



Technical Data Sheet

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	

1. ASTM: American Society for Testing and Materials.

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

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 					

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