



DOW™ LDPE 621I

The Dow Chemical Company - Low Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

DOW LDPE 621I Resin is a low density polyethylene resin intended for foam and blown film applications requiring high melt strength.

- Specialty resin designed for high melt strength applications
- Provides excellent bubble stability

Complies with:

- U.S. FDA 21 CFR 177.1520 (c) 2.1
- Canadian HPFB No Objection

Consult the regulations for complete details.

General

Material Status	• Commercial: Active
Availability	• North America
Additive	• Antiblock: No • Processing Aid: No • Slip: No
Agency Ratings	• FDA 21 CFR 177.1520(c) 2.1 • HPFB (Canada) No Objection
Forms	• Pellets
Processing Method	• Blown Film • Foam Processing

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.920		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	2.3	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	2	mil	
Film Puncture Resistance (2.0 mil)	43.0	ft-lb/in ³	Internal Method
Film Toughness - MD (2.0 mil)	1700	ft-lb/in ³	ASTM D882
Film Toughness - TD (2.0 mil)	1790	ft-lb/in ³	ASTM D882
Secant Modulus - 2% Secant, MD (2.0 mil)	24100	psi	ASTM D882
Secant Modulus - 2% Secant, TD (2.0 mil)	30200	psi	ASTM D882
Tensile Strength - MD (Yield, 2.0 mil)	1690	psi	ASTM D882
Tensile Strength - TD (Yield, 2.0 mil)	1600	psi	ASTM D882
Tensile Strength - MD (Break, 2.0 mil)	3160	psi	ASTM D882
Tensile Strength - TD (Break, 2.0 mil)	2850	psi	ASTM D882
Tensile Elongation - MD (Break, 2.0 mil)	450	%	ASTM D882
Tensile Elongation - TD (Break, 2.0 mil)	620	%	ASTM D882
Dart Drop Impact (2.0 mil)	96	g	ASTM D1709A
Elmendorf Tear Strength - MD (2.0 mil)	320	g	ASTM D1922
Elmendorf Tear Strength - TD (2.0 mil)	190	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	198	°F	ASTM D1525
Melting Temperature (DSC)	226	°F	Internal Method
Optical	Nominal Value	Unit	Test Method
Gloss (45°, 2.00 mil)	40		ASTM D2457

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Optical	Nominal Value	Unit	Test Method
Haze (2.00 mil)	16.1	%	ASTM D1003

Processing Information

Extrusion	Nominal Value	Unit
Melt Temperature	425	°F

Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 2.5 in. (63.5 mm) 30:1 L/D
- Die Gap: 40 mil (1.0 mm)
- Melt Temperature: 425°F (218°C)
- Output: 10 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 89 rpm
- Frost Line Height: 30 in. (762mm)

Notes

¹ Typical properties: these are not to be construed as specifications.