

Safety Data Sheet(SDS)

According to Regulation (EU) No. 2020/878

Version : 2-3

Revision date : 01-06-2026

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product identifier : VPEG-4000

Other means of identification : No data

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

○ Relevant identified uses

1.Raw materials and intermediates

○ Uses advised against

Use for recommended use only

Do not use it for weapons manufacturing and related purposes.

1.3. Details of the supplier of the safety data sheet

○ Seller

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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Fax number : +82-2-834-6070

Email : www.lottechem.com(contact us)

1.4. Emergency telephone number

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

Opening hours : 09:00~18:00 (GMT+9)

Other comments(e.g. language(s) of the phone service) : English

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

- Not applicable

2.2. Label elements

Hazard pictograms

- Not applicable

Signal word

- NONE

Hazard statements

- Not applicable

Precautionary statements

- Not applicable

2.3. Other hazards

- No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance name	1) CAS No 2) EC No	Classification	1) Index number 2) SCL 3) M-Factor 4) ATE	Content(wt%)
Poly(oxy-1,2-ethanediyl), .alpha.-(2-methyl-2- propen-1-yl)-, .omega.-	1) 31497-33-3 2) -		1) - 2) - 3) - 4) -	100

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

○ 4.1.1. Eye contact

- Call a physician immediately.

○ 4.1.2. Skin contact

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

○ 4.1.3. Inhalation

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

○ 4.1.4. If swallowed

- If accidentally swallowed obtain immediate medical attention.

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

- No data available

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

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

SECTION 5: Firefighting measures

5.1. 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.

5.2. Special hazards arising from the substance or mixture

- Heating or fire can release toxic gas.
- May cause toxic effects if inhaled.

5.3. Advice for firefighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment
 - The wearing of suitable protective equipment to prevent any contamination of skin, eyes and personal clothing.
- Emergency procedures
 - Removal of ignition sources, provision of sufficient ventilation.

6.1.2. For emergency responders

- Wear protective equipment and keep unprotected persons away.
- Avoid dust formation.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

6.3.1. For containment

- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

6.3.2. For cleaning up

- Clear spills immediately.
- Don't use a brush or compressed air for cleaning surfaces or clothing.

6.3.3. Other information

- Any information on personal protection and disposal is given in sections 8 and 13.
- Keep in suitable, closed containers for disposal.

- Pick up and arrange disposal without creating dust.

6.4. Reference to other sections

- Section 8 (protective equipment), section 13 (disposal instructions)

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

7.2. 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.

7.3. Specific end use(s)

- See section 1 for recommended use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

- Contains no substances with occupational exposure limit values.

8.2. Exposure controls

8.2.1. Appropriate engineering controls

- Ensure adequate ventilation and exhaust ventilation at the workplace.

8.2.2. Individual protection measures, such as personal protective equipment

- Eye/face protection
 - If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.
- Skin protection
 - (i) Hand protection
 - Wear chemical safety gloves.
 - (ii) Other
 - No data available
- Respiratory protection
 - If you have a direct contact or exposed to the material, wear the appropriate form of respiratory protection certified.
- Thermal hazards
 - Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

8.2.3. Environmental exposure controls

- Ensure not to cause environmental pollution by discharging into rivers or other waterways.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Property name	Values	Source
Physical state	Solid	
Colour	white	
Odour	slight	
Melting point/freezing point	No data available	
Initial boiling point and boiling range(°C)	No data available	
Flammability(solid, gas)	No data available	
Upper/lower flammability or explosive limits	No data available	
Flash point(°C)	> 250 °C	
Auto ignition temperature	No data available	
Decomposition temperature	No data available	
pH	5.5 - 7.5	
Kinematic viscosity(mm ² /s, 40°C)	No data available	
Solubility	Solubility	
Partition coefficient(n-octanol/water)	Not applicable	
Vapour pressure	Not applicable	
Density/Relative density	No data available	
Relative Vapour density	Not applicable	
Particle characteristics	No data available	
Specific gravity	No data available	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

- No data available

9.2.2. Other safety characteristics

- No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

- No decomposition if stored and applied as directed.
- Stable at normal ambient temperature and pressure.

10.2. Chemical stability

- No decomposition if stored and applied as directed.
- Stable at normal ambient temperature and pressure.

10.3. Possibility of hazardous reactions

- No decomposition if stored and applied as directed.
- Stable at normal ambient temperature and pressure.

10.4. Conditions to avoid

- Follow precautionary advice and avoid incompatible materials and conditions

10.5. Incompatible materials

- Combustible material

10.6. Hazardous decomposition products

- This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regula

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

- 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
 - No data available
- 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

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

- Poly(oxy-1,2-ethanediyl), .alpha.-(2-methyl-2-propen-1-yl)-, .omega.-hydroxy-
Not applicable

11.2.2. Other information

- Poly(oxy-1,2-ethanediyl), .alpha.-(2-methyl-2-propen-1-yl)-, .omega.-hydroxy-
No other hazards have been identified

SECTION 12: Ecological information

12.1. Toxicity

- Fish
No data available
- Crustaceans
No data available
- Aquatic algae
No data available

12.2. Persistence and degradability

- Degradability
No data available
- Biodegradation
No data available

12.3. Bioaccumulative potential

- n-octanol water partition coefficient
No data available
- Bioconcentration factor(BCF)
No data available

12.4. Mobility in soil

No data available

12.5. Result of PBT and vPvB assessment

Not applicable

12.6. Endocrine disrupting properties

Not applicable

12.7. Other adverse effects

Not applicable

SECTION 13: Disposal considerations

13.1. Waste treatment methods

13.1.1. Product / Packaging disposal

- Empty containers should be taken to an approved waste handling site for recycling or disposal.
- o Waste codes / waste designations according to LoW
 - No data available

13.1.2. Waste treatment-relevant information

- Disposal according to local regulations.

13.1.3. Sewage disposal-relevant information

- Disposal according to local regulations and avoid release to the environment.

13.1.4. Other disposal recommendations

- No data available

SECTION 14: Transport information

14.1. UN number or ID number : Not applicable

14.2. UN proper shipping name : Not applicable

14.3. Transport hazard class(es) : Not applicable

14.4. Packing group : Not applicable

14.5. Environmental hazards : No

14.6. Special precautions for user :

Emergency measures in case of fire : Not applicable

Emergency measures in the effluent : Not applicable

14.7. Maritime transport in bulk according to IMO instruments :

Not applicable

- ADR

· Tunnel restriction code : Not applicable

- IMDG

· Marine pollutant : No

- Air transport(IATA)

· UN No. : Not applicable

· Proper shipping name : Not applicable

· Class or division : Not applicable

· Packing group : Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU regulations

- EU - REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances
 - Not applicable
- EU - REACH (1907/2006) - Annex XIV - Substances Subject to Authorization
 - Not applicable

15.1.2. Other EU regulations

- EU - Persistent Organic Pollutants (POPs) (2019/1021) - Annex III - Substances Subject to Release Reduction Provisions
 - Not applicable
- EU - Persistent Organic Pollutants (POPs) (2019/1021) - Annex I - Substances Subject to Prohibitions
 - Not applicable
- EU - Persistent Organic Pollutants (POPs) (2019/1021) - Annex IV - Waste Management - Concentration Limits
 - Not applicable
- EU - Persistent Organic Pollutants (POPs) (2019/1021) - Annex V - Waste Management - Maximum Concentration Limits
 - Not applicable
- EU - Paints, Varnishes, Vehicle Refinishing Products (2004/42/CE) - Annex II A - WB Phase 1 - VOCs
 - Not applicable
- EU - Paints, Varnishes, Vehicle Refinishing Products (2004/42/CE) - Annex II A - WB Phase 2 - VOCs
 - Not applicable
- EU - Paints, Varnishes, Vehicle Refinishing Products (2004/42/CE) - Annex II B - Vehicles - VOCs
 - Not applicable
- EU - Paints, Varnishes, Vehicle Refinishing Products (2004/42/CE) - Annex II A - SB Phase 1 - VOCs
 - Not applicable
- EU - Paints, Varnishes, Vehicle Refinishing Products (2004/42/CE) - Annex II A - SB Phase 2 - VOCs
 - Not applicable
- EU - Seveso III Directive (2012/18/EU) - Qualifying Quantities of Dangerous Substances - Lower-Tier Requirements
 - Not applicable
- EU - Seveso III Directive (2012/18/EU) - Qualifying Quantities of Dangerous Substances - Higher-Tier Requirements
 - Not applicable
- EU - Export and Import Restrictions (649/2012) - Chemicals Subject to Export Notification Procedure
 - Not applicable

- EU - Export and Import Restrictions (649/2012) - Chemicals and Articles Subject to Export Ban
 - Not applicable
- EU - Export and Import Restrictions (649/2012) - Chemicals Subject to the PIC Procedure under the Rotterdam Convention
 - Not applicable
- EU - Export and Import Restrictions (649/2012) - Chemicals Qualifying for PIC Notification
 - Not applicable

15.2. Chemical safety assessment

- A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

16.1. Key literature references and sources for data

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

16.2. Issuing date : 28-04-2025

16.3. Indication of changes

- Revision number : 2-3
- Revision date : 01-06-2026

16.4. Abbreviations and acronyms

Not applicable

For explanation of abbreviations see section 16.

- This substance/mixture contain(s) only ingredients which have been registered, or are exempt from registration, according to Regulation (EC) No. 1907/2006 (REACH).

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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