

Producer: The Dow Chemical Company (DOW)/ The United States (USA)

DOW HDPE DGDC-2100 NT 7

Description:

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. **DOW DGDC-2100 NT 7** HDPE resin is ideally suited for use in making grocery sacks, consumer and institutional liners, and merchandise bags.

PROPERTY	NOMINAL VALUE (ENGLISH)	NOMINAL VALUE (SI)	TEST METHOD
Physical			
Density	0,948 g/cm ³	0,948 g/cm ³	ASTM D 792
Melt Index			ASTM D 1238
190°C / 21.6 Kg	9.0 g/10 min.	9.0 g/10 min.	
190°C / 2.16 Kg	0.070 g/10 min.	0.070 g/10 min.	
Films			
Film Thickness - tested	0.500 mil.	12.7 µm	
Film Puncture Energy (0.500 mil (12.7 µm))	7.90 in lb	0.893 J	Dow Method
Film Puncture Force (0.500 mil (12.7 µm))	6.70 lbf	29.8 J	Dow Method
Film Puncture Resistance (0.500 mil (12.7 µm))	128 ft lb/in ³	10.6 J/cm ³	Dow Method
Secant Modulus			ASTM D 882
2% Secant, MD:0.500 mil (12.7 µm)	140000 psi	966 Mpa	
2% Secant, TD:0.500 mil (12.7 µm)	159000 psi	1100 Mpa	
Tensile Strength			ASTM D 882
MD: Yield, 0.500 mil (12.7 µm)	6140 psi	42.4 Mpa	
TD: Yield, 0.500 mil (12.7 µm)	4610 psi	31.8 Mpa	
MD: Break, 0.500 mil (12.7 µm)	13600 psi	93.4 Mpa	
TD: Break, 0.500 mil (12.7 µm)	9990 psi	68.8 Mpa	
Tensile Elongation			ASTM D 882
MD: Break, 0.500 mil (12.7 µm)	330%	330%	
TD: Break, 0.500 mil (12.7 µm)	410%	410%	
Dart Drop Impact (0.500 mil (12.7 µm))	350 g	350 g	ASTM D 1709A
Elmendorf Tear Strength			ASTM D 1922
MD: 0.500 mil (12.7 µm)	11 g	11 g	
TD: 0.500 mil (12.7 µm)	73 g	73 g	
Thermal			
Melting Temperature (DSC)	504 °F	262 °C	Dow Method
Optical			
Gloss (45 ⁰ , 0.500 mil (12.7 µm))	9	9	ASTM D 2457
Haze (0.500 mil (12.7 µm))	69%	69%	ASTM D 1003



DOW HDPE DGDC-2100 NT 7

PROPERTY	NOMINAL VALUE (ENGLISH)	NOMINAL VALUE (SI)	TEST METHOD
Melt Temperature	410 °F	210 °C	

Extrusion notes

Fabrication Conditions For Blown Film:

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

Notes

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