



AGILITY™ 1022 Performance LDPE

The Dow Chemical Company - Low Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

AGILITY™ 1022 Performance LDPE resin is a high pressure LDPE resin designed to run at faster output rates on blown film lines in LLDPE blends while maintaining optics.

Main Characteristics:

- Faster Processing LDPE resin
- Designed for higher output rates in blends with LLDPE resin at 20-30% loading
- Optimized molecular structure gives improved optics in blends with LLDPE resins

Complies with:

- U.S.FDA 21 CFR 177.1520 (c) 2.1
- EU No 10/2011
- Canadian HPFB No Objection

Consult the regulations for complete details

General

Material Status	• Commercial: Active		
Availability	• North America		
Additive	• Antiblock: 2000 ppm	• Processing Aid: No	• Slip: 400 ppm
Agency Ratings	• EU No 10/2011	• FDA 21 CFR 177.1520(c) 2.1	• HPFB (Canada) No Objection
Forms	• Pellets		

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.923		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	1.9	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	1	mil	
Film Puncture Energy	4.00	in·lb	
Film Puncture Force	4.00	lbf	
Film Puncture Resistance	30.0	ft·lb/in ³	
Film Toughness - MD	340	ft·lb/in ³	ASTM D882
Film Toughness - TD	510	ft·lb/in ³	ASTM D882
Secant Modulus			ASTM D882
1% Secant, MD	29100	psi	
2% Secant, MD	26200	psi	
Secant Modulus			ASTM D882
1% Secant, TD	36200	psi	
2% Secant, TD	30800	psi	
Tensile Strength - MD (Yield)	1550	psi	ASTM D882
Tensile Strength - TD (Yield)	1700	psi	ASTM D882
Tensile Strength - MD (Break)	3350	psi	ASTM D882
Tensile Strength - TD (Break)	1950	psi	ASTM D882
Tensile Elongation - MD (Break)	150	%	ASTM D882
Tensile Elongation - TD (Break)	380	%	ASTM D882

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Films	Nominal Value	Unit	Test Method
Dart Drop Impact	55	g	ASTM D1709A
Elmendorf Tear Strength - MD	260	g	ASTM D1922
Elmendorf Tear Strength - TD	120	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	196	°F	ASTM D1525
Melting Temperature (DSC)	228	°F	Internal Method
Optical	Nominal Value	Unit	Test Method
Gloss (45°)	60		ASTM D2457
Haze	8.00	%	ASTM D1003

Processing Information

Extrusion Notes

Fabrication Conditions for 1 mil monolayer blown film at 100%

- Die Diameter: 8 in.
- Screw Type: DSB II
- Die Gap: 70 mil
- Output: 12 lb/hr/in. of die circumference
- Screw Size: 3.5 in.
- Blow-Up Ratio: 2.5 to 1
- Screw Speed: 50 rpm
- Frost Line Height: 39 in.
- Melt Temperature: 383°F

Notes

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