



AGILITY™ 1002 Performance LDPE

The Dow Chemical Company - Low Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

AGILITY™ 1002 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. This resin includes 2,000 ppm of anti-block to minimize blocking issues.

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

General

Material Status	• Commercial: Active		
Availability	• Latin America	• North America	
Additive	• Antiblock: 2000 ppm	• Processing Aid: No	• Slip: No
Agency Ratings	• EU No 10/2011	• FDA 21 CFR 177.1520(c) 2.2	• HPFB (Canada) No Objection
Forms	• Pellets		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.923		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	0.65	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	1	mil	
Film Puncture Energy	5.00	in·lb	
Film Puncture Force	5.00	lbf	
Film Puncture Resistance	30.0	ft·lb/in ³	Internal Method
Film Toughness - MD	320	ft·lb/in ³	ASTM D882
Film Toughness - TD	620	ft·lb/in ³	ASTM D882
Secant Modulus			ASTM D882
1% Secant, MD	35300	psi	
2% Secant, MD	32100	psi	
Secant Modulus			ASTM D882
1% Secant, TD	43600	psi	
2% Secant, TD	37000	psi	
Tensile Strength - MD (Yield)	4100	psi	ASTM D882
Tensile Strength - TD (Yield)	1880	psi	ASTM D882
Tensile Strength - MD (Break)	4300	psi	ASTM D882
Tensile Strength - TD (Break)	2350	psi	ASTM D882
Tensile Elongation - MD (Break)	110	%	ASTM D882
Tensile Elongation - TD (Break)	430	%	ASTM D882

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Films	Nominal Value	Unit	Test Method
Dart Drop Impact	75	g	ASTM D1709A
Elmendorf Tear Strength - MD	290	g	ASTM D1922
Elmendorf Tear Strength - TD	95	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	201	°F	ASTM D1525
Melting Temperature (DSC)	228	°F	Internal Method
Optical	Nominal Value	Unit	Test Method
Gloss (45°)	51		ASTM D2457
Haze	10.0	%	ASTM D1003

Processing Information

Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Type: DSB II
- Die Gap: 70 mil
- Melt Temperature: 398°F
- Output: 12 lb/hr/in. of die circumference
- Screw size: 3.5 in.
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5 to 1
- Screw Speed: 55 rpm
- Frost Line Height: 37 in.

Notes

¹ Typical properties: these are not to be construed as specifications.