



DOW™ HDPE DGDB-2480 NT

The Dow Chemical Company - High Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

DOW DGDB-2480 NT High Density Polyethylene resin is produced using UNIPOL™ process technology. It is intended for use in pipe applications where long term hydrostatic strength and resistance to slow crack growth are desired. Suitable applications include natural gas distribution pipes, large diameter industrial piping, mining, sewage, and municipal water service lines.

Industrial Standards Compliance:

ASTM D 3350: cell classification

- Natural - PE345464A
- Black - PE345464C (See NOTES A)

Plastics Pipe Institute (PPI): TR-4

- Natural Pipe - DGDB-2480 NT 3408
 - ASTM PE3608 pipe grade - 1600psi HDB @ 73°F
- Black Pipe - DGDB-2480 BK 3408 (See NOTES B)
 - ASTM PE3608 pipe grade - 1600psi HDB @ 73°F and 800psi HDB @ 140°F

National Sanitation Foundation (NSF)

Standard 14 and 61

- Natural Pipe - DGDB-2480 NT 3608
- Black Pipe - DGDB-2480 BK 3608 (See NOTES B)

Consult the regulations for complete details.

NOTES:

(A) The first five numbers of the cell classification are based on natural resin. The last number and letter are based on black resin (natural resin plus 6.5% DFNF-0092).

(B) Natural resin extruded under proper conditions with carbon black masterbatch DFNF-0092 (6.5%).

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Latin America	• North America
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
Agency Ratings	• ASTM D3350 PE345464A • ASTM D3350 PE345464C	• NSF STD-14 • NSF STD-61	• PPI TR-4
Forms	• Pellets		
Processing Method	• Profile Extrusion		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity			ASTM D792
-- ²	0.946		
-- ³	0.956		
Melt Mass-Flow Rate			ASTM D1238
190°C/2.16 kg	0.10	g/10 min	
190°C/21.6 kg	8.3	g/10 min	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ⁴ (Yield)	3200	psi	ASTM D638
Tensile Elongation ⁴ (Break)	850	%	ASTM D638
Flexural Modulus ^{5, 4}	120000	psi	ASTM D790B

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Mechanical	Nominal Value	Unit	Test Method
Slow Crack Growth PENT ⁶ (176°F)	200	hr	ASTM F1473
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact ⁴ (73°F)	4.0	ft-lb/in	ASTM D256A
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature ⁴	< -148	°F	ASTM D746A
Thermal Stability	> 482	°F	ASTM D3350

Processing Information

Extrusion	Nominal Value	Unit
Melt Temperature	380 to 440	°F

Extrusion Notes

Fabrication Conditions:

- Screw Type: High quality HDPE (preferably barrier for complete melting)
- Melt Temperature Range: 380-440°F (193-225°C)

Notes

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

² Natural resin

³ Natural resin extruded under proper conditions with carbon black masterbatch DFNF-0092 (6.5%)

⁴ Compression molded parts prepared according to ASTM D 4703, Procedure C. Properties will vary with changes in molding conditions and aging time. Data generated based on ASTM F1473 at Dow facility. Pent data projected based on representative test samples and conditions.

⁵ Method I (3 point load)

⁶ 2.4 MPa