

Technical Data Sheet

Alathon L5040TC



High Density Polyethylene

Product Description

Alathon L5040TC is a bimodal high density polyethylene copolymer natural resin used by customers for telecommunications and power conduits. L5040TC offers an excellent balance of stiffness, toughness and ease of processing. Conduits made with this resin are used with fiber optic cable, electrical cable and telecommunications cable. L5040TC meets the material requirements for polyethylene conduit as per ASTM F2160 and also meets the requirements of ASTM D3350 cell classification PE435580A.

Application	Conduit
Market	Industrial, Building & Construction; Pipe
Processing Method	Pipe

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
Physical					
Melt Flow Rate, (190 °C/2.16 kg)	0.29	g/10 min	0.29	g/10 min	ASTM D1238
Density, (23 °C)	0.949	g/cm ³	0.949	g/cm ³	ASTM D1505
Mechanical					
Flexural Modulus, (2% Secant)	145000	psi	1000	MPa	ASTM D790
Tensile Strength at Yield	3700	psi	26	MPa	ASTM D638
Tensile Elongation at Break	>600	%	>600	%	ASTM D638
Environmental Stress Crack Resistance					
F ₁₀ (10% Igepal®, Cond B)	>200	hr	>200	hr	ASTM D1693
F ₅₀ (100% Igepal®, Cond B)	>1000	hr	>1000	hr	ASTM D1693
Notched Constant Ligament Stress, (10% Igepal, 50 °C, 600 psi stress)	>160	hr	>160	hr	ASTM F2136
Impact					
Tensile Impact Strength	188	ft-lb/in ²	395	kJ/m ²	ASTM D1822
Hardness					
Shore Hardness, (Shore D)	63		63		ASTM D2240
Thermal					
Low Temperature Brittleness, F ₅₀	<-96	°F	<-71	°C	ASTM D746
Deflection Temperature Under Load, (66 psi, Unannealed)	169	°F	76	°C	ASTM D648