



ENDOT INDUSTRIES, INC.

PIPE AND TUBING • DUCT AND INNERDUCT

ENDOT PE-100/PE4710 GAS PIPE

Endot announces the immediate availability of PE-100/PE4710* gas pipe produced from the new, high performance Bi-Modal resin, DGDA 2490BK from Dow Chemical.

Endot PE-100/PE 4710 Gas Pipe is produced in black with three yellow stripes for easy identification as gas service pipe and tubing. Endot PE-100/PE 3408 Gas Pipe is available in CTS and IPS dimensions produced to ASTM D2513 and is available in sizes from ½" through 2".

The Dow resin DGDA 2490BK used to make Endot PE-100/PE 4710 Gas Pipe is a Bi-Modal, High Density Polyethylene (HDPE) and is the first ISO PE100 pipe material produced in North America to be listed with a 100-year rating at 20°C (68°F) by The Plastics Pipe Institute, Inc. (PPI). DOW DGDA-2490 BK100 HDPE resin also was given a 50-year rating at 40°C (104°F) and an 11-year rating at 60°C (140°F) by the PPI, making it the first PE100 resin to be listed at elevated temperatures

This new HDPE resin provides enhanced performance characteristics, such as:

- Superior Slow Crack Growth (SCG) resistance
- Excellent resistance to Rapid Crack Propagation (RCP)
- High temperature/pressure performance
- Increased toughness (especially at low temperatures)
- Increased tensile strength and modulus
- Enhanced fusion to MDPE and other HDPE pipe grades

Resin Properties

| | | |
|--|------------|-------------|
| Cell Classification (with carbon black) | ASTM D3350 | PE445576C |
| Melt Index (I ₂) @ 190°C/2.16 kg, g/10 min | ASTM D1238 | 0.08 |
| Flow Rate (I ₂) @ 190°C/21.60 kg, g/10min | ASTM D1238 | 7.0 |
| Density (natural resin), g/cc | ASTM D792 | 0.949 |
| Density, g/cc | ASTM D792 | 0.959 |
| Thermal Stability, °F (°C) | ASTM D3350 | >428 (>220) |

Mechanical Properties

| | | |
|--|----------------------------------|----------------|
| Tensile Strength at Yield, psi (MPa) | ASTM D638 | 3600 (24.8) |
| Elongation at Break, % | ASTM D638 | 740 |
| Flexural Modulus, psi (MPa) | ASTM D790, method 1, procedure B | 150,000 (1034) |
| Notched Izod Impact @ 23°C, ft lbf/in. (J/m) | ASTM D256, method A | 9.1 (488) |
| Brittleness Temperature, °F (°C) | ASTM D746, procedure A | <-103 (<-75) |
| Slow Crack Growth PENT, hours | ASTM F1473 | >10000 |

Pipe Properties

| | |
|---|------------|
| Hydrostatic Strength @ 20°C /1798 psi (12.4 MPa), hr.ASTM 1598 | >100 |
| Hydrostatic Strength @ 80°C / 798 psi (5.5 MPa), hr. ASTM 1598 | >1000 |
| Resistance to Rapid Crack Propagation, Pc, psi (bar) SO 13477 | >174 (>12) |
| Resistance to Rapid Crack Propagation, Tc, °F (°C) ISO 13477 | <2 (<-17) |

Fusion Qualification

Qualified to TR-33 Generic Procedure

* PE 4710 is also called PE 3408 under certain ASTM and AGA specifications

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