Alathon® XL5906WC

High Density (HMW) Polyethylene

LyondellBasell Industries

Message:

ALATHON XL 5906WC is a high molecular weight high density homopolymer with a broad bimodal molecular weight distribution. This resin exhibits excellent stiffness and very high tensile strength. Typical applications for wire and cable include optical fiber buffer tubes.

General Information				
Features	Rigid, good			
	High molecular weight			
	High tensile strength			
	Compliance of Food Exposure			
	Medium wide molecular weight distribution			
Uses	Wire and 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	Particle			
Processing Method	Extrusion			
Physical	Nominal Value	Unit	Test Method	
Density	0.959	g/cm ³	ASTM D1505	
Melt Mass-Flow Rate (MFR) (190°C/2.16				
kg)	0.057	g/10 min	ASTM D1238	
Environmental Stress-Cracking Resistance				
(10% Igepal, Compression Molded, F50)	96.0	hr	ASTM D1693	
Hardness	Nominal Value	Unit	Test Method	
Durometer Hardness (Shore D,	<u>(</u>)			
	69			
Mechanical	Nominal Value	Unit	Test Method	
Tensile Strength			ASTM D638	
Yield, molding	29.6	MPa	ASTM D638	
Fracture, molding	40.0	MPa	ASTM D638	
Tensile Elongation (Break, Compression		~		
Molded)	900	%	ASTM D638	
Flexural Modulus - 1% Secant (Compression Molded)	1470	MPa	ASTM D790	
Thermal	Nominal Value	Unit	Test Method	
Brittleness Temperature	-76.0	°C	ASTM D746	
Vicat Softening Temperature	130	°C	ASTM D1525	
CLTE - Flow	1.4E-4	cm/cm/°C	ASTM D696	

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	7.6E+17	ohms·cm	ASTM D257
Dielectric Constant (1 MHz)	2.36		ASTM D150
Dissipation Factor (1 MHz)	5.0E-5		ASTM D150

Additional Information

The value listed as Dielectric Constant, ASTM D150, was tested in accordance with ASTM D1531. The value listed as Dissipation Factor, ASTM D150, was tested in accordance with ASTM D1531. Thermal Stress Crack Resistance, ASTM D2951, F50, compression molded: >264 hr

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	149 - 163	℃
Cylinder Zone 2 Temp.	177 - 204	℃
Cylinder Zone 3 Temp.	204 - 232	℃
Cylinder Zone 4 Temp.	246 - 260	℃
Adapter Temperature	246 - 260	℃
Melt Temperature	246 - 260	℃
Die Temperature	246 - 260	°C

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