

Safety Data Sheet(SDS)

Revision date : 01-06-2026

1. Identification

- 1) Product identifier : LLDPE UL312A
- 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
 - Specific target organ toxicity single exposure Category 3(Respiratory tract irritation)
- 2) Allocation label elements
 - Hazard pictograms


 - Signal word
 - WARNING
 - Hazard statements
 - H335 May cause respiratory irritation

Precautionary statements

- Prevention

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a wellventilated area.

- Response

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Discomfort call a POISON CENTER / toxins center / physician if you feel unwell.

- Storage

P403+P233 Store in a wellventilated place. Keep container tightly closed.

P405 Store locked up.

- Disposal

P501 Discard the contents/containers in accordance with the laws and laws related to waste.

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%)
Polyethylene	Polyethylene, Ethene polymer, Ethene, homopolymer	9002-88-4	>=95 ~ <=100

4. First-aid measures

1) Following eye contact

In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

Seek immediate medical assistance.

2) Following skin contact

For minor skin contact, avoid spreading material on unaffected skin.

In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

Remove and isolate contaminated clothing and shoes.

Seek immediate medical assistance.

3) Following inhalation

Administer oxygen if breathing is difficult.

Give artificial respiration if victim is not breathing.

If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.

Keep victim warm and quiet.

Move to fresh air.

4) Following ingestion

Seek immediate medical assistance.

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

May cause respiratory irritation

6) Advice to physician

Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Fire-Fighting measures

1) Suitable (and unsuitable) extinguishing media

○ Suitable extinguishing media

CO2.

Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

Dry chemical.

Use dry sand or earth to smother fire.

Water spray.

○ Unsuitable extinguishing media

Direct water.

2) Special hazards arising from the substance or mixture

- Pyrolytic product

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

- Risk of fire and explosion

Some may burn but none ignite readily.

Containers may explode when heated.

- Other

May cause toxic effects if inhaled.

3) Special protective equipment for firefighters

Dike fire-control water for later disposal; do not scatter the material.

Evacuate area and fight fire from a safe distance.

Fire involving Tanks: ALWAYS stay away from tanks engulfed in fire.

Fire involving Tanks: Cool containers with flooding quantities of water until well after fire is out.

Fire involving Tanks: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.

Fire involving Tanks: For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Fire involving Tanks: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.

Move containers from fire area if you can do it without risk.

Substance may be transported in a molten form.

6. Accident release measures

1) Personal precautions, protective equipment and emergency procedures

Clean up spills immediately, observing precautions in Protective Equipment section.

Cover with plastic sheet to prevent spreading.

Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Please note that materials and conditions to be avoided.

Stop leak if you can do it without risk.

2) Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas.

3) Methods and materials for containment and cleaning up

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

Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container.

Absorb the liquid and scrub the area with detergent and water.

7. Handling and storage

1) Precautions for safe handling

Avoid breathing vapors from heated material.

Do not enter storage area unless adequately ventilated.

Follow all MSDS/label precautions even after container is emptied because they may retain product residues.

Handling refer to engineering control/personal protection section.

Loosen closure cautiously before opening.

Please note that materials and conditions to be avoided.

Use care in handling/storage.

Use only in a well-ventilated area.

2) Conditions for safe storage (including any incompatibilities)

Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioner, or properly disposed of.

8. Exposure controls & personal protection

1) Chemical exposure limits, Biological exposure standard

- Contains no substances with occupational exposure limit values.

2) Appropriate engineering controls

If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

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	Odorless	
Odor threshold	No data available	
pH	Not applicable	
Melting point/freezing point	85 - 140 °C	
Initial boiling point and boiling range(°C)	Not applicable	
Flash point(°C)	> 221 °C	
Evaporation rate	Not applicable	
Flammability(solid, gas)	No data available	
Upper/lower flammability or explosive limits	Not applicable	
Vapour pressure	Not applicable	
Solubility(ies)	Insolubility	
Vapour density	Not applicable	

Relative density	No data available	
n-octanol/water partition coefficient	No data available	
Auto ignition temperature	> 300 °C	
Decomposition temperature	No data available	
Viscosity(mm ² /s, 40°C)	No data available	
Molecular weight(mass)	> 1,000 g/mol	
Density	0.91 - 0.97 g/cm ³	
Specific gravity	0.91 - 0.97	

10. Stability and hazardous reactivity

1) Chemical stability and Possibility of hazardous reactions

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

Some may burn but none ignite readily.

2) Conditions to avoid

Ignition source(heat, spark, flame, etc.).

3) Incompatible materials

Combustibles, reducing material.

4) Hazardous decomposition products

Corrosive/toxic fume.

Irritating, corrosive and/or toxic gas.

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
 - Polyethylene
 - : LD50> 8000 mg / kg experimental species: Rat
- 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) LC50 (Rat) : 75.5 mg/l (Exposure time : 30 min)
 - Polyethylene
 - : LC50 75.5 mg / l 30 min experimental species: Rat

- 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
 - Polyethylene

: 3 (IARC)

- Germ cell mutagenicity PRODUCT : Not classified
 - No data available
- Reproductive toxicity PRODUCT : Not classified
 - No data available
- Specific target organ toxicity single exposure PRODUCT : Category 3(Respiratory tract irritation)
 - Polyethylene
 - : If breathing dust causes inflammation of the lungs in laboratory animals (rats).
- 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

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

2) Persistence and degradability

- Degradability
 - No data available
- Biodegradation
 - No data available

3) Bioaccumulative potential

- n-octanol water partition coefficient
 - No data available

- Bioconcentration factor(BCF)

No data available

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 of 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 : No

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 : No

- Air transport(IATA)

· UN No. : Not applicable

· Proper shipping name : Not applicable

· Class or division : Not applicable

· Packing group : Not applicable

15. Regulatory information

Australia Industrial Chemicals Notification and Assessment Act

- Inventory - Australia - Inventory of Industrial Chemicals (AIIC)
- Polyethylene : Present

China Inventory of Existing Chemical Substances (IECSC)

- Inventory - China - Inventory of Existing Chemical Substances (IECSC)
- Polyethylene : Present [05721]

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 Enforcement Order Notifiable Substances

Japan - ISHL Ordinance Notifiable Substances

Japan - ISHL Enforcement Order Hazardous Substances Whose Names Are to be Indicated on the Label

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)
- Polyethylene : (6)-1

New Zealand Environmental Protection Authority, Inventory of Chemicals

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

- Polyethylene : Present

U.S. Toxic Substances Control Act

Vietnam National Chemicals Inventory (NCI)

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

- Polyethylene : Present 12086

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 : 1-6-2026

3) Revision date

- Revised date count : 3-1

- Last revised date : 1-6-2026

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



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