# CONTINUUM™ DGDA-2420 YL

### Bimodal Polyethylene Resin

#### The Dow Chemical Company

#### Message:

CONTINUUM<sup>™</sup> DGDA-2420 YL Bimodal Polyethylene Resin is produced using UNIPOL<sup>™</sup> 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 PE234373E(a) Plastics Pipe Institute (PPI): ISO PE 80 pipe grade ASTM PE 2708 pipe grade - 1250 psi HDB @ 73°F, 800 psi HDS at 73°F, and 1000 psi HDB at 140°F

General Information			
Additive	Processing Aid		
Agency Ratings	ASTM D 3350 PE234373E		
	ASTM PE2708		
	ISO PE 100		
Forms	Pellets		
Processing Method	Profile Extrusion		
Physical	Nominal Value	Unit	Test Method
Density			ASTM D1505
Base Resin <sup>1</sup>	0.940	g/cm <sup>3</sup>	
Yellow <sup>2</sup>	0.944	g/cm <sup>3</sup>	
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	> 0.28	g/10 min	
190°C/21.6 kg	9.5	g/10 min	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>3</sup> (Yield)	> 17.9	MPa	ASTM D638
Tensile Elongation <sup>4</sup> (Break)	> 600	%	ASTM D638
Flexural Modulus - 2% Secant	> 621	MPa	ASTM D790B
Resistance to Rapid Crack Propagation, Pc			
Calculated, Full Scale : $0^{\circ}C^{5}$	> 38.6	bar	ISO 13478
S-4 : 0°C <sup>6</sup>	> 10.0	bar	ISO 13477
Resistance to Rapid Crack Propagation, Tc			
- S-4 @ 5 bar <sup>7</sup>	< -2	°C	ISO 13477
- S-4 @ 5 bar <sup>7</sup> Slow Crack Growth Resistance <sup>8</sup>	< -2	°C	ISO 13477
- S-4 @ 5 bar <sup>7</sup> Slow Crack Growth Resistance <sup>8</sup> Notched Pipe Test : 80°C	< -2	°C hr	ISO 13477 ISO 13479
- S-4 @ 5 bar <sup>7</sup> Slow Crack Growth Resistance <sup>8</sup> Notched Pipe Test : 80°C PENT	< -2 > 3000 > 15000	°C hr hr	ISO 13477 ISO 13479 ASTM F1473
- S-4 @ 5 bar <sup>7</sup> Slow Crack Growth Resistance <sup>8</sup> Notched Pipe Test : 80°C PENT Thermal Stability	< -2 > 3000 > 15000 > 220	°C hr hr °C	ISO 13477 ISO 13479 ASTM F1473 ASTM D3350
- S-4 @ 5 bar <sup>7</sup> Slow Crack Growth Resistance <sup>8</sup> Notched Pipe Test : 80°C PENT Thermal Stability Thermal	< -2 > 3000 > 15000 > 220 Nominal Value	°C hr hr °C Unit	ISO 13477 ISO 13479 ASTM F1473 ASTM D3350 Test Method
- S-4 @ 5 bar <sup>7</sup> Slow Crack Growth Resistance <sup>8</sup> Notched Pipe Test : 80°C PENT Thermal Stability Thermal Brittleness Temperature <sup>9</sup>	< -2 > 3000 > 15000 > 220 Nominal Value < -75.0	°C hr hr °C Unit	ISO 13477 ISO 13479 ASTM F1473 ASTM D3350 Test Method ASTM D746A

NOTE	
	Compression molded parts
	prepared according to ASTM D
	1928 Procedure C. Properties will
4	vary with changes in molding
1.	conditions and aging time.
2.	Method I (3 point load)
	Compression molded parts
	prepared according to ASTM D
	1928 Procedure C. Properties will
	vary with changes in molding
	conditions and aging
	time.Calculated value, determined
	by the equation in ISO 4437 based
	on S-4 test data. Pipe diameter of
	12 inch IPS (30.5 mcm) and
	Standard Dimension Ratio (SDR)
3.	11.5.
	Compression molded parts
	prepared according to ASTM D
	1928 Procedure C. Properties will
	vary with changes in molding
	conditions and aging
	time.Calculated value, determined
	by the equation in ISO 4437 based
	on S-4 test data. Pipe diameter of
	12 inch IPS (30.5 mcm) and
	Standard Dimension Ratio (SDR)
4.	11.5.
	Calculated value, determined by
	the equation in ISO 4437 based on
	S-4 test data. Pipe diameter of 12
	inch IPS (30.5 mcm) and Standard
5.	Dimension Ratio (SDR) 11.5.
	Pipe diameter of 12 inch IPS (30.5
	cm) and Standard Dimension Ratio
6.	(SDR) 11.5.
	Pipe diameter of 12 inch IPS (30.5
	cm) and Standard Dimension Ratio
7.	(SDR) 11.5.
	Compression molded parts
	prepared according to ASTM D
	1928 Procedure C. Properties will
	vary with changes in molding
8.	conditions and aging time.
	Compression molded parts
	prepared according to ASTM D
	1928 Procedure C. Properties will
	vary with changes in molding
9.	conditions and aging time.

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