

Ryton® XE4500BL

polyphenylene sulfide alloy

Ryton® XE4500BL unfilled polyphenylene sulfide alloy compound for extrusion provides excellent mechanical strength, ductility, toughness and chemical resistance.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • Latin America • North America
Features	• Chemical Resistant • Ductile • Good Toughness • High Strength
RoHS Compliance	• RoHS Compliant
Appearance	• Black
Forms	• Pellets

Physical	Typical Value	Unit	Test method
Density	1.25	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) ¹ (316°C/5.0 kg)	2.0	g/10 min	ASTM D1238
Water Absorption (24 hr, 23°C)	0.10	%	ASTM D570
Mold Shrinkage ²	2.00	%	

Mechanical	Typical Value	Unit	Test method
Tensile Modulus	1800	MPa	ISO 527
Tensile Strength	45.0	MPa	ISO 527
Tensile Elongation (Break)	20	%	ISO 527
Flexural Modulus	1800	MPa	ISO 178
Flexural Strength	80.0	MPa	ISO 178

Impact	Typical Value	Unit	Test method
Notched Izod Impact Strength	30	kJ/m ²	ISO 180/A

Thermal	Typical Value	Unit	Test method
Thermal Conductivity	0.20	W/m/K	ASTM E1530
Coefficient of Linear Thermal Expansion			ISO 11359-2
-50 to 50°C	7.5E-5	cm/cm/°C	
100 to 200°C	1.3E-4	cm/cm/°C	
Heat Deflection Temperature			ASTM D648
0.45 MPa	120	°C	
1.8 MPa	95	°C	

Electrical	Typical Value	Unit	Test method
Dielectric Strength	24	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
25°C, 1 kHz	3.10		
25°C, 1 MHz	3.10		

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Electrical	Typical Value	Unit	Test method
Dissipation Factor			ASTM D150
25°C, 1 kHz	2.0E-3		
25°C, 1 MHz	4.0E-3		
Arc Resistance	120	sec	ASTM D495
Comparative Tracking Index (CTI) ³	150	V	UL 746

Flammability	Typical Value	Unit	Test method
Flame Rating ³ (1.6 mm)	V-1		UL 94

Notes

Typical properties: these are not to be construed as specifications.

¹ Procedure B

² Measured on 102 mm x 102 mm x 3.2 mm plaques, edge gated.

³ This product is not currently UL listed; test results indicate this level of performance.



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