Toxicity to daphnia

and other aquatic

invertebrates.

LC50 - Daphnia magna (Water flea) - 21 mg/l - 48 h

### **Further information on ecology**

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## **Section 13 - Disposal Considerations**

### **Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

### **Contaminated packaging**

Dispose of as unused product.

## **Section 14 - Transport Information**

### **ADR/RID**

UN-Number: 2023 Class: 6.1 (3) Packing group: II

Proper shipping name: EPICHLOROHYDRIN

### **IMDG**

UN-Number: 2023 Class: 6.1 (3) Packing group: II EMS-No: F-E, S-D

Proper shipping name: EPICHLOROHYDRIN

Marine pollutant: Marine pollutant

### **IATA**

UN-Number: 2023 Class: 6.1 (3) Packing group: II

Proper shipping name: Epichlorohydrin

## **Section 15 - Regulatory Information**

### **Labelling according to EC Directives**

EC Label

Hazard symbols

T Toxic

R-phrases)

R45 May cause cancer.

R10 Flammable.

R23/24/25 Also toxic by inhalation, in contact with skin and if swallowed.

R34 Causes burns.

R43 May cause sensitization by skin contact.

S-phrase(s)

S53 Avoid exposure - obtain special instructions before use.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Restricted to professional users.

## **Section 16 - Additional Information**

**Not Regulated**