



AGILITY™ 1001 Performance LDPE

Low Density Polyethylene Resin

Overview

AGILITY™ 1001 Performance LDPE is a high pressure LDPE resin designed specifically to run at faster output rates on blown film lines in blends with LLDPE resins while maintaining bubble stability.

Main Characteristics:

- Faster processing LDPE resin
- Designed for higher output rates in blends with LLDPE resins at 10-20% loading
- Optimized molecular structure gives improved optics in blends with LLDPE resins

Complies with:

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

Consult the regulations for complete details

Additive

- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.920 g/cm ³	0.920 g/cm ³	ASTM D792
Base Density ¹	0.920 g/cm ³	0.920 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	0.65 g/10 min	0.65 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	1 mil	25 µm	
Film Puncture Energy	9.00 in·lb	1.02 J	
Film Puncture Force	7.00 lbf	31.1 N	
Film Puncture Resistance	60.0 ft·lb/in ³	4.96 J/cm ³	Dow Method
Film Toughness			ASTM D882
MD	320 ft·lb/in ³	26.5 J/cm ³	
TD	650 ft·lb/in ³	53.8 J/cm ³	
Secant Modulus			ASTM D882
1% Secant, MD	34200 psi	236 MPa	
2% Secant, MD	31400 psi	216 MPa	
1% Secant, TD	43100 psi	297 MPa	
2% Secant, TD	37200 psi	256 MPa	
Tensile Strength			ASTM D882
MD : Yield	4000 psi	27.6 MPa	
TD : Yield	1850 psi	12.8 MPa	
MD : Break	4150 psi	28.6 MPa	
TD : Break	2450 psi	16.9 MPa	
Tensile Elongation			ASTM D882
MD : Break	120 %	120 %	
TD : Break	440 %	440 %	
Dart Drop Impact	70 g	70 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD	270 g	270 g	
TD	95 g	95 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	201 °F	94.0 °C	ASTM D1525
Melting Temperature (DSC)	228 °F	109 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°)	54	54	ASTM D2457

Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Haze	9.00 %	9.00 %	ASTM D1003

Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 3.5 in.
- Screw Type: DSB II
- Die Gap: 70 mil
- Melt Temperature: 398°F
- Output: 12 lb/hr/in. of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5 to 1
- Screw Speed: 56 rpm
- Frost Line Height: 37 in.

Notes

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

¹ Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.

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