SAFETY DATA SHEET

Revision date – 29.10.2025
Revision No. - 01

EPICHLOROHYDRIN
according to Regulation (EC) / REACH

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identification

Product Name	:	EPICHLOROHYDRIN
Synonyms	:	1-chloro-2,3-epoxypropane, 3-Chloro-1, 2-Epoxypropane
CAS number	:	106-89-8
EC No.	:	203-439-8

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

Substance Use : Chemical production, industrial applications. Intermediate for use under strictly control condition, chemical for synthesis

Substance uses advised against : Not applicable

1.3 Details of Supplier of the Safety Data Sheet

Supplier : DCM Shriram Ltd.
Unit : Shriram Alkali & Chemicals
749/GIDC, Jhagadia-393110,
Dist- Bharuch, Gujarat.
Phone No: (02645)222000/222015
www.dcmshriram.com

1.4 Emergency Telephone : (02645)222000/222015

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification of the substance in accordance with Regulation (EC) No 1272/2008

Health Hazards

Flammable liquids, (Category 3)	H226: Flammable liquid and vapor.
Acute toxicity, (Category 3)	H301: Toxic if swallowed.
Acute toxicity, (Category 3)	H331: Toxic if inhaled
Acute toxicity, (Category 3)	H311: Toxic in contact with skin.
Skin corrosion, (Sub-category1B)	H314: Causes severe skin burns and eye damage
Serious eye damage, (Category1)	H318: Causes serious eye damage

Skin sensitization, (Category 1)	H317: May cause an allergic skin reaction.
Carcinogenicity, (Category 1B)	H350: May cause cancer.
Environmental Hazards (Category 3)	H412: Hazardous to aquatic environmental, Acute Hazard

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word Danger

Hazard Statements

H226	Flammable liquid and vapor.
H301 + H311 + H331	Toxic if swallowed, in contact with skin or if inhaled.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H350	May cause cancer.
H318	May cause serious eye damage.
H412	Harmful to aquatic life

Precautionary Statements

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash thoroughly after handling the treated area.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P281 Use personal protective equipment as required.

Treatment

P301+P310	If swallowed: Immediately call a poison center or doctor/physician.
P301+P330+P331	If swallowed: Rinse mouth. Do not induce vomiting.
P302+P352	If on skin: Wash with plenty of soap and water.
P303+P353 +P361	If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P338 +P351	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313	If exposed or concerned: Get medical advice/ attention.
P312	Call a poison center or doctor/physician if you feel unwell.
P321	Specific treatment (see information on this label).
P322	Specific measures (see information on this label).
P330	Rinse mouth.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P361	Remove/Take off immediately all contaminated clothing.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use the fire extinguishing agent for extinction.

Storage

P403+P233+P235	Store in a cool & well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal

P501 Dispose the contents/container in accordance with Local/ Regional/ National/ International Regulations.

2.3 Other hazards (NFPA)

Health: 3
Flammability: 3
Reactivity: 2

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula	:	C3H5ClO
Molecular weight	:	92,53 g/mol
CAS-No.	:	106-89-8
EC-No.	:	203-439-8
EU Index Ni.	:	603-026-00-6
Common Name	:	Epichlorohydrin
Concentration	:	99.9%

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 doctorin attendance.

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

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin withwater/ shower. Call a physician immediately.

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

If swallowed
If swallowed: give water to drink (two glasses at most). Seek medical advice immediately.In exceptional cases only, if medical care is not available within one hour, induce vomiting(only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
Exposures require specialized first aid with contact and medical follow -up .
Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

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.
Fire may cause evolution of:
Hydrogen chloride gas, Phosgene, dioxin
Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air at elevated temperatures.

Development of hazardous combustion gases or vapors possible in the event of fire.

5.3 Advice for firefighters
Evacuate area and fight fire from a safe distance with appropriate protective equipment
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.
Avoid release to the environment.
Avoid the discharge into drain, water courses or onto the ground

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6.3 Methods and materials for containment and cleaning up

Do not get water on spilled substance or inside container.
Ventilate the contaminated area.
Wear appropriate protective equipment and clothing during clean-up.
Prevent product from eating drains.
Do not allow material to contaminate ground water system.

Large Spill:

Stop the flow of material, if this is without risk.
Dike the spilled material, where this is possible.
Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to
minimize spreading or contact with rain.

Small Spill:

Wipe up with absorbent material (e.g. cloth, fleece).
Clean surface thoroughly to remove residual contamination.

6.4 Reference to other sections

See section 7,8 and 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 precautionarymeasures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash handsand 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 authorizedpersons.
Recommended storage temperature see product label.

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 Occupational Exposure Limits

1-chloro-2,3-epoxypropane

ACGIH regulation: TWA = 0.5ppm
Biological exposure index: Not available

8.2 Exposure controls

Appropriate engineering controls

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Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne
levels below recommended exposure limits.

If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the recommended exposure limit.
Facilities for storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Individual protection measures, such as personal protective equipment

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH / MSHA approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Eye protection

Wear chemical splash goggle.
An eye wash unit and safely shower station should be available nearby work place.
Hand protection
Wear appropriate chemical resistant protective gloves by considering physical and chemical properties of Chemicals.

Body protection

Wear appropriate chemical resistant protective clothing by considering physical and chemical properties of chemicals.

Hygiene measures

Ensure that eyewash stations and safety showers are close to the workstation location.
When using do not eat, drink or smoke.
Wash hands before breaks and at the end of workday.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Physical state	liquid
b)	Color	colorless
c)	Odor	stinging
d)	Melting point/freezing point	Melting point: -57 °C at 1.013 hPa
e)	Initial boiling point and boiling range	116 - 117 °C at 1.0 atm
f)	Flammability (solid, gas)	No data available
g)	Upper/lower flammability or explosive limits	Upper explosion limit: 21 %(V) Lower explosion limit: 3,8 %(V)
h)	Flash point	28 °C – closed cup, 40°C – Open cup
i)	Autoignition temperature	385 °C at 1.013 hPa
j)	Decomposition temperature	225 °C

k)	pH	No data available
l)	Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: ca.1,03 mPa.s at 20 °C
m)	Water solubility	ca.65,9 g/l at 25 °C - completely soluble
n)	Partition coefficient: n-octanol/water	log Pow: 0,45 at 25 °C - Bioaccumulation is not expected.
o)	Vapor pressure	16,5 hPa at 20 °C 22,8 hPa at 25 °C
p)	Vapor Density	3.29
q)	Density	1,18 g/cm3 at 20 °C
r)	Relative density	1,18 at 20 °C
s)	Relative vapordensity	3,2 - (Air = 1.0)
t)	Particle characteristics	No data available
u)	Explosive properties	No data available
v)	Oxidizing properties	none

NOTE: The physical data presented above are typical values and should not be construed as a specification"

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity/Chemical stability/Possibility of hazardous reactions:

May decompose at high temperatures into forming toxic gases.
May form explosive mixtures at temperatures at or above the flashpoint.
May cause vapor explosion hazard indoors, outdoors or in sewers.
Some of these materials may burn, but none ignite readily.
Vapors may form explosive mixtures with air.
Avoid contact with the temperature more than 325°C.
It may occur exothermic reaction, if it contact with water.
May react with water. Stable under recommended storage conditions.

10.2 Conditions to avoid:

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

10.3 Incompatible materials:

Acid, alcohol, phenol, organic acids, metal salts, amine, combustible materials, bases, oxidizing agents, halo carbons, aluminum, ammonia, magnesium, zinc, sodium.

10.4 Hazardous decomposition products:

Hydrogen chloride, carbon monoxide, phosgene.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Inhalation	Cough, Sore throat, burning sensation.
Skin Contact	Burning sensation, Skin Burns.
Eye Contact	Pain, Redness, loss of vision.
Ingestion	Nausea, vomiting, abdominal pain, cough.

Acute toxicity

LD50 (Oral, Rat) : 175 mg/kg
LD50 (Dermal, Rabbit): 515 mg/kg
LC50 (Inhalation Rat): 4114 mg/m3.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - 10,6 -13,2 mg/l - 96 h Remarks: (ECHA)
	Toxicity to daphnia and other aquaticstatic test EC50 - Daphnia magna (Water flea) - 24 mg/l - 48 h
	Remarks: (ECHA)
	invertebrates
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 15 mg/l - 72 h (OECD Test Guideline 201)
	Toxicity to bacteriastatic test NOEC - microorganisms - 35 mg/l - 72 h Remarks: (ECHA)

12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 14 d Result: 92,5 % - Readily biodegradable.(OECD Test Guideline 301C) Remarks: The value is given in analogy to the following substances:3-chloro-1,2-propanediol

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Do not allow this material to drain into sewers/ water supplies.
Consult your local/ regional authorities before disposal.
You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system.
Observe all local/regional/national/ international regulations when disposing of the substance.

13.2 Waste from residues/unused products:

Refer manufacturer / supplier for information on residues.
Dispose-off any residue / unused products in accordance with local regulations.

13.3 Contaminated Packaging:

Since emptied containers may retain product residue, follow label warnings even after container is emptied.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 2023 IMDG: 2023 IATA: 2023

14.2 UN proper shipping name

ADR/RID: EPICHLOROHYDRIN
IMDG: EPICHLOROHYDRIN
IATA: Epichlorohydrin

14.3 Transport hazard class(es)

ADR/RID: 6.1 (3) IMDG: 6.1 (3) IATA: 6.1 (3)

14.4 Packaging group

ADR/RID: II IMDG: II IATA: II

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: no

14.6 Special precautions for user

Tunnel restriction code : (D/E)

Further information : No data available

SECTION 15: REGULATORY INFORMATION

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventoryof chemicals and chemicals Substances	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s) A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16: Other information

Name of the firm	Mailing Address	Contact Person in Emergency	Telephone no.
Shriram Alkali & Chemicals (SAC)	749, GIDC Estate Jhagadia. Pin-393110 Dist: Bharuch	Head of Production Head of Safety	Telephone NOS : 02645-222000/222015

Abbreviations:

ACGIH: American Conference of Governmental Industrial hygienists
OSHA : Occupational Safety and Health Administration
NFPA: National Fire Protection Association
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Dangerous Goods
ICAO/IATA: International Civil Aviation Organization International Air Transport Association
RID: Regulations Concerning the International Transport of Dangerous Goods by Rail

Disclaimer:

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DCM Shriram Ltd.
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