ELITE™ AT 6111
Enhanced Polyethylene Resin

Overview

ELITE™ AT 6111 Enhanced Polyethylene Resin is an ethylene-octene copolymer based on ELITE™ AT technology from Dow. This resin is designed for cast stretch machine wrap films in pallet wrap application and offers an optimized balance of extensibility, impact strength, and puncture resistance.

Main Characteristics:

- Excellent extensibility
- High impact and exceptional puncture resistance
- Excellent processibility with low back pressure and power consumption.

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	0.912	g/cm³	0.912	g/cm³	ASTM D792
Base Density [1]	0.912	g/cm³	0.912	g/cm³	Dow Method
Melt Index (190°C/2.16 kg)	3.7	g/10 min	3.7	g/10 min	ASTM D1238
Films	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Film Thickness - Tested	1	mil	20	µm	
Film Puncture Energy (0.80 mil (20 µm))	25.4	in·lb	2.87	J	Dow Method
Film Puncture Force (0.80 mil (20 µm))	8.30	lbf	36.9	N	Dow Method
Film Puncture Resistance (0.80 mil (20 µm))	278	ft·lb/in³	23.0	J/cm³	Dow Method
Tensile Strength					ASTM D882
MD : Yield, 0.80 mil (20 µm)	924	psi	6.37	MPa	
TD : Yield, 0.80 mil (20 µm)	914	psi	6.30	MPa	
MD : Break, 0.80 mil (20 µm)	6430	psi	44.3	MPa	
TD : Break, 0.80 mil (20 µm)	5530	psi	38.1	MPa	
Tensile Elongation					ASTM D882
MD : Break, 0.80 mil (20 µm)	440	%	440	%	
TD : Break, 0.80 mil (20 µm)	560	%	560	%	
Dart Drop Impact (0.80 mil (20 µm))	740	g	740	g	ASTM D1709A
Elmendorf Tear Strength [2]					ASTM D1922
MD : 0.80 mil (20 µm)	240	g	240	g	
TD : 0.80 mil (20 µm)	470	g	470	g	
Ultimate Stretch - On-Pallet Testing [3] (0.8 mil (20.3 µm))	300	%	300	%	Dow Method
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Melting Temperature (DSC)	228	°F	109	°C	Dow Method
Optical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Gloss (45°, 0.800 mil (20.3 µm))	90		90		ASTM D2457
Haze (0.800 mil (20.3 µm))	1.30	%	1.30	%	ASTM D1003

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Extrusion Notes

Fabrication Conditions For Cast Film:

- EGAN/Davis-Standard 5 layer cast line
- Melt Temperature: 520°F (271°C)
- Chill Roll (primary/secondary) Temperature: 70°F (21°C)
- Line Speed: 600 fpm (183m/min)
- Output: 400 lb/hr
- Die Width: 36in. (915 mm)
- Die Gap: 20mil (0.5mm)
- Air Gap: 3in. (7.6mm)

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.

[2] Method B

[3] Determined by Highlight Industries, Inc.

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