



Technical Data Sheet

## ELITE™ 5401GT Enhanced Polyethylene Resin

### Overview

ELITE™ 5401GT 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™ 5401GT Enhanced Polyethylene Resin offers a unique combination of low seal initiation temperature and high modulus and low blocking tendency for automatic packaging applications. ELITE™ 5401GT Enhanced Polyethylene Resin contains slip and antiblock additives.

### Sustainability Attribute:



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: 2750 ppm
- Slip: 1000 ppm
- Processing aid: No

### Physical Properties

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method <sup>1</sup>
Density	0.917	g/cm <sup>3</sup>	0.917	g/cm <sup>3</sup>	ASTM D792
Base Density <sup>2</sup>	0.916	g/cm <sup>3</sup>	0.916	g/cm <sup>3</sup>	Dow Method
Melt Index (190°C/2.16 kg)	1.0	g/10 min	1.0	g/10 min	ISO 1133



## Physical Properties (Cont.)

Films	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Film Thickness - Tested	2	mil	51	µm	
Film Puncture Energy <sup>3</sup> (2.0 mil (51 µm))	53.1	in-lb	6.00	J	ASTM D5748
Film Puncture Force <sup>3</sup> (2.0 mil (51 µm))	18.0	lbf	80.0	N	ASTM D5748
Tensile Modulus <sup>3</sup>					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 <sup>3</sup>					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 <sup>3</sup>					ISO 527-3
MD : Break, 2.0 mil (51 µm)	570	%	570	%	
TD : Break, 2.0 mil (51 µm)	610	%	610	%	
Dart Drop Impact <sup>3</sup> (2.0 mil (51 µm))	> 850	g	> 850	g	ISO 7765-1/B
Elmendorf Tear Strength <sup>3</sup>					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 <sup>4</sup>					Dow Method
2.0 mil (51 µm)	203	°F	95.0	°C	
<b>Thermal</b>					
Vicat Softening Temperature	212	°F	100	°C	ASTM D1525
Melting Temperature (DSC)	253	°F	123	°C	DSC
<b>Optical</b>					
Gloss <sup>3</sup> (45°, 2.01 mil (51.0 µm))	64		64		ASTM D2457
Haze <sup>3</sup> (2.01 mil (51.0 µm))	13.0	%	13.0	%	ISO 14782
<b>Extrusion</b>					
Melt Temperature	374 to 482	°F	190 to 250	°C	
<b>Extrusion Notes</b>					
Fabrication Conditions for Blown Film Extrusion:					
<ul style="list-style-type: none"> <li>• Die Gap: 0.8–2.8 mm</li> <li>• Melt Temperature: 190–250°C</li> <li>• Blow-Up Ratio: 1.5 to 3.5</li> </ul>					

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

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

