



INNATE™ ST70 Precision Packaging Resin

Overview

INNATE™ ST70 Precision Packaging Resin is designed for excellent balance of stiffness and mechanical performance like tear resistance and dart impact resistance.

Complies with:

- Europe Commission Regulation (EU) No 10/2011 (See NOTES)
- U.S. FDA 21 CFR 177.1520(c)3.2a

Consult the regulations for complete details.

Sustainability Attribute:



Additive

- Antiblock: No
- Slip: No
- Processing aid: No

Physical Properties

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method ¹
Density	0.926	g/cm ³	0.926	g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	0.85	g/10 min	0.85	g/10 min	ASTM D1238
Films					
Film Thickness — Tested	2	mil	50	µm	
Film Puncture Energy	32.7	in·lb	3.70	J	
Film Puncture Force	13.9	lbf	61.8	N	
Film Puncture Resistance	108	ft·lb/in ³	8.90	J/cm ³	
Secant Modulus					ASTM D882
2% Secant, MD	41600	psi	287	MPa	
2% Secant, TD	48600	psi	335	MPa	
Tensile Strength					ASTM D882
MD: Yield	1940	psi	13.4	MPa	
TD: Yield	2180	psi	15.0	MPa	
MD: Break	6310	psi	43.5	MPa	
TD: Break	6820	psi	47.0	MPa	



Physical Properties (Cont.)

Thermal	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Tensile Elongation					ASTM D882
MD: Break	550	%	550	%	
TD: Break	640	%	640	%	
Dart Drop Impact	880	g	880	g	ASTM D1709A
Elmendorf Tear Strength					ASTM D1922
MD	450	g	450	g	
TD	930	g	930	g	
Thermal					
Vicat Softening Temperature	234	°F	112	°C	ASTM D1525
Melting Temperature (DSC)	253	°F	123	°C	Dow Method
Optical					
Gloss (45°)	42		42		ASTM D2457
Haze	19.5	%	19.5	%	ASTM D1003
Extrusion Notes					
Fabrication Conditions for Blown Film:					
<ul style="list-style-type: none">• Die Diameter: 8 in• Die Gap: 90 mil• Melt Temperature: 418°F• Output: 10.3 lb/hr/in. of die circumference• Screw Size: 3.5 in• Blow-up Ratio: 2.5 to 1• Screw Speed: 34 rpm• Frost Line Height: 35 in					

