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Marlex® Polyethylene

PREMIUM EXTRUSION AND RIGID PACKAGING RESINS

Marlex® TRB-490 Polyethylene

HIGH DENSITY POLYETHYLENE (HDPE)

This bimodal high molecular weight, high density polyethylene (HMW-HDPE) ethylene-hexene copolymer is tailored for use 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
- Initial and long-term OIT

Typical corrugated pipe applications for TRB-490 include:

- Roadway culverts
- Storm sewers
- Land drainage

This resin meets these standards/specifications:

- ASTM D4976 – PE 235
- AASHTO M 294
- AASHTO M 252
- ASTM D3350, Cell Class PE445520A
- ASTM D3895

Nominal Resin Properties[1]	English	SI	Method
Density	---	0.950 g/cm^3	ASTM D1505
Flow Rate (HLMI, 190 °C/21.6 kg)	---	9.5 g/10 min	ASTM D1238
Flexural Modulus, 2 % Secant, 16:1 span:depth, 0.5 in/min	130,000 psi	900 MPa	ASTM D790
Tensile Strength at Yield, 2 in/min, Type IV bar	3,750 psi	26 Mpa	ASTM D638
Tensile Elongation at Break, 2 in/min, Type IV bar	700 %	700 %	ASTM D638
NCLS, 15 % of the reference yield stress of 4,000 psi (600 psi)	> 800 h	> 800 h	ASTM F2136
ESCR, Condition B (100 % Igepal), F_{50}	> 1,000 h	> 1,000 h	ASTM D1693
Oxidative-Induction Time (OIT), Initial	> 100 min	> 100 min	ASTM D3895
Brittleness Temperature, Type A clamp, Type I specimen	< -103 °F	< -75 °C	ASTM D746
Thermal Stability	> 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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