INNATE™ ST50 Precision Packaging Resin
Precision Packaging Resin

Overview

INNATE™ ST50 Precision Packaging Resin is designed for exceptional abuse performance. It offers a unique combination of high stiffness with excellent toughness which enables excellent performance on automated packaging equipment. This product also delivers robust processability.

Complies with:

- Europe Commission Regulation (EU) No 10/2011
- U.S. FDA FCN 424
- JHOSPA (Japan Hygienic Olefin and Styrene Plastics Association)

Consult the regulations for complete details

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.918	g/cm³	0.918	g/cm³	ASTM D792
Base Density [1]	0.918	g/cm³	0.918	g/cm³	Dow Method
Melt Index (190°C/2.16 kg)	0.85	g/10 min	0.85	g/10 min	ASTM D1238
Films	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Film Thickness - Tested	2	mil	51	µm	
Film Puncture Energy	81.0	in·lb	9.15	J	
Film Puncture Force	23.5	lbf	105	N	
Film Puncture Resistance	272	ft·lb/in³	22.5	J/cm³	
Secant Modulus					ASTM D882
2% Secant, MD	28500	psi	196	MPa	
2% Secant, TD	33400	psi	230	MPa	
Tensile Strength					ASTM D882
MD : Yield	1470	psi	10.1	MPa	
TD : Yield	1570	psi	10.8	MPa	
MD : Break	7500	psi	51.7	MPa	
TD : Break	7350	psi	50.6	MPa	
Tensile Elongation					ASTM D882
MD : Break	570	%	570	%	
TD : Break	660	%	660	%	
Dart Drop Impact [2]	1900	g	1900	g	ASTM D1709
Elmendorf Tear Strength					ASTM D1922
MD	570	g	570	g	
TD	940	g	940	g	
Optical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Gloss (45°)	51		51		ASTM D2457
Haze	15.0	%	15.0	%	ASTM D1003

Additional Information

Fabrication Conditions for 2 mil monolayer blown film at 100%:

- Die Diameter: 8 in.
- Screw Type: DSB II
- Die Gap: 90 mil
- Melt Temperature: 432 °F
- Output: 10.34 lb/hr/in. of die circumference
- Screw Size: 3.5 in.
- Blow-Up Ratio: 2.5 to 1
- Screw Speed: 36 rpm
- Frost Line Height:40 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.

[2] Method A