



DOWLEX™ 2085G

The Dow Chemical Company - Linear Low Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

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

Material Status	• Commercial: Active
Availability	• Latin America • North America
Additive	• Antiblock: 5100 ppm • Processing Aid: No • Slip: 917 ppm
Agency Ratings	• FDA 21 CFR 177.1520(c) 3.2a
Forms	• Pellets
Processing Method	• Blown Film

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.922		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	0.85	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	1	mil	
Film Puncture Energy	35.0	in·lb	Internal Method
Film Puncture Force	12.0	lbf	Internal Method
Film Puncture Resistance	250	ft·lb/in ³	Internal Method
Film Toughness - MD	850	ft·lb/in ³	ASTM D882
Film Toughness - TD	1000	ft·lb/in ³	ASTM D882
Secant Modulus			ASTM D882
1% Secant, MD	25000	psi	
2% Secant, MD	22000	psi	
Secant Modulus			ASTM D882
1% Secant, TD	26000	psi	
2% Secant, TD	23000	psi	
Tensile Strength - MD (Yield)	1200	psi	ASTM D882
Tensile Strength - TD (Yield)	1300	psi	ASTM D882
Tensile Strength - MD (Break)	5000	psi	ASTM D882
Tensile Strength - TD (Break)	4000	psi	ASTM D882
Tensile Elongation - MD (Break)	450	%	ASTM D882
Tensile Elongation - TD (Break)	600	%	ASTM D882
Dart Drop Impact	800	g	ASTM D1709A
Elmendorf Tear Strength - MD	350	g	ASTM D1922
Elmendorf Tear Strength - TD	600	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	221	°F	ASTM D1525

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Thermal	Nominal Value	Unit	Test Method
Melting Temperature (DSC)	252	°F	Internal Method
Optical	Nominal Value	Unit	Test Method
Gloss (45°)	30		ASTM D2457
Haze	23.0	%	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

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