



DOWLEX™ 2083G

The Dow Chemical Company - Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

Linear Low Density Polyethylene
Excellent tear strength, outstanding toughness

Complies with:

- U.S. FDA 21 CFR 177.1520 (c) 3.2a.
- 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) 3.2a • HPFB (Canada) No Objection
Forms	• Pellets
Processing Method	• Blown Film • Cast Film

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.927		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	2.0	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Puncture Resistance			
0.80 mil	262	ft-lb/in ³	
2.0 mil	271	ft-lb/in ³	
Film Toughness - MD			ASTM D882
0.80 mil	1070	ft-lb/in ³	
2.0 mil	1580	ft-lb/in ³	
Film Toughness - TD			ASTM D882
0.80 mil	1710	ft-lb/in ³	
2.0 mil	1670	ft-lb/in ³	
Tensile Strength - MD			ASTM D882
Yield, 0.80 mil	1700	psi	
Yield, 2.0 mil	1590	psi	
Tensile Strength - TD			ASTM D882
Yield, 0.80 mil	1510	psi	
Yield, 2.0 mil	1510	psi	
Tensile Strength - MD			ASTM D882
Break, 0.80 mil	7280	psi	
Break, 2.0 mil	7070	psi	
Tensile Strength - TD			ASTM D882
Break, 0.80 mil	5870	psi	
Break, 2.0 mil	5860	psi	

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Films	Nominal Value	Unit	Test Method
Tensile Elongation - MD			ASTM D882
Break, 0.80 mil	420	%	
Break, 2.0 mil	670	%	
Tensile Elongation - TD			ASTM D882
Break, 0.80 mil	800	%	
Break, 2.0 mil	790	%	
Dart Drop Impact			ASTM D1709A
0.80 mil	94	g	
2.0 mil	180	g	
Elmendorf Tear Strength - MD			ASTM D1922
0.80 mil	160	g	
2.0 mil	650	g	
Elmendorf Tear Strength - TD			ASTM D1922
0.80 mil	580	g	
2.0 mil	960	g	
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	226	°F	ASTM D1525
Melting Temperature (DSC)	255	°F	Internal Method
Optical	Nominal Value	Unit	Test Method
Gloss			ASTM D2457
45°, 0.800 mil	93		
45°, 2.00 mil	91		
Haze			ASTM D1003
0.800 mil	1.20	%	
2.00 mil	3.70	%	

Processing Information

Extrusion Notes

Fabrication Conditions For Cast Film:

- Screw Size: 2.0 in. (51 mm); 30:1 L/D
 - Melt Temperature: 524°F (273°C)
- Screw Size: 2.5 in. (63.5 mm); 30:1 L/D
 - Melt Temperature: 525°F (274°C)
- Chill Roll Temperature: 70°F (21°C)
- Screw Speed: 30 rpm
- Line Speed: 600 fpm (183 m/min)

Notes

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