

## UF315

Application : Blown Film(industrial film, blend with LDPE)

Characteristics : Good mechanical properties

Good processability, Butene copolymer

Good openness (A/B Agent:Silica).

Additives : Medium slip, Medium antiblocking agent

Resin Properties	Unit	ASTM	Values
Melt index	g/10min	D 1238	1.1
Density	g/cm <sup>3</sup>	D 1505	0.920
MWD			Narrow

Blown Film Properties(40 $\mu$ m)	Unit	ASTM	Values
Ultimate Tensile Strength	kg/cm <sup>2</sup>	MD D 882	430
		TD D 882	390
Ultimate Elongation	%	MD D 882	740
		TD D 882	760
Elmendorf Tear Strength	g/ $\mu$ m	MD D 1922	6.0
		TD D 1922	11.0
Dart Impact Strength	g	D 1709	170
Haze	%	D 1003	12
Gloss (45.°)	-	D 2457	72

◆ Processing condition :  $\Phi$ 50mm LLDPE BLOWN FILM EXTRUDER

Temperature : 200°C, Die Gap 2.2mm, BUR 2.1, FLH 32cm


◆ The properties data in this table are typical values, and not guaranteed specification.

## LLDPE[UF315]

- **Attributes :** Processability, Mechanical Properties
- **Applications :** General, Industrial Packaging, Shopping Bag (Mid Slipperiness)
- **Certification :** -

- **Properties DATA SHEET**

Properties	Test Method	Unit	Properties
Melt Flow Rate(MFR)	D1238	g/10min	1.0
Density	D-505	g/cm <sup>3</sup>	0.920
Softening Point	D1525	°C	103
Film Thickness	HPC	μm	40
Haze	D1003	%	17
Gloss(45°C)	D2457	-	72
Drop Impact Strength	D2457	g	170
Tensile Strength at Break MD	D882	kg/cm <sup>2</sup>	430
Tensile Strength at Break TD	D882	kg/cm <sup>2</sup>	390
Tensile Strength at Break MD	D882	kg/cm <sup>2</sup>	-
Tensile Strength at Break TD	D882	kg/cm <sup>2</sup>	-
Elongation at Break MD	D-882	%	740
Elongation at Break TD	D-882	%	760
EL Tear Strength MD	D1922	g/μm	6
EL Tear Strength TD	D1922	g/μm	11
Melt Flow Rate(MFR)	D1238	g/10min	-
Density	D1505	g/cm <sup>3</sup>	-
Melting Point	HPC	°C	-
Softening Point	D1525	°C	-
Tensile Strength Yield Point	D638	kg/cm <sup>2</sup>	-
Tensile Strength Break Point	D638	kg/cm <sup>2</sup>	-
Elongation at Break	D638	%	-
Hardness	D2240	D SCALE	-
Flexural Modulus of			

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## SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

- 1) Product Name: Linear Low Density Polyethylene, GRADE: UF315
- 2) Company Identification
  - ① Prepared by: Honam Petrochemical Corp. Daesan Plant
  - ② Address: 634 Dokgot-Ri, Daesan-Eup, Seosan-city, Chungnam, Korea
  - ③ Telephone & Fax: Tel) 82-61-689-5830, Fax) 82-61-689-5993
  - ④ Revision Date: 2009.02.01

## SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	Ethylene Polymer	Additives
CAS No	25087-34-7	-
Composition (%)	Min 99	Max 1

## SECTION 3. HAZARDS IDENTIFICATION


- 1) Appearance: White
- 2) Eye Contact: Product fines can cause mechanical irritation.
- 3) Skin Contact: Product is unlikely to cause irritation.
- 4) Inhalation: Product fines may cause mechanical irritation.
- 5) Ingestion: Product is practically non-toxic.
- 6) Signs and Symptoms: Irritation as noted above.

## SECTION 4. FIRST AID MEASURES

- 1) Eye Contact: Flush eyes with water if irritation occurs.
- 2) Skin Contact: Flush skin with plenty of soap and water for at least 15 minutes, while removing contaminated clothing and shoes.
- 3) Ingestion: Do not induce vomiting. Allow the victim to rinse his mouth then to drink 2-4 cupfuls of water and seek medical advice.
- 4) Inhalation: Remove from exposure to fresh air immediately.
- 5) Notes to physician: Treat symptomatically and supportively.

## SECTION 5. FIRE-FIGHTING MEASURES

- 1) Flash Point and Method: Not Applicable

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- 2) Extinguishing media: Use water fog, foam, dry chemical or CO2
- 3) Autoignition temperature: Not Applicable
- 4) Special fire fighting procedures and precautions: Material will not burn unless preheated. Do not enter confined fire space without full bunker gear(helmet with face shield, bunker coats, gloves and rubber boots). Cool fire exposed containers with water.
- 5) Unusual fire and explosion hazards: Treat as a solid that can burn. Molded parts generally burn slowly with a low smoke density and flaming drips. Under certain conditions can burn with a high smoke density.

## SECTION 6. ACCIDENTAL RELEASE MEASURES


- 1) General information: Use proper personal protective equipment
- 2) Spill/leaks: Clean up spills immediately. Sweep up, then place into a suitable container for disposal.

## SECTION 7. HANDLING AND STORAGE

- 1) Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.
- 2) Storage: Store in a cool, dry place. Keep container closed when not in use.

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- 1) Engineering controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.
- 2) Personal protective equipment
  - ① Eye: Wear safety glasses and chemical goggles if splashing is possible.
  - ② Skin: Wear appropriate protective gloves and clothing to prevent skin exposure.
  - ③ Clothing: Wear appropriate protective clothing to minimize contact with skin.
  - ④ Respirators: Use approved supplier air respiratory protection.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- 1) Appearance: White
- 2) Odor: Essentially odorless pellet.
- 3) pH: Not applicable
- 4) Solubility: (In Water) Insoluble  
(Other solvent) Soluble in Tetrahydronaphthalene,  
Tetrachloroethane etc.
- 5) Viscosity: Not applicable
- 6) Melt point: 100 ~ 130 °C
- 7) Boiling point: Not applicable
- 8) Decomposition temperature: Not applicable
- 9) Vapor pressure: Not applicable
- 10) Vapor density (air=1): Not applicable
- 11) Evaporation rate: Not applicable
- 12) Specific gravity (H2O=1): 0.910 ~ 0.945
- 13) Molecular weight: >10,000

## SECTION 10. STABILITY AND REACTIVITY


- 1) Chemical stability: Stable under normal temperature and pressure
- 2) Conditions to avoid: Incompatible materials, strong oxidants
- 3) Incompatibilities with other materials: Strong oxidizing agents
- 4) Hazardous decomposition product: Carbon monoxide, irritating and toxic fumes  
and gases, carbon dioxide

## SECTION 11. TOXICOLOGICAL INFORMATION

- 1) LD50: 3200 mg/kg Mouse-in throat
- 2) Inhalation: Product fines may cause mechanical irritation.
- 3) Skin contact: Product is unlikely to cause irritation.
- 4) Eye contact: Product fines can cause mechanical irritation.
- 5) Ingestion: Product is practically non-toxic.

## SECTION 12. ECOLOGICAL INFORMATION

- 1) Spill or leak procedures: Shovel and sweep up or use industrial vacuum cleaner.

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Avoid generation dust clouds. Put into containers for reclaiming or disposal.

2) Ecotoxicity: Not applicable

### SECTION 13. DISPOSAL CONSIDERATIONS

1) Waste disposal method: Place contaminated material in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

2) Environmental hazards: Not applicable

### SECTION 14. TRANSPORTATION REQUIREMENTS

Not applicable

### SECTION 15. REGULATORY INFORMATION

1) Korea: Not applicable

2) US Federal: The components of this product are listed on the SARA and TSCA inventory of chemical substances.

### SECTION 16. ADDITIONAL INFORMATION

The information contained herein is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Therefore, vendee assumes the risk in his use of the material.