



DOW™ HDPE DGDB-5004 NT 7

The Dow Chemical Company - High Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

DOW DGDB-5004 NT 7 High Density Polyethylene (HDPE) resin is a multi-purpose polymer designed for sheet extrusion and thermoforming applications, including single-serve disposables and other thin walled containers including food service such as cups, plates, bowls and refrigerated dairy containers.

Main Characteristics:

- Maximum rigidity
- Excellent color consistency
- High Melt Strength
- High Impact Strength including low temperature toughness
- Good Top Load Strength
- Optimized Shear Rheology for Good Processability

Complies with:

- U.S. FDA 21 CFR 177.1520 (c) 2.2
- Canadian HPFB No Objection

Consult the regulations for complete details.

General

Material Status	• Commercial: Active		
Availability	• Latin America	• North America	
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
Agency Ratings	• FDA 21 CFR 177.1520(c) 2.2	• HPFB (Canada) No Objection	
Forms	• Pellets		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.963		ASTM D792
Melt Mass-Flow Rate			ASTM D1238
190°C/2.16 kg	0.80	g/10 min	
190°C/21.6 kg	57	g/10 min	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	4600	psi	ASTM D638
Tensile Strength (Break)	3500	psi	ASTM D638
Tensile Elongation (Yield)	7.0	%	ASTM D638
Tensile Elongation (Break)	1000	%	ASTM D638
Flexural Modulus - 2% Secant	188000	psi	ASTM D790B
Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength ²	40.0	ft-lb/in ²	ASTM D1822
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	66		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	169	°F	ASTM D648
Brittleness Temperature	< -105	°F	ASTM D746
Vicat Softening Temperature	268	°F	ASTM D1525

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Thermal	Nominal Value	Unit	Test Method
Melting Temperature (DSC)	271	°F	Internal Method
Peak Crystallization Temperature (DSC)	248	°F	Internal Method

Additional Information

Plaque molded and tested in accordance with ASTM D 4976.

Notes

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

² Type S