

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.

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

