



ELITE™ AT 6301

Enhanced Polyethylene Resin

Overview

ELITE™ AT 6301 Enhanced Polyethylene Resin is a copolymer produced via post-metallocene technology from Dow. It offers a unique combination of low discoloration, high toughness, and excellent processability for high performance on automated packaging equipment.

Main Characteristics:

- For food and specialty packaging
- Extremely high impact resistance and good tear properties
- Low color due to gas fading
- Excellent processability

Complies with:

- EU, No 10/2011
- U.S. FDA FCN 424
- Canadian HPFB No Objection

Consult the regulations for complete details.

Additive

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

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.916 g/cm ³	0.916 g/cm ³	ASTM D792
Base Density	0.916 g/cm ³	0.916 g/cm ³	Dow Method ¹
Melt Index (190°C/2.16 kg)	1.0 g/10 min	1.0 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	1.0 mil	25 µm	
Film Puncture Energy	63.0 in·lb	7.12 J	Dow Method
Film Puncture Force	15.8 lbf	70.3 N	Dow Method
Film Puncture Resistance	400 ft-lb/in ³	33.1 J/cm ³	Dow Method
Film Toughness			ASTM D882
MD	1130 ft-lb/in ³	93.5 J/cm ³	
TD	1170 ft-lb/in ³	96.8 J/cm ³	
Secant Modulus			ASTM D882
1% Secant, MD	26300 psi	181 MPa	
2% Secant, MD	23300 psi	160 MPa	
1% Secant, TD	28000 psi	193 MPa	
2% Secant, TD	24100 psi	166 MPa	
Tensile Strength			ASTM D882
MD: Yield	1400 psi	9.65 MPa	
TD: Yield	1390 psi	9.58 MPa	
MD: Break	6420 psi	44.3 MPa	
TD: Break	6070 psi	41.9 MPa	
Tensile Elongation			ASTM D882
MD: Break	510 %	510 %	
TD: Break	620 %	620 %	
Dart Drop Impact	700 g	700 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922 ²
MD	290 g	290 g	
TD	530 g	530 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	225 °F	107 °C	ASTM D1525
Melting Temperature (DSC)	232 °F	111 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°)	33	33	ASTM D2457

Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Haze	20 %	20 %	ASTM D1003

Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 3.5in. (63.5mm); 30:1ratio L/D
- Screw Type: DSBII
- Die Gap: 70mil (1.8 mm)
- Melt Temperature: 418°F
- Output: 12 lb/hr/in. of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5 to 1
- Screw Speed: 38 rpm
- Frost Line Height: 43 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.

² Method B

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Published: 2010-11-16

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