



Experimental XUS 59999.06 Enhanced Polyethylene Resin

Overview XUS 59999.06 Experimental Polyethylene Resin is an enhanced ethylene-octene copolymer from Dow. This resin offers an optimized balance of extensibility, impact strength, and exceptional puncture resistance for machine wrap films in pallet stretch wrapper applications.

Main Characteristics:

- Excellent extensibility
- High impact and exceptional puncture resistance
- Excellent processibility with low back pressure and power consumption.

Complies with:

- U.S. FDA FCN 424
- Europe EU-Directive 2002/72/EC
- Consult the regulations for complete details.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.912 g/cm ³	0.912 g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	3.7 g/10 min	3.7 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	0.80 mil	20 µm	
Film Puncture Energy (0.80 mil (20 µm))	25.4 in-lb	2.87 J	Dow Method
Film Puncture Force (0.80 mil (20 µm))	8.30 lbf	36.9 N	Dow Method
Film Puncture Resistance (0.80 mil (20 µm))	260 ft-lb/in ³	21.5 J/cm ³	Dow Method
Tensile Strength			ASTM D882
MD: Yield, 0.80 mil (20 µm)	924 psi	6.37 MPa	
TD: Yield, 0.80 mil (20 µm)	914 psi	6.30 MPa	
MD: Break, 0.80 mil (20 µm)	6430 psi	44.3 MPa	
TD: Break, 0.80 mil (20 µm)	5530 psi	38.1 MPa	
Tensile Elongation			ASTM D882
MD: Break, 0.80 mil (20 µm)	440 %	440 %	
TD: Break, 0.80 mil (20 µm)	560 %	560 %	
Dart Drop Impact (0.80 mil (20 µm))	580 g	580 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922 ¹
MD: 0.80 mil (20 µm)	240 g	240 g	
TD: 0.80 mil (20 µm)	470 g	470 g	
Ultimate Stretch - On-Pallet Testing (0.8 mil (20.3 µm))	300 %	300 %	Dow Method ²
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Melting Temperature (DSC)	228 °F	109 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°, 0.800 mil (20.3 µm))	90	90	ASTM D2457
Haze (0.800 mil (20.3 µm))	1.3 %	1.3 %	ASTM D1003
Extrusion	Nominal Value (English)	Nominal Value (SI)	
Melt Temperature	520 °F	271 °C	

Extrusion Notes

Fabrication Conditions For Cast Film:

- EGAN/Davis-Standard 5 layer cast line
- Melt Temperature: 520°F (271°C)
- Chill Roll (primary/secondary) Temperature: 70°F (21°C)
- Line Speed: 600 fpm (183m/min)
- Output: 400 lb/hr
- Die Width: 36in. (915 mm)
- Die Gap: 20mil (0.5mm)
- Air Gap: 3in. (7.6mm)

Notes

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

¹ Method B

² Determined by Highlight Industries, Inc.

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Published: 2010-06-02

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