

## Marlex® TRB-490 Polyethylene

### HIGH DENSITY POLYETHYLENE (HDPE)

This bimodal high molecular weight, high density polyethylene (HMW-HDPE) ethylene-hexene copolymer is tailored as a blend resin component for corrugated pipe applications that require excellent:

- Melt strength
- Pipe stiffness
- Creep resistance
- Impact resistance
- Slow Crack Growth Resistance
- Chemical resistance

Typical corrugated pipe applications for TRB-490 include:

- Roadway culverts
- Storm sewers

This resin meets these specifications:

- ASTM D4976 – PE 235
- AASHTO M 294
- AASHTO M 252
- ASTM D3350 Cell Class PE445500A

| Nominal Resin Properties <sup>(1)</sup>                                 | English     | SI                      | Method     |
|---|-------------|-------------------------|------------|
| <b>Density</b>  | ---         | 0.950 g/cm <sup>3</sup> | ASTM D1505 |
| <b>Flow Rate</b> (MI, 190 °C/2.16 kg)                                   | ---         | 8.0 g/10 min            | ASTM D1238 |
| <b>Flexural Modulus</b> , 2 % Secant, 16:1 span:depth, 0.5 in/min       | 130,000 psi | 900 MPa                 | ASTM D790  |
| <b>Tensile Strength at Yield</b> , 2 in/min, Type IV bar                | 3,750 psi   | 26 MPa                  | ASTM D638  |
| <b>Tensile Elongation at Break</b> , 2 in/min, Type IV bar              | 700 %       | 700 %                   | ASTM D638  |
| <b>NCLS</b> , 15 % of the reference yield stress of 4,000 psi (600 psi) | > 800 h     | > 800 h                 | ASTM F2136 |
| <b>Brittleness Temperature</b> , Type A clamp, Type I specimen          | < -103 °F   | < -75 °C                | ASTM D746  |
| <b>Thermal Stability</b>  | > 428 °F    | > 220 °C                | ASTM D3350 |

1. The nominal properties reported herein are typical of the product, but do not reflect normal testing variance and therefore should not be used for specification purposes. Values are rounded. The physical properties were determined on compression molded specimens that were prepared in accordance with Procedure C of ASTM D4703, Annex A1.

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