

ELITE™ 5400G

Enhanced Polyethylene Resin

Overview

ELITE™ 5400G Enhanced Polyethylene Resin is a copolymer produced via INSITE™ Technology from Dow. It offers a unique combination of low seal initiation, moderate stiffness and low blocking tendencies for good performance on automated packaging equipment.

- For food and specialty packaging films
- Extremely high impact resistance and good tear properties
- Good optical properties

Complies with:

- U.S. FDA FCN 424
- EU, No 10/2011
- 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	0.916 g/cm ³	0.916 g/cm ³	ASTM D792
Base Density ¹	0.916 g/cm ³	0.916 g/cm ³	Dow Method
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	59.0 in·lb	6.67 J	Dow Method
Film Puncture Force	15.5 lbf	68.9 N	Dow Method
Film Puncture Resistance	390 ft·lb/in ³	32.3 J/cm ³	Dow Method
Film Toughness			ASTM D882
MD	1010 ft·lb/in ³	83.6 J/cm ³	
TD	1150 ft·lb/in ³	95.1 J/cm ³	
Secant Modulus			ASTM D882
1% Secant, MD	31600 psi	218 MPa	
2% Secant, MD	27300 psi	188 MPa	
1% Secant, TD	36500 psi	251 MPa	
2% Secant, TD	30300 psi	209 MPa	
Tensile Strength			ASTM D882
MD : Yield	1510 psi	10.4 MPa	
TD : Yield	1530 psi	10.5 MPa	
MD : Break	5590 psi	38.5 MPa	
TD : Break	5260 psi	36.3 MPa	
Tensile Elongation			ASTM D882
MD : Break	450 %	450 %	
TD : Break	630 %	630 %	
Dart Drop Impact	1000 g	1000 g	ASTM D1709B
Elmendorf Tear Strength			ASTM D1922
MD	280 g	280 g	
TD	600 g	600 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	219 °F	104 °C	ASTM D1525
Melting Temperature (DSC)	253 °F	123 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°)	32	32	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: 3.5 in.
- Screw Type: DSB II
- Die Gap: 70 mil (1.8 mm)
- Melt Temperature: 409°F
- Output: 12 lb/hr/in. of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 39 rpm
- Frost Line Height: 38 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.

