

Safety Data Sheet(SDS)

Print Date : 20-03-2025

Last revised date : 03-02-2025

1. Identification

1) Product identifier : PEG-4000

2) Relevant identified uses of the substance or mixture and uses advised against

○ Relevant identified uses

1.Raw materials and intermediates

○ Restrictions on use

Use for recommended use only

Do not use it for weapons manufacturing and related purposes.

3) Supplier information

○ Seller

Company name : Lotte Chemical Corporation

Address : 05551 Lotte World Tower, 300, Olympic-ro, Songpa-gu, Seoul, 05551 Rep. of KOREA

Telephone number :

Basic Chemicals	+82-2-829-4114	Advanced Materials	+82-31-596-3114
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Emergency phone number

Yeosu Plant	+82-61-688-2100	Ulsan Plant	+82-52-278-3500
Daesan Plant	+82-41-689-5900	Yeosu Plant(Advanced Materials)	+82-61-689-1100

Fax number : +82-2-834-6070

2. Hazards identification

1) Hazard classification

- Not applicable

2) Allocation label elements

Hazard pictograms

- Not applicable

Signal word

- NONE

Hazard statements

- Not applicable

Precautionary statements

- Not applicable

3) Other hazards:

According to experience and information provided, this product does not affect harmful effects when using and handling it as a regulation.

3. Composition/Information on ingredients

Chemical name	Common name	CAS No.	Content(wt%)
α -Hydro- ω -hydroxypoly(oxy-1,2-ethanediyl)	Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydr oxy-Ethane-1,2-diol, ethox ylated	25322-68-3	100

4. First-aid measures

1) Following eye contact

- Call a physician immediately.

2) Following skin contact

- Get medical attention if irritation develops and persists.
- Remove contaminated clothing and shoes.

3) Following inhalation

- If symptoms persist, call a physician.
- Move to fresh air.

4) Following ingestion

- If accidentally swallowed obtain immediate medical attention.

5) Delayed and immediate effects and also chronic effects from short and long term exposure

No data available

6) Advice to physician

- In the case of accident or if you feel unwell, seek medical advice immediately.

5. Fire-Fighting measures

1) Suitable (and unsuitable) extinguishing media

○ Suitable extinguishing media

- Large fire: Water spray/fog, regular foam (Suitable extinguishing media).
- Small fire: Dry sand, dry chemical, alcohol-resistant foam, water spray, regular foam, CO2 (Suitable extinguishing media).
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

- Unsuitable extinguishing media
 - Do not use a solid water stream as it may scatter and spread fire.

2) Special hazards arising from the substance or mixture

- Pyrolytic product
 - No data available
- Risk of fire and explosion
 - Heating or fire can release toxic gas.
- Other
 - May cause toxic effects if inhaled.

3) Special protective equipment for firefighters

- In the event of fire, wear self-contained breathing apparatus.

6. Accident release measures

1) Personal precautions, protective equipment and emergency procedures

- Avoid dust formation.

2) Environmental precautions

- Try to prevent the material from entering drains or water courses.

3) Methods and materials for containment and cleaning up

- Keep in suitable, closed containers for disposal.
- Pick up and arrange disposal without creating dust.

7. Handling and storage

1) Precautions for safe handling

- For personal protection see section 8.
- Smoking, eating and drinking should be prohibited in the application area.

2) Conditions for safe storage (including any incompatibilities)

- Please note that materials and conditions to be avoided.
- Store in a dry place. Store in a closed container.

8. Exposure controls & personal protection

1) Chemical exposure limits, Biological exposure standard

- Contains no substances with occupational exposure limit values.

2) Appropriate engineering controls

- Ensure adequate ventilation and exhaust ventilation at the workplace.

3) Personal protective equipment

- Respiratory protection
 - If you have a direct contact or exposed to the material, wear the appropriate form of respiratory protection certified.

- Eye protection
 - If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.
- Hand protection
 - Wear chemical safety gloves.
- Skin protection
 - Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

9. Physical and chemical information

Property name	Values	Source
Appearance		
Physical state	Soild	
Color	White	
Odor	slight	
Odor threshold	No data available	
pH	58 - 64 °C	
Melting point/freezing point	No data available	
Initial boiling point and boiling range(°C)	> 300 °C	
Flash point(°C)	> 250 °C	
Evaporation rate	Not applicable	
Flammability(solid, gas)	No data available	
Upper/lower flammability or explosive limits	No data available	
Vapour pressure	< 0.01 hPa (20 °C)	
Solubility(ies)	Solubility	
Vapour density	> 1	
Relative density	No data available	
n-octanol/water partition coefficient	Not applicable	
Auto ignition temperature	No data available	
Decomposition temperature	No data available	
Viscosity(mm²/s, 40°C)	80 CPS (100 °C)	
Molecular weight(mass)	4,000 g/mol	
Specific gravity	No data available	

10. Stability and hazardous reactivity

- 1) Chemical stability and Possibility of hazardous reactions
 - No decomposition if stored and applied as directed.
 - Stable at normal ambient temperature and pressure.
- 2) Conditions to avoid
 - Follow precautionary advice and avoid incompatible materials and conditions
- 3) Incompatible materials
 - Combustible material
- 4) Hazardous decomposition products
 - This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regula

11. Toxicological information

- 1) Information on the likely routes of exposure
 - No data available
- 2) Delayed and immediate effects and also chronic effects from short and long term exposure
 - Acute toxicity
 - Acute toxicity(Oral)
 - No data available
 - Acute toxicity(Dermal)
 - No data available
 - Acute toxicity(Inhalation:Gases)
 - No data available
 - Acute toxicity(Inhalation:Vapours)
 - No data available
 - Acute toxicity(Inhalation:Dust/mist)
 - No data available
 - Skin corrosion/irritation
 - No data available
 - Serious eye damage/eye irritation
 - Not irritating
 - Respiratory sensitization
 - No data available
 - Skin sensitization

- No data available
- Carcinogenicity
 - No data available
- Germ cell mutagenicity
 - No data available
- Reproductive toxicity
 - No data available
- Specific target organ toxicity single exposure
 - No data available
- Specific target organ toxicity repeated exposure
 - No data available
- Aspiration hazard
 - No data available

12. Ecological information

1) Ecotoxicity

- Hazardous to the aquatic environment, short-term (acute)
No data available
- Hazardous to the aquatic environment, long-term (chronic)
No data available
- Fish
LC50 >20000 mg/l 96 hr *Oncorhynchus mykiss*
- Crustaceans
(19.0 ug/L 96 hours, LETH (mortality) pink shrimp (USA))
- Aquatic algae
(9.26 ug/L 24 weeks (residual) diatom)

2) Persistence and degradability

- Degradability
No data available
- Biodegradation
No data available

3) Bioaccumulative potential

- n-octanol water partition coefficient
(Not applicable)
- Bioconcentration factor(BCF)
(5800-12300 ug/L 28 days BCF (residual) Sheephead minnow 1.3ug/L)

4) Mobility in soil

No data available

5) Other adverse effects

No data available

13. Disposal considerations

1) Disposal methods

- Empty containers should be taken to an approved waste handling site for recycling or disposal.

2) Precautions (including disposal of contaminated container or package)

- Dispose of in accordance with local regulations.
- Send to a licensed waste management company.

14. Transport information

1) UN No. : Not applicable

2) Proper shipping name : Not applicable

3) Hazard class : Not applicable

4) Packing group : Not applicable

5) Marine pollutant : Not applicable

6) Special precautions for user related to transport or transportation measures :

Emergency measures in case of fire : Not applicable

Emergency measures in the effluent : Not applicable

- ADR

- Tunnel restriction code : Not applicable

- IMDG

- Marine pollutant : Not applicable

- Air transport(IATA)

- UN No. : Not applicable
- Proper shipping name : Not applicable
- Class or division : Not applicable
- Packing group : Not applicable

- Maritime transport in bulk according to IMO instruments :

Not applicable

15. Regulatory information

Australia Industrial Chemicals Notification and Assessment Act

- Inventory - Australia - Inventory of Industrial Chemicals (AIIC)
- α -Hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) : Present

China Inventory of Existing Chemical Substances (IECSC)

- Inventory - China - Inventory of Existing Chemical Substances (IECSC)
- α -Hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) : Present [21666]

92/32/EEC

- Not applicable

European Union Official Journal of the European Communities 15 June 1990 - Annex Based on Article 13 of Directive 67/548/EEC Amended by Directive 79/831/EEC

- Not applicable

Japan Law Concerning the Examination and Regulations of Manufacture, etc. of Chemical Substances

- Inventory - Japan - Existing and New Chemical Substances (ENCS)
- α -Hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) : (7)-129

New Zealand Environmental Protection Authority, Inventory of Chemicals

- Inventory - New Zealand - Inventory of Chemicals (NZIoC)
- α -Hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) : May be used as a single component chemical under an appropriate group standard

Turkey Regulation on Inventory and Control of Chemicals

- Not applicable

Taiwan Chemical Substance Inventory

- Inventory - Taiwan - Taiwan Chemical Substance Inventory (TCSI)
- α -Hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) : Present

U.S. Toxic Substances Control Act

- Inventory - United States - Section 8(b) Inventory (TSCA)
- α -Hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) : Present [XU] (ACTIVE)

Vietnam National Chemicals Inventory (NCI)

- Inventory - Vietnam - National Chemicals Inventory (NCI) (DRAFT)
- α -Hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) : Present 16107

Note

- Not applicable

16. Other information

1) Reference

NCIS, KOSHA, Montreal Protocol, ECHA, OECD SIDS, EU IUCLID, HSDB(PubChem), NITE, NTP, ACGIH, IARC, NIOSH, ChemIDplus, EPA, EPI Suite, INCHEM

2) Issue date : 26-12-2022

3) Revision date

- Revised date count : 2-3

- Last revised date : 03-02-2025

4) Other

ACGIH : American Conference of Governmental Industrial Hygienists

ADR : Agreement Concerning the International Carriage of Dangerous Goods by Road

ATE : The Acute Toxicity Estimate

ECHA : European Chemicals Agency

EPA : United States Environmental Protection Agency

EPI Suite : The Estimation Programs Interface for Windows

EU IUCLID : International Uniform Chemical Information Database

HSDB : Hazardous Substances Data Bank

IARC : International Agency for Research on Cancer

IATA : International Air Transport Association

IMDG : International Maritime Dangerous Goods Codes

INCHEM : Internationally Peer Reviewed Chemical Safety Information

M-Factor : The Multiplication Factor

NIOSH : National Institute of Occupational Safety and Health

NITE : National Institute of Technology and Evaluation(JAPAN)

NTP : National Toxicology Program

SCL : Specific Concentration Limit

OECD SIDS : Organization for Economic Co-operation and Development Screening Information Dataset

GHS/EN