Technical Information

AGILITY™ 1022 Performance LDPE
Low Density Polyethylene Resin

Overview

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 reins

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

Additive

- Antiblock: 2000 ppm
- Slip: 400 ppm
- Processing Aid: No

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.921	g/cm³	0.921	g/cm³	ASTM D792
Base Density [1]	0.920	g/cm³	0.920	g/cm³	Dow Method
Melt Index (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	1	mil	25	µm	
Film Puncture Energy	4.00	in·lb	0.452	J	
Film Puncture Force	4.00	lbf	17.8	N	
Film Puncture Resistance	30.0	ft·lb/in³	2.48	J/cm³	
Film Toughness					ASTM D882
MD	340	ft·lb/in³	28.1	J/cm³	
TD	510	ft·lb/in³	42.2	J/cm³	
Secant Modulus					ASTM D882
1% Secant, MD	29100	psi	201	MPa	
2% Secant, MD	26200	psi	181	MPa	
1% Secant, TD	36200	psi	250	MPa	
2% Secant, TD	30800	psi	212	MPa	
Tensile Strength					ASTM D882
MD : Yield	1550	psi	10.7	MPa	
TD : Yield	1700	psi	11.7	MPa	
MD : Break	3350	psi	23.1	MPa	
TD : Break	1950	psi	13.4	MPa	
Tensile Elongation					ASTM D882
MD : Break	150	%	150	%	
TD : Break	380	%	380	%	
Dart Drop Impact	55	g	55	g	ASTM D1709A
Elmendorf Tear Strength					ASTM D1922
MD	260	g	260	g	
TD	120	g	120	g	
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Vicat Softening Temperature	196	°F	91.0	°C	ASTM D1525
Melting Temperature (DSC)	228	°F	109	°C	Dow Method
Optical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Gloss (45°)	60		60		ASTM D2457

Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Haze	8.00 %	8.00 %	ASTM D1003

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

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.