

AGILITY™ 1001 Performance LDPE

Low Density Polyethylene Resin

The Dow Chemical Company

Message:

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

General Information			
Agency Ratings	FDA 21 CFR 177.1520(c) 2.2		
	HPFB (Canada) No Objection		
	Europe No 10/2011		
Forms	Particle		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.920	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.65	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	25	µm	
Film Puncture Energy	1.02	J	
Film Puncture Force	31.1	N	
Film Puncture Resistance	4.96	J/cm ³	Internal method
Film strength			ASTM D882
MD	26.5	J/cm ³	ASTM D882
TD	53.8	J/cm ³	ASTM D882
secant modulus			ASTM D882
1% secant, MD	236	MPa	ASTM D882
2% secant, MD	216	MPa	ASTM D882
1% secant, TD	297	MPa	ASTM D882
2% secant, TD	256	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield	27.6	MPa	ASTM D882
TD: Yield	12.8	MPa	ASTM D882
MD: Fracture	28.6	MPa	ASTM D882
TD: Fracture	16.9	MPa	ASTM D882

Tensile Elongation			ASTM D882
MD: Fracture	120	%	ASTM D882
TD: Fracture	440	%	ASTM D882
Dart Drop Impact	70	g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD	270	g	ASTM D1922
TD	95	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	94.0	°C	ASTM D1525
Melting Temperature (DSC)	109	°C	Internal method
Optical	Nominal Value	Unit	Test Method
Gloss (45°)	54		ASTM D2457
Haze	9.0	%	ASTM D1003
Extrusion instructions			

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.

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