

DOWLEX™ 2085G

Linear Low Density Polyethylene Resin
The Dow Chemical Company

Message:

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.

General Information			
Additive	Anti-caking agent (5100 ppm)		
	Sliding agent (917 ppm)		
Agency Ratings	FDA 21 CFR 177.1520(c) 3.2a		
Forms	Particle		
Processing Method	Blow film		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.920	g/cm ³	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	
Film Puncture Energy	3.95	J	Internal method
Film Puncture Force	53.4	N	Internal method
Film Puncture Resistance	20.7	J/cm ³	Internal method
Film strength			ASTM D882
MD	70.3	J/cm ³	ASTM D882
TD	82.7	J/cm ³	ASTM D882
secant modulus			ASTM D882
1% secant, MD	172	MPa	ASTM D882
2% secant, MD	152	MPa	ASTM D882
1% secant, TD	179	MPa	ASTM D882
2% secant, TD	159	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield	8.27	MPa	ASTM D882
TD: Yield	8.96	MPa	ASTM D882
MD: Fracture	34.5	MPa	ASTM D882
TD: Fracture	27.6	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Fracture	450	%	ASTM D882

TD: Fracture	600	%	ASTM D882
Dart Drop Impact	800	g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD	350	g	ASTM D1922
TD	600	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	105	°C	ASTM D1525
Melting Temperature (DSC)	122	°C	Internal method
Optical	Nominal Value	Unit	Test Method
Gloss (45°)	30		ASTM D2457
Haze	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.

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