



CONTINUUM™ DGDA-2420 YL2

The Dow Chemical Company - Bimodal Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

CONTINUUM™ DGDA-2420 YL2 Bimodal Polyethylene Resin is produced using UNIPOL™ II process technology. This product is formulated with UV stabilizers 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.

Industrial Standards Compliance:

- ASTM D 3350: cell classification:
 - Natural – PE234373D
 - Yellow - PE234373E (Note A)
- NSF International: Standard 14
- Canadian Standards Association (CSA): B137.4 – PE2708 PLUS
- Plastics Pipe Institute (PPI):
 - psi HDB @ 73°F, 800 psi HDS at 73°F, and 1000 psi HDB at 140°F

NOTES:

(A) The first 5 numbers of the cell classification are based on natural resin. The last number and letter are based on yellow resin. (natural resin plus 2.0% DFDA 0022 YL2).

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Latin America	• North America
Additive	• Antiblock: No	• Processing Aid: Yes	• Slip: No
Agency Ratings	• ASTM D3350 PE234373E	• ASTM PE2708	• ISO PE 100
Forms	• Pellets		
Processing Method	• Profile Extrusion		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density			ASTM D1505
Base Resin	0.940	g/cm ³	
Yellow	0.941	g/cm ³	
Melt Mass-Flow Rate			ASTM D1238
190°C/2.16 kg	< 0.25	g/10 min	
190°C/21.6 kg	9.5	g/10 min	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (Yield)	> 2600	psi	ASTM D638
Tensile Elongation ² (Break)	> 600	%	ASTM D638
Flexural Modulus - 2% Secant ^{3, 2}	> 90000	psi	ASTM D790B
Resistance to Rapid Crack Propagation, Pc			
Calculated, Full Scale : 32°F ⁴	> 560	psi	ISO 13478
S-4 : 32°F ⁵	> 145	psi	ISO 13477
Resistance to Rapid Crack Propagation, Tc - S-4 @ 5 bar ⁵	< 28	°F	ISO 13477
Slow Crack Growth Resistance ²			
Notched Pipe Test : 176°F	> 3000	hr	ISO 13479
PENT	15000	hr	ASTM F1473

CONTINUUM™ DGDA-2420 YL2

The Dow Chemical Company - Bimodal Polyethylene Resin

Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature ²	< -103	°F	ASTM D746A
Thermal Stability	> 428	°F	ASTM D3350

Notes

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

² Compression molded parts prepared according to ASTM D 4703 Procedure C. 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 Dimension Ratio (SDR) 11.5.

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