



Technical Data Sheet

CONTINUUM™ DGDA-2490 WH Bimodal Polyethylene Resin

Overview

CONTINUUM™ DGDA-2490 WH Bimodal Polyethylene Resin is produced using UNIPOL™ II process technology. 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 municipal water service lines, industrial piping, mining and sewage.

Sustainability Attribute:



Industrial Standards Compliance:

- ASTM D 3350: cell classification
 - Natural — PE445574A CC2
 - White - PE445574E CC3 (See Note A)
- Plastics Pipe Institute (PPI): TR-4
 - Natural Pipe — CONTINUUM™ DGDA-2490 NT
 - ASTM PE4710 pipe grade – 1600 psi HDB and 1000 psi HDS @ 73°F, and 1000 psi HDB @ 140°F
 - White Pipe — CONTINUUM™ DGDA-2490 WH WH Bimodal Polyethylene Resin (See Note B)
 - ASTM PE4710 pipe grade – 1600 psi HDB and 1000 psi HDS @ 73°F, and 1000 psi HDB @ 140°F
- NSF International
 - NSF/ANSI Standard 14
 - NSF/ANS/CAN Standard 61

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 white resin (natural resin plus 2% DFDA-0027 WH 2).
- B. Natural resin extruded under proper conditions with 2.0% white masterbatch DFDA-0027 WH2



Additive

- Antiblock: No
- Slip: No
- Processing aid: Yes

Properties

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method ¹
Density					ASTM D792
Natural	0.949	g/cm ³	0.949	g/cm ³	
White	0.954	g/cm ³	0.954	g/cm ³	
Melt Index					ASTM D1238
190°C/2.16 kg	0.080	g/10 min	0.080	g/10 min	
190°C/21.6 kg	7.5	g/10 min	7.5	g/10 min	
Mechanical					
Tensile Strength (Yield)	> 3500	psi	> 24.1	MPa	ASTM D638
Tensile Elongation (Break)	> 500	%	> 500	%	ASTM D638
Flexural Modulus ²	150000	psi	1030	MPa	ASTM D790B
Resistance to Rapid Crack Propagation, Pc					
Full Scale : 32°F (0°C) ³	> 663	psi	> 45.7	bar	ISO 13478
S-4 : 32°F (0°C) ⁴	> 174	psi	> 12.0	bar	ISO 13477
Resistance to Rapid Crack Propagation, Tc					ISO 13477
Tc S-4 @10 bar ⁴	< 2	°F	< -17	°C	
Slow Crack Growth PENT	10000	hr	10000	hr	ASTM F1473
Impact					
Notched Izod Impact (73°F (23°C))	9.1	ft-lb/in	490	J/m	ASTM D256A
Thermal					
Brittleness Temperature	< -103	°F	< -75.0	°C	ASTM D746A
Thermal Stability	> 428	°F	> 220	°C	ASTM D3350

1. ASTM: American Society for Testing and Materials
ISO: International Standardization Organization
2. Method I (3 point load)
3. Calculated value, determined by the equation in ISO 4437 based on S-4 test data. Pipe diameter of 10 inch IPS (25.4 cm) and Standard Diameter Ratio (SDR) 11.
4. Pipe diameter of 10 inch IPS (25.4 cm) and Standard Diameter Ratio (SDR) 11.

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

