



Technical Data Sheet

INNATE™ ST 30 Precision Packaging Resin

Description

INNATE™ ST 30 Precision Packaging Resin is designed for excellence balance of stiffness and mechanical performance like tear resistance and dart impact resistance.

Sustainability Attribute:



Complies with

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

Consult the regulations for complete details.

Properties¹

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method ²
Density	0.935	g/cm ³	0.935	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	2.0	mil	50	µm	
Film Puncture Energy	38.9	in·lb	4.40	J	Internal Method
Film Puncture Force	18.0	lbf	80.0	N	Internal Method
Film Puncture Resistance	131	ft·lb/in ³	10.8	J/cm ³	Internal Method
Secant Modulus					ASTM D882
2% Secant, MD	62800	psi	433	MPa	
2% Secant, TD	76400	psi	527	MPa	
Tensile Strength					ASTM D882
MD: Yield	2520	psi	17.4	MPa	
TD: Yield	2900	psi	20.0	MPa	
MD: Break	5370	psi	37.0	MPa	
TD: Break	5370	psi	37.0	MPa	
Tensile Elongation					ASTM D882
MD: Break	550	%	550	%	
TD: Break	660	%	660	%	
Dart Drop Impact ³	290	g	290	g	ASTM D1709
Elmendorf Tear Strength					ASTM D1922
MD	220	g	220	g	
TD	1000	g	1000	g	



Properties (Cont.)

Thermal	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Vicat Softening Temperature	250	°F	121	°C	ASTM D1525
Melting Temperature (DSC)	259	°F	126	°C	Internal Method
Optical					
Gloss (45°)	43		43		ASTM D2457
Haze	20.7	%	20.7	%	ASTM D1003

Extrusion Notes

Fabrication Conditions:

- Die Diameter: 8 in
- Die Gap: 70 mil
- Melt Temperature: 415°F
- Output: 10.3 lb/hr/in. of die circumference
- Screw Size: 3.5 in.
- Blow-up Ratio: 2.5 to 1
- Screw Speed: 39 rpm
- Frost Line Height: 37 in

