



INNATE™ ST70

The Dow Chemical Company - Precision Packaging Resin

Tuesday, November 5, 2019

General Information

Product Description

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.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
Agency Ratings	• EU 2011/10/EC	• FDA 21 CFR 177.1520(c) 3.2a	
Forms	• Pellets		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.928		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	0.85	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	2	mil	
Film Puncture Energy	32.7	in-lb	
Film Puncture Force	13.9	lbf	
Film Puncture Resistance	108	ft-lb/in ³	
Secant Modulus - 2% Secant, MD	41600	psi	ASTM D882
Secant Modulus - 2% Secant, TD	48600	psi	ASTM D882
Tensile Strength - MD (Yield)	1940	psi	ASTM D882
Tensile Strength - TD (Yield)	2180	psi	ASTM D882
Tensile Strength - MD (Break)	6310	psi	ASTM D882
Tensile Strength - TD (Break)	6820	psi	ASTM D882
Tensile Elongation - MD (Break)	550	%	ASTM D882
Tensile Elongation - TD (Break)	640	%	ASTM D882
Dart Drop Impact	880	g	ASTM D1709A
Elmendorf Tear Strength - MD	450	g	ASTM D1922
Elmendorf Tear Strength - TD	930	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	234	°F	ASTM D1525
Melting Temperature (DSC)	253	°F	Internal Method
Optical	Nominal Value	Unit	Test Method
Gloss (45°)	42		ASTM D2457
Haze	19.5	%	ASTM D1003

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Additional Information

Fabrication Conditions:

- 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

Notes

¹ Typical properties: these are not to be construed as specifications.