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Marlex® Polyethylene

PREMIUM EXTRUSION AND RIGID PACKAGING RESINS

Marlex® TRB-455 Polyethylene

HIGH DENSITY POLYETHYLENE (HDPE)

This bimodal high molecular weight, high density polyethylene (HMW-HDPE) ethylene-hexene copolymer is tailored 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-455 include:

- Roadway culverts
- Storm sewers
- Land drainage
- Agriculture drainage

This resin meets these standards/specifications:

- ASTM D4976 – PE 235
- AASHTO M 252
- AASHTO M 294
- ASTM D3350, Cell Class PE435400A
- ASTM D3895

Nominal Resin Properties(1)	English	SI	Method
Density	---	0.952 g/cm^3	ASTM D1505
Flow Rate (HLMI, 190 °C/21.6 kg)	---	25 g/10 min	ASTM D1238
Flexural Modulus, 2 % Secant, 16:1 span:depth, 0.5 in/min	135,000 psi	930 MPa	ASTM D790
Tensile Strength at Yield, 2 in/min, Type IV bar	3,600 psi	25 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)	> 100 h	> 100 h	ASTM F2136
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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Before using this product, the user is advised and cautioned to make its own determination and assessment of the safety and suitability of the product for the specific use in question and is further advised against relying on the information contained herein as it may relate to any specific use or application. It is the ultimate responsibility of the user to ensure that the product is suited and the information is applicable to the user's specific application. Chevron Phillips Chemical Company LP does not make, and expressly disclaims, all warranties, including warranties of merchantability or fitness for a particular purpose, regardless of whether oral or written, express or implied, or allegedly arising from any usage of any trade or from any course of dealing in connection with the use of the information contained herein or the product itself. The user expressly assumes all risk and liability, whether based in contract, tort or otherwise, in connection with the use of the information contained herein or the product itself. Further, information contained herein is given without reference to any intellectual property issues, as well as federal, state or local laws which may be encountered in the use thereof. Such questions should be investigated by the user.