



AGILITY™ 1021 Performance LDPE

Low Density Polyethylene Resin

Overview

AGILITY™ 1021 Performance LDPE is a high pressure LDPE resin designed to run at faster output rates on blown film lines in LLDPE rich blends while maintaining optics.

Main Characteristics:

- Faster processing LDPE resin
- Designed for higher output rates in blends with LLDPE resins at 20-30% 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	0.919 g/cm ³	0.919 g/cm ³	ASTM D792
Base Density ¹	0.919 g/cm ³	0.919 g/cm ³	Dow Method
Melt Mass-Flow Rate (190°C/2.16 kg)	1.9 g/10 min	1.9 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	2.0 mil	51 µm	
Film Puncture Resistance (2.0 mil (51 µm))	58.9 ft-lb/in ³	4.87 J/cm ³	Dow Method
Film Toughness			ASTM D882
MD : 2.0 mil (51 µm)	553 ft-lb/in ³	45.8 J/cm ³	
TD : 2.0 mil (51 µm)	727 ft-lb/in ³	60.1 J/cm ³	
Secant Modulus			ASTM D882
2% Secant, MD : 2.0 mil (51 µm)	24400 psi	168 MPa	
2% Secant, TD : 2.0 mil (51 µm)	26800 psi	185 MPa	
Tensile Strength			ASTM D882
MD : Yield, 2.0 mil (51 µm)	1580 psi	10.9 MPa	
TD : Yield, 2.0 mil (51 µm)	1560 psi	10.8 MPa	
MD : Break, 2.0 mil (51 µm)	3130 psi	21.6 MPa	
TD : Break, 2.0 mil (51 µm)	2380 psi	16.4 MPa	
Tensile Elongation			ASTM D882
MD : Break, 2.0 mil (51 µm)	260 %	260 %	
TD : Break, 2.0 mil (51 µm)	540 %	540 %	
Dart Drop Impact (2.0 mil (51 µm))	100 g	100 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD : 2.0 mil (51 µm)	460 g	460 g	
TD : 2.0 mil (51 µm)	250 g	250 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Melting Temperature (DSC)	226 °F	108 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°, 2.00 mil (50.8 µm))	60	60	ASTM D2457
Haze (2.00 mil (50.8 µm))	9.0 %	9.0 %	ASTM D1003



Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 3.5 in.; 30:1 ratio L/D
- Screw Type: DSB II
- Die Gap: 70 mil (1.78 mm)
- Melt Temperature: 404°F (206°C)
- Output: 16 lb/hr/in. of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5 to 1
- Screw Speed: 50 rpm
- Frost Line Height: 42 in. (1067 mm)
- IBC

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.

