ELITE™ 5401G

The Dow Chemical Company - Enhanced Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

ELITE™ 5401G 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 for excellent performance on automated packaging equipment.

- For food and specialty packaging films
- Superior impact resistance and tear properties

Complies with:

- U.S. FDA FCN 424
- Canadian HPFB No Objection
- EU, No 10/2011
  - Consult the regulations for complete details.

General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Latin America	• North America
Additive	• Antiblock: 2500 ppm	• Processing Aid: No	• Slip: 1000 ppm
Agency Ratings	• EU No 10/2011	• FDA FCN 424	• HPFB (Canada) No Objection
Forms	• Pellets		
Processing Method	• Blown Film		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.920		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Films	**Nominal Value**	**Unit**	**Test Method**
Film Thickness - Tested	1	mil	
Film Puncture Energy	15.0	in·lb	Internal Method
Film Puncture Force	8.00	lbf	Internal Method
Film Puncture Resistance	110	ft·lb/in³	Internal Method
Film Toughness - MD	850	ft·lb/in³	ASTM D882
Film Toughness - TD	800	ft·lb/in³	ASTM D882
Secant Modulus			ASTM D882
1% Secant, MD	26000	psi	
2% Secant, MD	23000	psi	
Secant Modulus			ASTM D882
1% Secant, TD	29000	psi	
2% Secant, TD	24000	psi	
Tensile Strength - MD (Yield)	1700	psi	ASTM D882
Tensile Strength - TD (Yield)	1600	psi	ASTM D882
Tensile Strength - MD (Break)	4900	psi	ASTM D882
Tensile Strength - TD (Break)	4000	psi	ASTM D882
Tensile Elongation - MD (Break)	400	%	ASTM D882
Tensile Elongation - TD (Break)	450	%	ASTM D882
Dart Drop Impact	450	g	ASTM D1709A

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Films	Nominal Value	Unit	Test Method
Elmendorf Tear Strength - MD	250	g	ASTM D1922
Elmendorf Tear Strength - TD	550	g	ASTM D1922
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature	212	°F	ASTM D1525
Melting Temperature (DSC)	253	°F	Internal Method
Optical	**Nominal Value**	**Unit**	**Test Method**
Gloss (45°)	33		ASTM D2457
Haze	22.0	%	ASTM D1003

Processing Information

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: 410°F
- Output: 12 lb/hr/in. of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 40 rpm
- Frost Line Height: 47 in.

Notes

[1] Typical properties: these are not to be construed as specifications.