

Safety Data Sheet(SDS)

Revision date : 01-06-2026

1. Identification

- 1) Product identifier : UL614
- 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 Daesan Petrochem Corporation
 - Address : 82 Dokgot 1-ro, Daesan-eup, Seosan-si, Chungcheongnam-do
 - Telephone number : +82-41-689-5114
 - Emergency phone number : (Control Room) +82-41-689-5119
 - Fax number : +82-41-689-5985

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%)
1-Butene, polymer with ethene , Ethylene,polymer with 1-butene, Ethylene/1-butene copolymer	1-Butene, polymer with ethene , Ethylene,polymer with 1-butene, Ethylene/1-butene copolymer	25087-34-7	>=95 ~ <=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	solid	
Color	No data available	
Odor	No data available	
Odor threshold	No data available	
pH	Not applicable	
Melting point/freezing point	100 °C	
Initial boiling point and boiling range(°C)	Not applicable	
Flash point(°C)	No data available	
Evaporation rate	Not applicable	
Flammability(solid, gas)	No data available	
Upper/lower flammability or explosive limits	No data available	
Vapour pressure	Not applicable	
Solubility(ies)	Insolubility	
Vapour density	Not applicable	
Relative density	No data available	
n-octanol/water partition coefficient	Not applicable	
Auto ignition temperature	340 °C	
Decomposition temperature	No data available	
Viscosity(mm²/s, 40°C)	No data available	
Molecular weight(mass)	No data available	
Density	0.924 g/cm³	
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) LD50 (Rat) : > 8,000 mg/kg
 - No data available
 - Acute toxicity(Dermal) PRODUCT : Not classified
 - No data available
 - Acute toxicity(Inhalation:Gases) PRODUCT : Not classified
 - No data available
 - Acute toxicity(Inhalation:Vapours) PRODUCT : Not classified
 - No data available
 - Acute toxicity(Inhalation:Dust/mist) PRODUCT : Not classified
 - No data available
 - Skin corrosion/irritation PRODUCT : Not classified
 - No data available
 - Serious eye damage/eye irritation PRODUCT : Not classified
 - No data available
 - Respiratory sensitization PRODUCT : Not classified
 - No data available
 - Skin sensitization PRODUCT : Not classified

- No data available
- Carcinogenicity PRODUCT : Not classified
 - No data available
- Germ cell mutagenicity PRODUCT : Not classified
 - No data available
- Reproductive toxicity PRODUCT : Not classified
 - No data available
- Specific target organ toxicity single exposure PRODUCT : Not classified
 - No data available
- Specific target organ toxicity repeated exposure PRODUCT : Not classified
 - No data available
- Aspiration hazard PRODUCT : Not classified
 - No data available

12. Ecological information

- 1) Ecotoxicity
 - No data available
- 2) Persistence and degradability
 - No data available
- 3) Bioaccumulative potential
 - n-octanol water partition coefficient
 - 1-Butene, polymer with ethene , Ethylene,polymer with 1-butene, Ethylene/1-butene copolymer : (None)
- 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)
 - 1-Butene, polymer with ethene , Ethylene,polymer with 1-butene, Ethylene/1-butene copolymer : Present

China Inventory of Existing Chemical Substances (IECSC)

- Inventory - China - Inventory of Existing Chemical Substances (IECSC)
 - 1-Butene, polymer with ethene , Ethylene,polymer with 1-butene, Ethylene/1-butene copolymer : Present
- [06470]

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 - ISHL Ordinance Hazardous Substances Whose Names Are to be Indicated on the Label

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

- Inventory - Japan - Existing and New Chemical Substances (ENCS)

- 1-Butene, polymer with ethene , Ethylene,polymer with 1-butene, Ethylene/1-butene copolymer : (6)-18

New Zealand Environmental Protection Authority, Inventory of Chemicals

- Inventory - New Zealand - Inventory of Chemicals (NZIoC)

- 1-Butene, polymer with ethene , Ethylene,polymer with 1-butene, Ethylene/1-butene copolymer : 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)

- 1-Butene, polymer with ethene , Ethylene,polymer with 1-butene, Ethylene/1-butene copolymer : Present

U.S. Toxic Substances Control Act

Vietnam National Chemicals Inventory (NCI)

- Inventory - Vietnam - National Chemicals Inventory (NCI) (DRAFT)

- 1-Butene, polymer with ethene , Ethylene,polymer with 1-butene, Ethylene/1-butene copolymer : Present 15969

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 : 3-1

- Last revised date : 01-06-2026

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