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Marlex Polyethylene

PREMIUM EXTRUSION AND RIGID PACKAGING RESINS

# Marlex® 4538A Polyethylene

**LOW DENSITY POLYETHYLENE (LDPE)**

**This autoclave, low density, ethylene homopolymer is tailored for blow molded applications that require:**

- Good impact resistance
- Excellent flexibility
- Good clarity
- Good gloss
- No slip or antiblock

**Typical blow molded applications for 4538A include:**

- Pharmaceutical bottles
- Squeeze bottles
- Flexible toys

**Typical extrusion applications for 4538A include:**

- Wood-plastic composite component
- Blends to improve friction values
- Blends to enhance part flexibility
- Adhesives

**This resin meets these specifications:**

- ASTM D4976 - PE 113
- FDA 21 CFR 177.1520(c) 2.2, use conditions B through H per Table 2 of 21 CFR 176.170(c)
- Listed in the Drug Master File

| NOMINAL PHYSICAL PROPERTIES(1) | English | SI | Method |
|---|---|---|---|
| **Density** | --- | 0.925 g/cm$^3$ | ASTM D1505 |
| **Flow Rate** (MI, 190 °C/2.16 kg) | --- | 2.0 g/10 min | ASTM D1238 |
| **Tensile Strength at Yield**, 2 in/min, Type IV bar | 2,500 psi | 17 MPa | ASTM D638 |
| **Elongation at Break**, 2 in/min, Type IV bar | 600 % | 600 % | ASTM D638 |
| **Flexural Modulus**, Tangent - 16:1 span:depth, 0.5 in/min | 50,000 psi | 340 MPa | ASTM D790 |
| **Brittleness Temperature**, Type A, Type I specimen | < -103 °F | < -75 °C | ASTM D746 |

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.