

LDPE 312E

Low Density Polyethylene Resin

Overview LDPE 312E is a fractional melt index low density polyethylene resin, containing slip and antiblock additives. LDPE 312E has been specially designed for superior processability on blown films lines leading to significant output improvements. The resin offers additionally excellent draw down. It can be used pure or in blends with LLDPE resins.

Main Characteristics and Applications:

- Lamination films, Collation shrink, Shopping bags, Garbage bags.
- Health & hygiene films, Food packaging, Collation shrink, Agricultural films.
- Excellent processability and draw down
- Good physical properties in blends with LLDPE
- Can be readily extruded using conventional blown films techniques at melt temperatures between 160 and 195°C

Complies with:

- U.S FDA 21 CFR 177.1520 (c) 2.2
- EU, No 10/2011
- U.S. FDA-DMF
- Canadian HPFB No Objection

Consult the regulations for complete details.

Additive	- Antiblock: 900 ppm	- Slip: 385 ppm	- Processing Aid: No
Physical Properties	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.923 g/cm ³	0.923 g/cm ³	ASTM D792
Melt Index (190 °C/2.16 kg)	0.75 g/10 min	0.75 g/10 min	ASTM D1238
Mechanical Properties	Nominal Value (English)	Nominal Value (SI)	Test Method
Coefficient of Friction	0.15	0.15	ASTM D1894
Film Properties	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness – Tested	2.0 mil	50 µm	
Film Puncture Energy	15.9 in.lb	1.80 J	Dow Method
Film Puncture Force	11.2 lbf	50.0 N	Dow Method
Film Puncture Resistance	48.3 ft/lb/in ³	4.00 J/cm ³	Dow Method
Secant Modulus			ASTM D882
2% Secant, MD	25400 psi	175 MPa	
2% Secant, TD	26800 psi	185 MPa	
Tensile Strength			ASTM D882
Yield : MD	1600 psi	11.0 MPa	
Yield : TD	1600 psi	11.0 MPa	
Break : MD	3630 psi	25.0 MPa	
Break : TD	3340 psi	23.0 MPa	
Tensile Elongation			ASTM D882
Break : MD	390 %	390 %	
Break : TD	570 %	570 %	
Dart Drop Impact	170 g	170 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD	350 g	350 g	
TD	260 g	260 g	
Optical Properties	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°)	58	58	ASTM D2457
Haze	9.2 %	9.2 %	ASTM D1003

Extrusion	Nominal Value (English)	Nominal Value (SI)
Melt Temperature	320 – 383 °F	160 - 196 °C

Extrusion Notes

Fabrication Conditions for Blown Film:

- Screw Type: Universal
- Output: 25 kg/hr
- Die Diameter: 150 mm
- Blow-Up Ratio: 2.5:1
- Screw Speed: 77 rpm

Notes

These are typical properties only and are not to be construed as specifications. User should confirm results by their own tests.



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