



CONTINUUM™ DGDD-2480 NT

Bimodal Polyethylene Resin

Overview CONTINUUM™ DGDD-2480 NT 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 are desired. Suitable applications include natural gas distribution pipes, industrial piping, mining, sewage, and municipal water service lines.

Industrial Standards Compliance

- ASTM D 3350: cell classification
 - Natural - PE445574A
 - Black - PE445574C (See NOTES 1)
- Plastics Pipe Institute (PPI): TR-4
 - Black Pipe - CONTINUUM DGDD-2480 BK 3408 (See NOTES 2)
 - ASTM PE4710 pipe grade - 1600psi HDB @ 73°F and 1000psi HDB @ 140°F
- National Sanitation Foundation (NSF): Standard 14 and 61
 - Black Pipe - DGDD-2480 BK 3408 (See NOTES 2)
- Consult the regulations for complete details.

NOTES:

- (1) The first five numbers of the cell classification are based on natural resin. The last number and letter are based on black resin (natural resin plus 6.5% DFNF-0092).
 (2) Natural resin extruded under proper conditions with carbon black masterbatch DFNF-0092 (6.5%).

| Physical | Nominal Value (English) | Nominal Value (SI) | Test Method |
|---|-------------------------|-------------------------|----------------------------|
| Density | | | |
| -- | 0.949 g/cm ³ | 0.949 g/cm ³ | ASTM D1505 ¹ |
| -- | 0.959 g/cm ³ | 0.959 g/cm ³ | ASTM D1505 ² |
| Melt Index | | | ASTM D1238 |
| 190°C/2.16 kg | 0.080 g/10 min | 0.080 g/10 min | |
| 190°C/21.6 kg | 8.5 g/10 min | 8.5 g/10 min | |
| Mechanical | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Tensile Strength (Yield) | 3600 psi | 24.8 MPa | ASTM D638 ³ |
| Tensile Elongation (Break) | 740 % | 740 % | ASTM D638 ³ |
| Flexural Modulus | 150000 psi | 1030 MPa | ASTM D790B ^{4, 3} |
| Resistance to Rapid Crack Propagation, S-4 Pc | | | ISO 13477 ⁵ |
| -- | > 174 psi | > 1.20 MPa | |
| Resistance to Rapid Crack Propagation, S-4 Tc | | | ISO 13477 ⁵ |
| -- | < 2 °F | < -17 °C | |
| Slow Crack Growth PENT | | | ASTM F1473 |
| 176°F (80°C), 2.4 MPa | > 24 wk | > 24 wk | |
| Impact | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Notched Izod Impact (73°F (23°C)) | 9.10 ft-lb/in | 486 J/m | ASTM D256A ³ |
| Thermal | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Brittleness Temperature | < -103 °F | < -75.0 °C | ASTM D746A ³ |
| Thermal Stability | > 428 °F | > 220 °C | ASTM D3350 |
| Extrusion | Nominal Value (English) | Nominal Value (SI) | |
| Melt Temperature | 380 to 440 °F | 193 to 227 °C | |
| Extrusion Notes | | | |

Fabrication Conditions:

- Screw Type: High quality HDPE (preferably barrier for complete melting)
- 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 Natural resin

² Natural resin extruded under proper conditions with carbon black masterbatch DFNF-0092 (6.5%)

³ Compression molded parts prepared according to ASTM D 4703, Procedure C. Properties will vary with changes in molding conditions and aging time.

⁴ Method I (3 point load)

⁵ Pipe diameter of 10 inch IPS (25.4 cm) and Standard Diameter Ratio (SDR) 11.

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Published: 2006-06-09

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