



DOW™ HDPE DGDC-2100 NT 7

The Dow Chemical Company - High Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

- High Density Polyethylene (HDPE)
- Complies with:
 - U.S. FDA 21 CFR 177.1520 (c) 3.2a
 - Canadian HPFB No Objection
 - EU, No 10/2011
 - Consult the regulations for complete details.

DOW DGDC-2100 NT 7 High Density Polyethylene Resin is a high-molecular weight, high-density film grade resin. This product was specifically designed to offer an optimal balance of physical properties and processability. DGDC-2100 NT7 HDPE resin is ideally suited for use in making grocery sacks, consumer and institutional liners, and merchandise bags.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• North America	
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
Agency Ratings	• EU No 10/2011	• FDA 21 CFR 177.1520(c) 3.2a	• HPFB (Canada) No Objection
Forms	• Pellets		
Processing Method	• Blown Film	• Profile Extrusion	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.950		ASTM D792
Melt Mass-Flow Rate			ASTM D1238
190°C/2.16 kg	0.070	g/10 min	
190°C/21.6 kg	9.0	g/10 min	
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	1	mil	
Film Puncture Energy (0.50 mil)	7.90	in-lb	Internal Method
Film Puncture Force (0.50 mil)	6.70	lbf	Internal Method
Film Puncture Resistance (0.50 mil)	128	ft-lb/in ³	Internal Method
Secant Modulus - 2% Secant, MD (0.50 mil)	140000	psi	ASTM D882
Secant Modulus - 2% Secant, TD (0.50 mil)	159000	psi	ASTM D882
Tensile Strength - MD (Yield, 0.50 mil)	6140	psi	ASTM D882
Tensile Strength - TD (Yield, 0.50 mil)	4610	psi	ASTM D882
Tensile Strength - MD (Break, 0.50 mil)	13600	psi	ASTM D882
Tensile Strength - TD (Break, 0.50 mil)	9990	psi	ASTM D882
Tensile Elongation - MD (Break, 0.50 mil)	330	%	ASTM D882
Tensile Elongation - TD (Break, 0.50 mil)	410	%	ASTM D882
Dart Drop Impact (0.50 mil)	350	g	ASTM D1709A
Elmendorf Tear Strength - MD (0.50 mil)	11	g	ASTM D1922
Elmendorf Tear Strength - TD (0.50 mil)	73	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Melting Temperature (DSC)	262	°F	Internal Method

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Optical	Nominal Value	Unit	Test Method
Gloss (45°, 0.500 mil)	9		ASTM D2457
Haze (0.500 mil)	69.0	%	ASTM D1003

Processing Information

Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 1.97 in. (50mm); 24:1 L/D
- Melt Temperature: 410 °F (210 °C)
- Output: 8 lb/hr/in. of die circumference
- Die Diameter: 3.94 in. (100mm)
- Blow-Up Ratio: 4:1
- Neck Height: 32 in. (813 mm)

Notes

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