

Technical Data Sheet

Petrothene LT493501



High Density Polyethylene

Product Description

Petrothene LT493501 is a high density copolymer natural resin used by customers for conduit with demanding environmental stress crack resistance requirements. LT493501 offers an excellent balance of stiffness, toughness and ease of processing.

Conduit made with this resin is used with fiber optic cable, electrical cable and telecommunications cable. LT493501 meets the material requirements for polyethylene conduit as per ASTM F2160 and also meets the requirements of ASTM D3350 cell classification 435530A.

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|--------------------------|--|
| Application | Conduit |
| Market | Industrial, Building & Construction; Pipe |
| Processing Method | Pipe; Sheet and Profile Extrusion |
| Attribute | Excellent Processability; High ESCR (Environmental Stress Cracking Resistance) |

| Typical Properties | Nominal Value | English Units | Nominal Value | SI Units | Test Method |
|--|---------------|-------------------|---------------|-------------------|-------------|
| Physical | | | | | |
| Melt Flow Rate, (190 °C/2.16 kg) | 0.34 | g/10 min | 0.34 | g/10 min | ASTM D1238 |
| Density, (23 °C) | 0.948 | g/cm ³ | 0.948 | g/cm ³ | ASTM D1505 |
| Mechanical | | | | | |
| Flexural Modulus, (2% Secant) | 131600 | psi | 900 | MPa | ASTM D790 |
| Tensile Strength at Yield | 3500 | psi | 24.1 | MPa | ASTM D638 |
| Tensile Elongation at Break | >600 | % | >600 | % | ASTM D638 |
| Environmental Stress Crack Resistance | | | | | |
| F ₁₀ (10% Igepal®, Cond B) | >96 | hr | >96 | hr | ASTM D1693 |
| F ₅₀ (100% Igepal®, Cond B) | >1000 | hr | >1000 | hr | ASTM D1693 |
| Thermal | | | | | |
| Low Temperature Brittleness | <-101 | °F | <-74 | °C | ASTM D746 |
| DSC Induction Temperature | >473 | °F | >245 | °C | ASTM D3350 |

Notes

Igepal® is a registered trademark of Rhodia.

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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