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.

Regulatory Status

For regulatory compliance information, see *Alathon* L5040TC Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	North America
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/cm³	0.949	g/cm³	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/in²	395	kJ/m²	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

Manufacturer website: https://www.lyondellbasell.com/en/

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. 2026

Disclaimer

Information in this document is accurate to the best of our knowledge at the date of publication. The document is designed to provide users general information for safe handling, use, processing, storage, transportation, disposal and release and does not constitute any warranty or quality specification, either express or implied, including any warranty of merchantability or fitness for any particular purpose. Users shall determine whether the product is suitable for their use and can be used safely and legally.

In addition to any prohibitions of use specifically noted in this document, LyondellBasell may further prohibit or restrict the sale of its products into certain applications. For further information, please contact a LyondellBasell representative.

Trademarks

The Trademark referenced within the product name is owned or used by the LyondellBasell family of companies.