



ELITE™ 5401GS

Enhanced Polyethylene Resin

Overview

ELITE™ 5401GS Enhanced Polyethylene Resin is a copolymer produced via INSITE™ Technology from Dow. It offers extremely high impact resistance, combined with excellent tear, tensile and optical properties for high strength blown film applications. ELITE 5401GS Enhanced Polyethylene Resin offers a unique combination of low seal initiation temperature and high modulus and low blocking tendency for automatic packaging applications. ELITE 5401GS Enhanced Polyethylene Resin contains slip and antiblock additives

Applications:

- Food and specialty packaging films.
- Very tough thin gauge films

Complies with:

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

Consult the regulations for complete details.

Additive

- Antiblock: 2500 ppm
- Slip: 1000 ppm
- Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.917 g/cm ³	0.917 g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	1.0 g/10 min	1.0 g/10 min	ISO 1133
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	2.0 mil	51 µm	
Film Puncture Energy ¹ (2.0 mil (51 µm))	53.1 in·lb	6.00 J	ASTM D5748
Film Puncture Force ¹ (2.0 mil (51 µm))	18.0 lbf	80.0 N	ASTM D5748
Tensile Modulus ¹			ISO 527-3
2% Secant, MD : 2.0 mil (51 µm)	26300 psi	181 MPa	
2% Secant, TD : 2.0 mil (51 µm)	29600 psi	204 MPa	
Tensile Stress ¹			ISO 527-3
MD : Yield, 2.0 mil (51 µm)	1160 psi	8.00 MPa	
TD : Yield, 2.0 mil (51 µm)	1310 psi	9.00 MPa	
MD : Break, 2.0 mil (51 µm)	5510 psi	38.0 MPa	
TD : Break, 2.0 mil (51 µm)	5370 psi	37.0 MPa	
Tensile Elongation ¹			ISO 527-3
MD : Break, 2.0 mil (51 µm)	570 %	570 %	
TD : Break, 2.0 mil (51 µm)	610 %	610 %	
Dart Drop Impact ¹ (2.0 mil (51 µm))	> 850 g	> 850 g	ISO 7765-1/B
Elmendorf Tear Strength ¹			ASTM D1922
MD : 2.0 mil (51 µm)	780 g	780 g	
TD : 2.0 mil (51 µm)	980 g	980 g	
Seal Initiation Temperature ²			Dow Method
2.0 mil (51 µm)	203 °F	95.0 °C	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	212 °F	100 °C	ASTM D1525
Melting Temperature	253 °F	123 °C	DSC
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss ¹ (45°, 2.01 mil (51.0 µm))	64	64	ASTM D2457
Haze ¹ (2.01 mil (51.0 µm))	13 %	13 %	ISO 14782
Extrusion	Nominal Value (English)	Nominal Value (SI)	
Melt Temperature	374 to 482 °F	190 to 250 °C	



Extrusion Notes

Fabrication Conditions For Blown Film Extrusion:

- Die Gap: 0.8-2.8 mm.
- Melt Temperature: 190-250 °C.
- Blow-Up Ratio: 1.5 to 3.5.

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ Blown film extruded at 232°C, 2.5:1 BUR, 1.8mm die gap.

² Blown film extruded at 232°C, 2.5:1 BUR, 1.8mm die gap.
Temperature at which 5.25 N/15 mm heat seal strength is achieved.

