



# 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
- Europe EU-Directive 2002/72/EC
  - Consult the regulations for complete details.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.916 g/cm <sup>3</sup>	0.916 g/cm <sup>3</sup>	ASTM D792
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	2.00 mil	50.8 µm	
Film Puncture Energy (2.00 mil (50.8 µm))	105 in-lb	11.9 J	Dow Method
Film Puncture Force (2.00 mil (50.8 µm))	27.0 lbf	120 N	Dow Method
Film Puncture Resistance			Dow Method
2.00 mil (50.8 µm)	334 ft-lb/in <sup>3</sup>	27.6 J/cm <sup>3</sup>	
Secant Modulus			ASTM D882
2% Secant, MD: 2.00 mil (50.8 µm)	24100 psi	166 MPa	
2% Secant, TD: 2.00 mil (50.8 µm)	27700 psi	191 MPa	
Tensile Strength			ASTM D882
MD: Yield, 2.00 mil (50.8 µm)	1420 psi	9.82 MPa	
TD: Yield, 2.00 mil (50.8 µm)	1480 psi	10.2 MPa	
MD: Break, 2.00 mil (50.8 µm)	8250 psi	56.9 MPa	
TD: Break, 2.00 mil (50.8 µm)	7660 psi	52.8 MPa	
Tensile Elongation			ASTM D882
MD: Break, 2.00 mil (50.8 µm)	610 %	610 %	
TD: Break, 2.00 mil (50.8 µm)	670 %	670 %	
Dart Drop Impact (2.00 mil (50.8 µm))	> 850 g	> 850 g	ASTM D1709B
Elmendorf Tear Strength			ASTM D1922
MD: 2.00 mil (50.8 µm)	830 g	830 g	
TD: 2.00 mil (50.8 µm)	1000 g	1000 g	
Seal Initiation Temperature			Dow Method <sup>1</sup>
2.00 mil (50.8 µm)	210 °F	98.9 °C	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	214 °F	101 °C	ASTM D1525
Melting Temperature (DSC)	252 °F	122 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°, 2.00 mil (50.8 µm))	70	70	ASTM D2457
Haze (2.00 mil (50.8 µm))	9.0 %	9.0 %	ASTM D1003
Extrusion	Nominal Value (English)	Nominal Value (SI)	
Melt Temperature	450 °F	232 °C	

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**Extrusion Notes**

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## Fabrication Conditions For Blown Film:

- Screw Size: 2.5 in. (63.5 mm); 24:1 L/D
- Screw Type: Barrier screw
- Die Gap: 70 mil (1.8 mm)
- Melt Temperature: 450°F (232°C)
- Output: 6 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 70 rpm
- Frost Line Height: 25 in. (635 mm)

**Notes**

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

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<sup>1</sup> Temperature at which 2 lb/in. (8.8 N/25.4 mm) heat seal strength is achieved.

J&B Automatic Heat Seal and Hot Tack Tester 0.5 S dwell, 40 psi bar pressure, Instron pull speed 10 in./min.

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