

				according to Directive 67/548/EEC or 1999/45/EC	according to Regulation (EC) No. 1272/2008 [CLP]	Registration Number
Polymer based on: ethylene oxide, propylene oxide, block copolymer, modified	-	61419-46-3	99-100	-	No data available	No data available
Propylene oxide	Present	75-56-9	0-0.001	F+; R12 Xn; R20/21/22 Xi; R36/37/38 Carc.Cat.2; R45 Muta.Cat.2; R46	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Muta. 1B (H340) Carc. 1B (H350) STOT SE 3 (H335) Flam. Liq. 1 (H224)	No data available
Ethylene oxide	Present	75-21-8	0-0.001	F+; R12 T; R23 Xi; R36/37/38 Carc.Cat.2; R45 Muta.Cat.2; R46 R6	Acute Tox. 3 (H331) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Muta. 1B (H340) Carc. 1B (H350) STOT SE 3 (H335) Flam. Gas 1 (H220) Press. Gas	No data available

Full text of R-phrases: see section 16

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

- General advice** Remove contaminated clothing.
- Inhalation** Move individual to fresh air and check to assure adequate respiration. Seek medical attention if necessary.
- Skin Contact** Remove contaminated clothing and immediately wash affected area with large amounts of water for at least 5 minutes. If irritation or redness persists, seek medical attention as needed.
- Eye contact** DO NOT RUB EYES. Immediately flush eyes with large amounts of water for 15 minutes lifting the lower and upper lids. Seek medical attention of necessary.
- Ingestion** Give large amounts of water to drink. Seek medical attention if necessary. Induce vomiting only upon advice from a physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms None known.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Treat according to symptoms (decontamination, vital functions), no known specific antidote.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

water spray, dry extinguishing media, foam, carbon dioxide.

Unsuitable Extinguishing Media

No information available

5.2. Special hazards arising from the substance or mixture

Harmful vapors Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Use personal protective clothing.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6.3. Methods and material for containment and cleaning up

Containment of Spill

Prevent further leakage or spillage if safe to do so.

Cleanup and Disposal of Spill

For large amounts: pump off product. For residues: pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

6.4. Reference to other sections

See Section 12: ECOLOGICAL INFORMATION.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling

No special measure necessary provided product is used correctly. Protection against fire and explosion. No special precautions necessary.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practices. Wearing of closed work clothing recommended.

7.2. Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed and in a cool place.

7.3. Specific end use(s)

Risk Management Methods (RMM)

The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Chemical Name	European Union	United Kingdom	France	Spain	Germany
Propylene oxide 75-56-9	-	STEL: 15 ppm STEL: 36 mg/m ³ TWA: 5 ppm TWA: 12 mg/m ³	TWA: 20 ppm TWA: 50 mg/m ³	TWA: 2 ppm TWA: 4.8 mg/m ³	-
Ethylene oxide 75-21-8	-	STEL: 15 ppm STEL: 27.6 mg/m ³ TWA: 5 ppm TWA: 9.2 mg/m ³	TWA: 1 ppm STEL: 5 ppm	TWA: 1 ppm TWA: 1.8 mg/m ³	-
Component	Italy	Portugal	Netherlands	Finland	Denmark
Propylene oxide 75-56-9 (0-0.001)		TWA: 2 ppm	TWA: 6 mg/m ³	TWA: 1 ppm TWA: 2.4 mg/m ³ Skin	TWA: 5 ppm TWA: 12 mg/m ³ Skin
Ethylene oxide 75-21-8 (0-0.001)		TWA: 1 ppm	TWA: 0.84 mg/m ³	TWA: 1 ppm TWA: 1.8 mg/m ³	TWA: 1 ppm TWA: 1.8 mg/m ³
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Propylene oxide 75-56-9	Skin	Skin TWA: 2.5 ppm TWA: 6 mg/m ³	TWA: 9 mg/m ³	TWA: 1 ppm TWA: 2 mg/m ³ Skin STEL: 3 ppm STEL: 4 mg/m ³	TWA: 5 ppm TWA: 12 mg/m ³
Ethylene oxide 75-21-8	Skin	Skin TWA: 1 ppm TWA: 2 mg/m ³	TWA: 1 mg/m ³	TWA: 1 ppm STEL: 3 ppm	TWA: 5 ppm TWA: 10 mg/m ³

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection Safety glasses with side shields (framed goggles (EN 166)).
Skin and body protection Suitable protective clothing.

Environmental exposure controls No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	liquid	Odor	Product specific
Appearance	Clear to hazy viscous liquid	Odor threshold	Colorless
Color	No information available		
Property	Values	Remarks • Method	
pH	approximate 6 (50g/l, 23°C)	No information available	
Freezing point		No information available	
Boiling point		No information available	
Flash point and Method	>100°C	No information available	
Evaporation rate		No information available	
Flammability (solid, gas)		No information available	

Flammability Limits in Air		
Upper flammability limits		No information available
Lower flammability limit		No information available
Vapor pressure		No information available
Vapor density		No information available
Relative density		No information available
Water solubility	Fully soluble (15°C)	No information available
Solubility(ies)		No information available
Partition coefficient		No information available
Autoignition temperature	>200°C	No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	1.02 g/cm ³ (23°C)
Bulk density	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

10.3. Possibility of hazardous reactions

Possibility of Hazardous Reactions

No hazardous reactions when stored and handled according to instructions.

10.4. Conditions to avoid

Avoid humidity.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No hazardous decomposition products if stored and handled as prescribed/indicated.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Product Information

This product has not been tested. The statement has been derived from products of a similar structure and composition.

- Inhalation** No data available.
- Eye contact** No data available.
- Skin Contact** Primary skin irritation/rabbit: non-irritant.
- Ingestion** No data available.

Unknown acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Propylene oxide	= 520 mg/kg (Rat)	= 1244 mg/kg (Rabbit)	= 0.948 mg/L (Rat) 4 h
Ethylene oxide	= 72 mg/kg (Rat)		= 800 ppm (Rat) 4 h

- Skin corrosion/irritation** No information available.
- Serious eye damage/eye irritation** No information available.
- Sensitization** No information available.
- Germ cell mutagenicity** No information available.
- Carcinogenicity** No information available.

Chemical Name	European Union
Propylene oxide	Carc. 1B
Ethylene oxide	Carc. 1B

- Reproductive toxicity** No information available.
- STOT - single exposure** No information available.
- STOT - repeated exposure** No information available.
- Aspiration hazard** No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Propylene oxide	240: 96 h Pseudokirchneriella subcapitata mg/L EC50	215: 96 h Lepomis macrochirus mg/L LC50 static	350: 48 h Daphnia magna mg/L EC50
Ethylene oxide		73 - 96: 96 h Pimephales promelas mg/L LC50	137 - 300: 48 h Daphnia magna mg/L LC50

12.2. Persistence and degradability

Elimination information. Test Methods: OECB 301B; ISO 9439; 92/69/EEC, C.4-C. Methods of analysis: CO2 formation relative to the theoretical value. Degree of elimination: 3- - 40%. Evaluation: Moderately/partially biodegradable. Chemical oxygen demand (COD): 2,010 mg/g.

12.3. Bioaccumulative potential

No information available.

Chemical Name	Partition coefficient
Propylene oxide	0.08
Ethylene oxide	-0.3

12.4. Mobility in soil

Mobility in soil
No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Uncontaminated pack scan be re-used. Packs that cannot be cleaned should be disposed of in the same manner as the contents.

Section 14: TRANSPORT INFORMATION

Note: Not classified as hazardous under transport regulations (ADR RID ADNR IMDG/GGSee ICAO/IATA

IMDG / IMO (Vessel)

- 14.1 UN/ID No Not regulated
- 14.2 Proper shipping name Not regulated
- 14.3 Hazard Class Not regulated
- 14.4 Packing Group Not regulated
- 14.5 Marine pollutant Not Applicable
- 14.6 Special Provisions None
- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

ADR / RID (Road and Rail)

- 14.1 UN/ID No Not regulated
- 14.2 Proper shipping name Not regulated
- 14.3 Hazard Class Not regulated
- 14.4 Packing Group Not regulated
- 14.5 Environmental hazard Not Applicable
- 14.6 Special Provisions None

ADR

- 14.1 UN/ID No Not regulated
- 14.2 Proper shipping name Not regulated
- 14.3 Hazard Class Not regulated
- 14.4 Packing Group Not regulated
- 14.5 Environmental hazard Not Applicable

14.6 Special Provisions None

IATA

14.1 UN/ID No Not regulated
 14.2 Proper shipping name Not regulated
 14.3 Hazard Class Not regulated
 14.4 Packing Group Not regulated
 14.5 Environmental hazard Not Applicable
 14.6 Special Provisions None

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemical Name	French RG number	Title
Ethylene oxide 75-21-8	RG 66	

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

International Inventories

TSCA -
 DSL/NDL -
 EINECS/ELINCS -
 ENCS -
 IECS -
 KECL -

 PICCS -
 AICS -

Legend

TSCA - (Toxic Substances Control Act)
 EINECS/ELINCS - (Europe)
 DSL/NDL - (Canada)
 PICCS
 ENCS
 IECS
 AICS
 KECL

15.2. Chemical safety assessment

No information available

Section 16: OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

No information available

Legend

SVHC: Substances of Very High Concern for Authorization

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Issue Date 11-Aug-2014

Revision Date 12-Jun-2015

Revision Summary by Pedro Perdomo.

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

End of Safety Data Sheet