

Alathon® L4907WC

High Density (HMW) Polyethylene
LyondellBasell Industries

Technical Data

Product Description

ALATHON L4907WC is a high molecular weight high density copolymer with a broad bimodal molecular weight distribution. This resin exhibits high density and stiffness. Typical applications for wire and cable include optical fiber buffer tubes and base resin for cable jacketing.

General

Material Status	• Commercial: Active		
Literature ¹	• Processing - Mold Shrink (English) • Processing - Polyolefin Injection Molding Guide (English) • Processing - Start-Up Guide (English) • Technical Datasheet (English)		
Search for UL Yellow Card	• LyondellBasell Industries • Alathon®		
Availability	• Asia Pacific • Europe	• North America • South America	
Features	• Copolymer • Food Contact Acceptable	• Good Stiffness • High Molecular Weight	• Med.-Wide Molecular Weight Distrib.
Uses	• Cable Jacketing	• Wire & Cable Applications	
Agency Ratings	• ASTM D 1248, III, Class A, Cat. 5, Grade E10 • FDA 21 CFR 177.1520 • FED L-P-390C, Type II, Class H, Category 5, Grade 5		
Forms	• Pellets		
Processing Method	• Extrusion		

Physical	Nominal Value Unit	Test Method
Density	0.949 g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.075 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance 10% Igepal, Compression Molded, F50	> 2000 hr	ASTM D1693

Mechanical	Nominal Value Unit	Test Method
Tensile Strength		ASTM D638
Yield, Compression Molded	23.4 MPa	
Break, Compression Molded	36.6 MPa	
Tensile Elongation		ASTM D638
Break, Compression Molded	800 %	
Flexural Modulus - 1% Secant (Compression Molded)	1000 MPa	ASTM D790

Hardness	Nominal Value Unit	Test Method
Durometer Hardness		ASTM D2240
Shore D, Compression Molded	65	

Thermal	Nominal Value Unit	Test Method
Brittleness Temperature	< -76.0 °C	ASTM D746
Vicat Softening Temperature	125 °C	ASTM D1525
CLTE - Flow (23°C)	0.00016 cm/cm/°C	ASTM D696
Thermal Stress Crack Resistance - F50	> 2500 hr	ASTM D2951

Electrical	Nominal Value Unit	Test Method
Volume Resistivity	2.6E+17 ohm·cm	ASTM D257
Dielectric Constant (1 MHz)	2.33	ASTM D1531
Dissipation Factor (1 MHz)	0.000070	ASTM D1531

Extrusion	Nominal Value Unit
Cylinder Zone 1 Temp.	149 to 163 °C
Cylinder Zone 2 Temp.	177 to 204 °C
Cylinder Zone 3 Temp.	204 to 232 °C