

# Ryton® XE5500BL

## polyphenylene sulfide alloy

Ryton® XE5500BL 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	1.30	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) <sup>1</sup> (316°C/5.0 kg)	20	g/10 min	ASTM D1238
Molding Shrinkage			ISO 294-4
Across Flow : 3.20 mm	1.3	%	
Flow : 3.20 mm	1.3	%	
Water Absorption			
24 hr, 23°C	0.060	%	ISO 62
24 hr, 23°C	0.10	%	ASTM D570
Saturation, 23°C	0.25	%	Internal Method

Mechanical	Typical Value	Unit	Test method
Tensile Modulus			ISO 527-2
--	2600	MPa	
-- <sup>2</sup>	2660	MPa	
Tensile Stress			ISO 527-2
Yield	59.0	MPa	
Yield <sup>2</sup>	66.0	MPa	
Tensile Strain (Break)	15	%	ISO 527-2
Flexural Modulus	2500	MPa	ISO 178
Flexural Stress	100	MPa	ISO 178

Impact	Typical Value	Unit	Test method
Charpy Notched Impact Strength			ISO 179
--	49	kJ/m <sup>2</sup>	
-- <sup>2</sup>	44	kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength	No Break		ISO 179
Notched Izod Impact Strength	46	kJ/m <sup>2</sup>	ISO 180/A

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Thermal	Typical Value Unit	Test method
Melting Temperature	280 °C	ISO 11357-3
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	1.2E-4 cm/cm/°C	
Heat Deflection Temperature		ASTM D648
0.45 MPa	130 °C	
1.8 MPa	95 °C	
Electrical	Typical Value Unit	Test method
Volume Resistivity	1.0E+15 ohms-cm	ASTM D257
Dielectric Strength	24 kV/mm	ASTM D149
Dielectric Constant		ASTM D150
25°C, 1 kHz	3.60	
25°C, 1 MHz	3.50	
Dissipation Factor		ASTM D150
25°C, 1 kHz	3.0E-3	
25°C, 1 MHz	9.0E-3	
Arc Resistance	100 sec	ASTM D495
Comparative Tracking Index (CTI) <sup>3</sup>	125 V	UL 746A

Notes

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

<sup>1</sup> Procedure B

<sup>2</sup> Conditioned data is meant to simulate 23°C 50% RH equilibrium values. Conditioning of specimens was achieved per ISO 1110 by exposing specimens for 11 days, 70°C and 62% RH.

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



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