

# INNATE™ ST50 Precision Packaging Resin

Precision Packaging Resin

The Dow Chemical Company

## Message:

INNATE™ ST50 Precision Packaging Resin is designed for exceptional abuse performance. It offers a unique combination of high stiffness with excellent toughness which enables excellent performance on automated packaging equipment. This product also delivers robust processability.

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 Information			
Agency Ratings		FDA 21 CFR 177.1520(c) 3.2a	
		Europe 2011/10/EC	
Forms		Particle	
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.918	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.85	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	25	µm	
secant modulus			ASTM D882
2% secant, MD	205	MPa	ASTM D882
2% secant, TD	228	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield	12.4	MPa	ASTM D882
TD: Yield	11.0	MPa	ASTM D882
MD: Fracture	35.5	MPa	ASTM D882
TD: Fracture	28.5	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Fracture	430	%	ASTM D882
TD: Fracture	550	%	ASTM D882
Dart Drop Impact <sup>1</sup>			ASTM D1709
Blow film <sup>2</sup>	1500	g	ASTM D1709
Blow film <sup>3</sup>	1200	g	ASTM D1709
Elmendorf Tear Strength			ASTM D1922
MD	270	g	ASTM D1922
TD	530	g	ASTM D1922
Optical	Nominal Value	Unit	Test Method
Gloss (45°)	47		ASTM D2457
Haze	14	%	ASTM D1003

#### Additional Information

Fabrication Conditions for 1 mil monolayer blown film at 100%: - Die Diameter: 8 in.

Screw Type: DSB II

Die Gap: 90 mil

Melt Temperature: 428 °F

Output: 10.4 lb/hr/in. of die circumference

Screw Size: 3.5 in.

Blow-Up Ratio: 2.5 to 1

Screw Speed: 40 rpm

Frost Line Height: 40 in.

#### NOTE

- |    |  |
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| 1. | Method A   |
| 2. | Dart impact for 100% Pure  |
| 3. | Dart impact for blend with 10%<br>LDPE (0.18 MI), 70 mil die gap |

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