Technical Data Sheet

INNATE™ TH60 Precision Packaging Resin

Description

INNATE™ TH60 Precision Packaging Resin is designed for exceptional toughness in combination with sealing performance while also delivering robust processability. It has exceptional low-temperature toughness and flex-crack resistance, making it a versatile resin that can meet the needs of demanding end-use applications.

Complies with

- U.S. FDA FCN 424
- EU, No 10/2011
- Canadian HPFB No Objection (with limitations)

Consult the regulations for complete details.

Properties[1]

Physical	Nominal Value	Unit	Test Method[2]
Density	0.912	g/cm^3	ASTM D792
Base Density[3]	0.912	g/cm^3	Internal Method
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.85	g/10 min	ASTM D1238
Films			
Film Thickness - Tested	51	µm	
Film Puncture Energy	10.5	J	Internal Method
Film Puncture Force	106	N	Internal Method
Film Puncture Resistance	26.3	J/cm^3	Internal Method
Secant Modulus			ASTM D882
2% Secant, MD	145	MPa	
2% Secant, TD	169	MPa	
Tensile Strength			ASTM D882
MD: Yield	8.32	MPa	
TD: Yield	8.51	MPa	
MD: Break	51.2	MPa	
TD: Break	51.9	MPa	
Tensile Elongation			ASTM D882
MD: Break	580	%	
TD: Break	660	%	
Dart Drop Impact[4]	2100	g	ASTM D1709

1. Typical properties: these are not to be construed as specifications
2. ASTM: American Society for Testing and Materials
3. 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/cm^3. Base Density is the estimated density of the polymer if it did not contain any antiblock.
4. Method A.

Properties (Cont.)

Films	Nominal Value	Unit	Test Method
Elmendorf Tear Strength			ASTM D1922
MD	520	g	
TD	820	g	
Thermal			
Vicat Softening Temperature	98.0	°C	ASTM D1525
Melting Temperature (DSC)	123	°C	Internal Method
Optical			
Gloss (45º)	51		ASTM D2457
Haze	14.0	%	ASTM D1003
Extrusion Notes			

Fabrication Conditions for 2 mil Monolayer Blown Film:

- Die Diameter: 8 in.
- Screw Type: DSB II
- Die Gap: 90 mil
- Melt Temperature: 433°F
- Output: 10.3 mlb/hr/in. of die circumference
- Screw Size: 3.5 in.
- Blow-Up Ratio: 2.5 to 1
- Screw Speed: 35 rpm
- Frost Line Height: 40 in.

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c. use as a critical component in medical devices that support or sustain human life; or
d. use specifically by pregnant women or in applications designed specifically to promote or interfere with human reproduction.
e. use as an ingredient of a pharmaceutical injectable application.

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