



CONTINUUM™ DGDA-2420 NT Bimodal Polyethylene Resin

Overview

CONTINUUM™ DGDA-2420 NT Bimodal Polyethylene Resin is produced using UNIPOL™ II process technology. This product is formulated with a UV stabilizer for outdoor storage. This product may be utilized for pipe applications where long-term hydrostatic strength combined with outstanding resistance to slow crack growth and rapid crack propagation is desired. Suitable applications include natural gas distribution pipes, irrigation and drip tube.

Industrial Standards Compliance:

- ASTM D 3350: cell classification PE234373E
- ISO PE 80 pipe grade
- ASTM PE 2708 pipe grade - 1250 psi HDB @ 73F, 800 psi HDS at 73F, and 1000 psi HDB at 140F

Consult the regulations for complete details.

Additive

- Antiblock: No
- Slip: No
- Processing Aid: Yes

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density (Natural Compound)	0.941 g/cm ³	0.941 g/cm ³	ASTM D792
Base Density ¹	0.940 g/cm ³	0.940 g/cm ³	Dow Method
Melt Index			ASTM D1238
190°C/2.16 kg ²	0.16 g/10 min	0.16 g/10 min	
190°C/21.6 kg ³	9.5 g/10 min	9.5 g/10 min	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ⁴ (Yield)	> 2600 psi	> 17.9 MPa	ASTM D638
Tensile Elongation ⁴ (Break)	> 600 %	> 600 %	ASTM D638
Flexural Modulus - 2% Secant ^{5,4}	> 90000 psi	> 621 MPa	ASTM D790B
Resistance to Rapid Crack Propagation, Pc			
Full Scale : 32°F (0°C) ⁶	> 560 psi	> 38.6 bar	ISO 13478
S-4 : 32°F (0°C) ⁷	> 145 psi	> 10.0 bar	ISO 13477
Resistance to Rapid Crack Propagation, Tc - S-4 @ 5 bar ⁷	< 28 °F	< -2 °C	ISO 13477
Slow Crack Growth Resistance ⁴			
Notched Pipe Test	> 3000 hr	> 3000 hr	ISO 13479
PENT	15000 hr	15000 hr	ASTM F1473
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Brittleness Temperature ⁴	< -103 °F	< -75.0 °C	ASTM D746A
Thermal Stability	> 428 °F	> 220 °C	ASTM D3350

Notes

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

¹ Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.

² Melt Index

³ Flow Index

⁴ Compression molded parts prepared according to ASTM D 4703 Procedure C unless otherwise noted in the test method. Properties will vary with changes in molding conditions and aging time.

⁵ Method I (3 point load)

⁶ Calculated value, determined by the equation in ISO 4437 based on S-4 test data. Pipe diameter of 12 inch IPS (30.5 cm) and Standard Dimension Ratio (SDR) 11.5.
Pipe diameter of 12 inch IPS (30.5 cm) and Standard Dimension Ratio (SDR) 11.5.

⁷ Pipe diameter of 12 inch IPS (30.5 cm) and Standard Dimension Ratio (SDR) 11.5.

