Technical Information

ELITE™ 5500G
Enhanced Polyethylene Resin

Overview

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.

Additive

- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.914	g/cm³	0.914	g/cm³	ASTM D792
Base Density [1]	0.914	g/cm³	0.914	g/cm³	Dow Method
Melt Index (190°C/2.16 kg)	1.5	g/10 min	1.5	g/10 min	ASTM D1238
Films	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Film Thickness - Tested	1	mil	25	µm	
Film Puncture Energy	50.0	in·lb	5.65	J	Dow Method
Film Puncture Force	14.0	lbf	62.3	N	Dow Method
Film Puncture Resistance	350	ft·lb/in³	29.0	J/cm³	Dow Method
Film Toughness					ASTM D882
MD	1000	ft·lb/in³	82.7	J/cm³	
TD	1100	ft·lb/in³	91.0	J/cm³	
Secant Modulus					ASTM D882
1% Secant, MD	23500	psi	162	MPa	
2% Secant, MD	20500	psi	141	MPa	
1% Secant, TD	28000	psi	193	MPa	
2% Secant, TD	24000	psi	165	MPa	
Tensile Strength					ASTM D882
MD : Yield	2650	psi	18.3	MPa	
TD : Yield	1500	psi	10.3	MPa	
MD : Break	6000	psi	41.4	MPa	
TD : Break	5500	psi	37.9	MPa	
Tensile Elongation					ASTM D882
MD : Break	400	%	400	%	
TD : Break	500	%	500	%	
Dart Drop Impact	650	g	650	g	ASTM D1709A
Elmendorf Tear Strength					ASTM D1922
MD	350	g	350	g	
TD	600	g	600	g	
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Vicat Softening Temperature	207	°F	97.0	°C	ASTM D1525
Melting Temperature (DSC)	252	°F	122	°C	Dow Method
Optical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Gloss (45°)	45		45		ASTM D2457

Optical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Haze	12.0	%	12.0	%	ASTM D1003

Extrusion	Nominal Value	(English)	Nominal Value	(SI)
Melt Temperature	438	°F	226	°C

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

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.