ELITE™ 5500G

The Dow Chemical Company - Enhanced Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

ELITE* 5500G Enhanced Polyethylene Resin is a copolymer produced via INSITE* Technology. It offers an exceptional combination of processability, low heat seal initiation temperature, package integrity, optical properties, and tear strength.

- A high performance sealant for food and specialty packaging films
- Outstanding combination of seal performance, caulkability, optics, and tear strength
- Easy processability on blown and cast film extrusion equipment

Complies with:

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

General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Latin America	• North America
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
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	0.916		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	1.5	g/10 min	ASTM D1238
Films	**Nominal Value**	**Unit**	**Test Method**
Film Thickness - Tested	1	mil	
Film Puncture Energy	50.0	in·lb	Internal Method
Film Puncture Force	14.0	lbf	Internal Method
Film Puncture Resistance	350	ft·lb/in³	Internal Method
Film Toughness - MD	1000	ft·lb/in³	ASTM D882
Film Toughness - TD	1100	ft·lb/in³	ASTM D882
Secant Modulus			ASTM D882
1% Secant, MD	23500	psi	
2% Secant, MD	20500	psi	
Secant Modulus			ASTM D882
1% Secant, TD	28000	psi	
2% Secant, TD	24000	psi	
Tensile Strength - MD (Yield)	2650	psi	ASTM D882
Tensile Strength - TD (Yield)	1500	psi	ASTM D882
Tensile Strength - MD (Break)	6000	psi	ASTM D882
Tensile Strength - TD (Break)	5500	psi	ASTM D882
Tensile Elongation - MD (Break)	400	%	ASTM D882
Tensile Elongation - TD (Break)	500	%	ASTM D882

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Films	Nominal Value	Unit	Test Method
Dart Drop Impact	650	g	ASTM D1709A
Elmendorf Tear Strength - MD	350	g	ASTM D1922
Elmendorf Tear Strength - TD	600	g	ASTM D1922
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature	207	°F	ASTM D1525
Melting Temperature (DSC)	252	°F	Internal Method
Optical	**Nominal Value**	**Unit**	**Test Method**
Gloss (45°)	45		ASTM D2457
Haze	12.0	%	ASTM D1003

Processing Information

Extrusion	Nominal Value	Unit
Melt Temperature	438	°F

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: 425°F
- Output: 12 lb/hr/in. of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 42 rpm
- Frost Line Height: 47 in.

Notes

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