



DOWLEX™ 2085G

Linear Low Density Polyethylene Resin

Overview DOWLEX® 2085G Polyethylene Resin is an ethylene-octene copolymer designed for general purpose thin gauge film applications. It is perfect for high strength consumer trash bags/liners. This product can be used in other applications that require toughness and also offers good melt strength for high throughput rates.

Complies with:
 • U.S. FDA 21 CFR 177.1520 (c) 3.2a
 Consult the regulations for complete details.

Additive • Antiblock: 5100 ppm • Slip: 917 ppm • Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.920 g/cm ³	0.920 g/cm ³	ASTM D792
Base Density ¹	0.917 g/cm ³	0.917 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	0.85 g/10 min	0.85 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	1.0 mil	25 µm	
Film Puncture Energy	35.0 in·lb	3.95 J	Dow Method
Film Puncture Force	12.0 lbf	53.4 N	Dow Method
Film Puncture Resistance	250 ft·lb/in ³	20.7 J/cm ³	Dow Method
Film Toughness			ASTM D882
MD	850 ft·lb/in ³	70.3 J/cm ³	
TD	1000 ft·lb/in ³	82.7 J/cm ³	
Secant Modulus			ASTM D882
1% Secant, MD	25000 psi	172 MPa	
2% Secant, MD	22000 psi	152 MPa	
1% Secant, TD	26000 psi	179 MPa	
2% Secant, TD	23000 psi	159 MPa	
Tensile Strength			ASTM D882
MD : Yield	1200 psi	8.27 MPa	
TD : Yield	1300 psi	8.96 MPa	
MD : Break	5000 psi	34.5 MPa	
TD : Break	4000 psi	27.6 MPa	
Tensile Elongation			ASTM D882
MD : Break	450 %	450 %	
TD : Break	600 %	600 %	
Dart Drop Impact	800 g	800 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD	350 g	350 g	
TD	600 g	600 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	221 °F	105 °C	ASTM D1525
Melting Temperature (DSC)	252 °F	122 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°)	30	30	ASTM D2457
Haze	23 %	23 %	ASTM D1003



Additional Information

Fabrication Conditions For Blown Film:

- Screw Size: 3.5 in. (63.5 mm) 30:1 L/D/Size
- Screw Type: DSB II
- Die Gap: 70 mil (1.75 mm)
- Melt Temperature: 420°F
- Output: 12 lb/hr/in. of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 40 rpm
- Frost Line Height: 39 in.

Notes

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

¹ 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.

