# **LOTTE**FINE CHEMICAL

## **Epichlorohydrin**

■ Name : Epichlorohydrin(ECH); Chloropropylene oxide, Propylene oxide

#### **■** Description

Epichlorohydrin is colorless, flammable, toxic liquid having specific chloroform-like odor Epichlorohydrin is mainly used as the raw material for epoxy resins, which are used in paints, electronics and construction materials. Epichlorohydrin is also used for specialty chemicals, such as water treatment chemicals, glycidyl compounds, and elastomers.

Raw Meterials: Propylene/Chlorine

#### **■** Manufacturing Process

$$C_3H_6 + CI_2 \rightarrow C_3H_5CI + HCI$$
  
 $2C_3H_5CI + HOCI + Ca(OH)_2 \rightarrow C_3H_5OCI + CaCl_2 + 2H_2O$ 

■ Physical properties

Appearance	Colorless liquid with Irritating chloroform line odor	
Mol. Weight	92.5	
Sp.Gr.(20°C)	1.18	
Boiling point(760mmHg)	116℃	
Melting point	-57°C	
Viscosity(20℃)	1.12cP	
Flash point	31°C(Closed cup)	
Explosion limit	3.8~21Vol%(in air)	
Ignition point	385℃	
Vaper pressure(20°C)	1.6kPa	

#### **■ Product Specifications**

Test item	spec.	Test Method
Epichlorohydrin(wt%)	99.9 min.	M18ISOZ-001
Moisture(ppm)	500 max.	M18ISOZ-002
Color(APHA No.)	15 max.	MI8ISOZ-003
Sp.Gr.(20°C)	1.180 ~ 1.185	M18ISOZ-005

#### Packing

- · 240kg Steel drum
- · ISO-Tank Container

#### **■** Applications

- · Raw material for Epoxy resin
- · Synthetic Glycerin
- · Polyamide-epichlorohydrin resin for wet strength resin production
- · Glycidyl ethers, glycidyl methacrylate surfactants
- · Ion-exchange resin
- · Keep out of water supplies and sewers
- · Polyamide water treatment chemicals
- · Flame retardants
- · Quaternary amines

### ■ Handling & storage

- · Avoid contact with temperatures above 325°C
- $\cdot$  Avoid heat,flames,sparks and other source of ignition
- · Containers may rupture or explode if exposed to heat
- · Protect from physical damage
- · Keep separated from incompatible substances