

Technical Data Sheet

Petrothene LT493501

High Density Polyethylene



Product Description

Petrothene LT493501 is a high density copolymer natural resin used by customers for conduit and blowmolding applications 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.

Regulatory Status

For regulatory compliance information, see *Petrothene* LT493501 [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

Status	Commercial: Active
Availability	North America
Application	Bottles for Industrial Use; Conduit
Market	Industrial, Building & Construction; Pipe; Rigid Packaging
Processing Method	Extrusion Blow Molding; 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 ₂₀ (100% Igepal®, Cond C)	>192	hr	>192	hr	ASTM D1693
F ₅₀ (100% Igepal®, Cond B)	>1000	hr	>1000	hr	ASTM D1693
Impact					
Tensile Impact Strength	131	ft-lb/in ²	275	kJ/m ²	ASTM D1822
Hardness					
Shore Hardness, (Shore D)	60		60		ASTM D2240
Thermal					
Vicat Softening Point	259	°F	126	°C	ASTM D1525
Deflection Temperature Under Load, (66 psi, Unannealed)	142	°F	61	°C	ASTM D648

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/>.

© LyondellBasell Industries Holdings, B.V. 2017

Disclaimer

Before using a product sold by a company of the LyondellBasell family of companies, users should make their own independent determination that the product is suitable for the intended use and can be used safely and legally.

SELLER MAKES NO WARRANTY; EXPRESS OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY WARRANTY) OTHER THAN AS SEPARATELY AGREED TO BY THE PARTIES IN A CONTRACT.

Users should review the applicable Safety Data Sheet before handling the product.

This product(s) may not be used in the manufacture of any of the following, without prior written approval by Seller for each specific product and application:

- (i) U.S. FDA Class I or II Medical Devices; Health Canada Class I, II or III Medical Devices; European Union Class I or II Medical Devices;
- (ii) film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned medical devices;
- (iii) packaging in direct contact with a pharmaceutical active ingredient and/or dosage form that is intended for inhalation, injection, intravenous, nasal, ophthalmic (eye), digestive, or topical (skin) administration;
- (iv) tobacco related products and applications, electronic cigarettes and similar devices.
- (v) safety components in automotive applications, for example: air bags, air bag unit housings and covers, seat belt mechanisms, brake systems, pedals and pedal supports, steering systems.

The product(s) may not be used in:

- (i) U.S. FDA Class III Medical Devices; Health Canada Class IV Medical Devices; European Class III Medical Devices;
- (ii) applications involving permanent implantation into the body;
- (iii) life-sustaining medical applications.

All references to U.S. FDA, Health Canada, and European Union regulations include another country's equivalent regulatory classification.

In addition to the above, LyondellBasell may further prohibit or restrict the use of its products in certain applications. For further information, please contact a LyondellBasell representative.

Trademarks

Adflex, Adstif, Adsyl, Akoafloor, Akoalit, Alastian, Alathon, Alkylate, Amazing Chemistry, Aquamarine, Aquathene, Avant, Catalloy, Clyrell, CRP, Crystex, Dexflex, Duopac, Duoprime, Explore & Experiment, Filmex, Flexathene, Fueling the power to win, Glacido, Hifax, Hiflex, Histif, Hostacom, Hostalen, Hyperzone, Ideal, Indure, Integrate, Koattro, LIPP, Lucalen, Luflexen, Lupolen, Luposim, Lupostress, Lupotech, Metocene, Microthene, Moplen, MPDIOL, Nerolex, Nexprene, Petrothene, Plexar, Polymeg, Pristene, Prodflex, Pro-fax, Punctilious, Purell, Refax, SAA100, SAA101, Sequel, Softell, Spherilene, Spheripol, Spherizone, Starflex, Stretchene, Superflex, TBAC, Tebol, T-Hydro, Toppyl, Trans4m, Tufflo, Ultrathene, Vacido and Valtec are trademarks owned and/or used by the LyondellBasell family of companies.

Adsyl, Akoafloor, Akoalit, Alastian, Alathon, Aquamarine, Avant, CRP, Crystex, Dexflex, Duopac, Duoprime, Explore & Experiment, Filmex, Flexathene, Hifax, Hostacom, Hostalen, Ideal, Integrate, Koattro, Lucalen, Lupolen, Metocene, Microthene, Moplen, MPDIOL, Nexprene, Petrothene, Plexar, Polymeg, Pristene, Pro-fax, Punctilious, Purell, Sequel, Softell, Spheripol, Spherizone, Starflex, Tebol, T-Hydro, Toppyl, Tufflo and Ultrathene are registered in the U.S. Patent and Trademark Office.