



CONTINUUM™ DGDA-2420 NT

Bimodal Polyethylene Resin

Overview

Industrial Standards Compliance

- ASTM D 3350: cell classification
 - Natural - PE 234370A (HDB)
 - Yellow - PE 234373E (HDB) (See NOTES 1)
- Plastics Pipe Institute (PPI): TR-4
 - Yellow Pipe - CONTINUUM™ DGDA-2420 YL (See NOTES 2)
- ASTM PE 2708 pipe grade - 1250 psi HDB and 800psi HDS @ 23°C, and 1000 psi HDB @ 60°C
- Consult the regulations for complete details.

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.

NOTES:

- (1) The first five numbers of the cell classification are based on natural resin. The last number and letter are based on yellow resin (natural resin plus approved yellow masterbatch).
- (2) Natural resin extruded under proper conditions with approved yellow masterbatch.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.940 g/cm ³	0.940 g/cm ³	ASTM D792 ¹
Melt Index			ASTM D1238
190°C/2.16 kg	> 0.15 g/10 min	> 0.15 g/10 min	
190°C/21.6 kg	9.5 g/10 min	9.5 g/10 min	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength (Yield)	> 2600 psi	> 17.9 MPa	ASTM D638 ²
Tensile Elongation (Break)	> 600 %	> 600 %	ASTM D638 ²
Flexural Modulus - 2% Secant	> 90000 psi	> 621 MPa	ASTM D790B ^{3, 2}
Hydrostatic Strength			ASTM D2837
73°F (23°C)	1 ksi	9 MPa	
140°F (60°C)	1 ksi	7 MPa	
Resistance to Rapid Crack Propagation, Full Scale Pc			ISO 13478 ⁴
32°F (0°C)	> 1 ksi	> 4 MPa	
Resistance to Rapid Crack Propagation, S-4 Pc			ISO 13477 ⁵
32°F (0°C)	> 145 psi	> 145 psi	
Resistance to Rapid Crack Propagation, S-4 Tc			ISO 13477 ⁶
--	< 28 °F	< -2 °C	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Brittleness Temperature	< -103 °F	< -75.0 °C	ASTM D746A ²
Thermal Stability	> 428 °F	> 220 °C	ASTM D3350
Additional Information	Nominal Value (English)	Nominal Value (SI)	Test Method
Resistance to Slow Crack Growth			
--	> 17.9 wk	> 17.9 wk	ISO 13479
--	> 89.3 wk	> 89.3 wk	ASTM F1473 ²
Extrusion	Nominal Value (English)	Nominal Value (SI)	
Melt Temperature	380 to 440 °F	193 to 227 °C	

Extrusion Notes

Fabrication Conditions:

- Screw Type: Barrier
- Melt Temperature Range: 380-440°F (193-225°C)

Notes

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

¹ Base resin

² 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.

³ Method I (3 point load)

⁴ 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 Diameter Ratio (SDR) 11.5.

⁵ Pipe diameter of 12 inch IPS (30.5 cm) and Standard Diameter Ratio (SDR) 11.5.

⁶ @ 5 bar; Pipe diameter of 12 inch IPS (30.5 cm) and Standard Diameter Ratio (SDR) 11.5.

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