Technical Information

AGILITY™ 1001 Performance LDPE
Low Density Polyethylene Resin

Overview

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

Additive

- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.920	g/cm³	0.920	g/cm³	ASTM D792
Base Density [1]	0.920	g/cm³	0.920	g/cm³	Dow Method
Melt Index (190°C/2.16 kg)	0.65	g/10 min	0.65	g/10 min	ASTM D1238
Films	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Film Thickness - Tested	1	mil	25	µm	
Film Puncture Energy	9.00	in·lb	1.02	J	
Film Puncture Force	7.00	lbf	31.1	N	
Film Puncture Resistance	60.0	ft·lb/in³	4.96	J/cm³	Dow Method
Film Toughness					ASTM D882
MD	320	ft·lb/in³	26.5	J/cm³	
TD	650	ft·lb/in³	53.8	J/cm³	
Secant Modulus					ASTM D882
1% Secant, MD	34200	psi	236	MPa	
2% Secant, MD	31400	psi	216	MPa	
1% Secant, TD	43100	psi	297	MPa	
2% Secant, TD	37200	psi	256	MPa	
Tensile Strength					ASTM D882
MD : Yield	4000	psi	27.6	MPa	
TD : Yield	1850	psi	12.8	MPa	
MD : Break	4150	psi	28.6	MPa	
TD : Break	2450	psi	16.9	MPa	
Tensile Elongation					ASTM D882
MD : Break	120	%	120	%	
TD : Break	440	%	440	%	
Dart Drop Impact	70	g	70	g	ASTM D1709A
Elmendorf Tear Strength					ASTM D1922
MD	270	g	270	g	
TD	95	g	95	g	
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Vicat Softening Temperature	201	°F	94.0	°C	ASTM D1525
Melting Temperature (DSC)	228	°F	109	°C	Dow Method
Optical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Gloss (45°)	54		54		ASTM D2457

Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Haze	9.00 %	9.00 %	ASTM D1003

Extrusion Notes

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.

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.