Technical Data Sheet

XUS 61530.23 Experimental Polyethylene Resin

Main Characteristics

- Linear low density polyethylene
- Fast processing on narrow die gaps
- For blown film paper product overwrap applications

Complies with

- U.S. FDA 21 CFR 177.1520(c)3.2a
- EU, No 10/2011
- Canadian HPFB No Objection (with limitations)

Consult the regulations for complete details.

Additive

- Antiblock: No
- Processing aid: No
- Slip: No

Properties[1]

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method[2]
Density	0.935	g/cm³	0.935	g/cm³	ASTM D792
Base Density[3]	0.935	g/cm³	0.935	g/cm³	Internal Method
Melt Index (190°C/2.16 kg)	1.0	g/10 min	1.0	g/10 min	ASTM D1238
Films					
Film Puncture Resistance (1.0 mil (25 µm))	93.0	ft-lb/in³	7.69	J/cm³	Internal Method
Film Toughness					ASTM D882
MD: 1.0 mil (25 µm)	1180	ft-lb/in³	97.5	J/cm³	
TD: 1.0 mil (25 µm)	1390	ft-lb/in³	115	J/cm³	
Secant Modulus					ASTM D882
2% Secant, MD: 1.0 mil (25 µm)	54700	psi	377	MPa	
2% Secant, TD: 1.0 mil (25 µm)	50500	psi	348	MPa	
Tensile Strength					ASTM D882
MD: Yield, 1.0 mil (25 µm)	2210	psi	15.2	MPa	
TD: Yield, 1.0 mil (25 µm)	2430	psi	16.7	MPa	
MD: Break, 1.0 mil (25 µm)	5560	psi	38.3	MPa	
TD: Break, 1.0 mil (25 µm)	4810	psi	33.1	MPa	

1. Typical properties: these are not to be construed as specifications. Users should confirm results by their own tests.
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/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.

Properties (Cont.)

Films	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Tensile Elongation					ASTM D882
MD: Break, 1.0 mil (25 µm)	520	%	520	%	
TD: Break, 1.0 mil (25 µm)	660	%	660	%	
Dart Drop Impact (1.0 mil (25 µm))	110	g	110	g	ASTM D1709A
Elmendorf Tear Strength					ASTM D1922
MD: 1.0 mil (25 µm	71	g	71	g	
TD: 1.0 mil (25 µm)	410	g	410	g	
Thermal					
Vicat Softening Temperature	248	°F	120	°C	ASTM D1525
Melting Temperature (DSC)	259	°F	126	°C	Internal Method
Optical					
Gloss (45°C, 1.0 mil (25.4 µm))	58		58		ASTM D2457
Haze (1.0 mil (25.4 µm))	7.00	%	7.00	%	ASTM D1003
Extrusion					
Melt Temperature	400 to 475	°F	204 to 246	°C	
Extrusion Notes					

Fabrication Conditions for Blown Film:

- Screw Size: 2.5 in. (63.5 mm); 24:1 L/D
- Screw Type: Single Flight, Double Mix
- Die Gap: 70 mil (1.8 mm)
- Melt Temperature: 400–475°F (200–250°C)
- Output: 7 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- Blow-up Ratio: 2.5:1
- Screw Speed: 87.3 rpm
- Frost Line Height: 23 in. (584 mm)

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