

# Ryton® XE4050BL

## polyphenylene sulfide alloy

Ryton® XE4050BL glass fiber and mineral filled polyphenylene sulfide alloy compound provides

high ductility and impact strength along with good thermal stability.

### General

Material Status	• Commercial: Active	
Availability	• Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Glass Fiber \ Mineral	
Features	• Ductile • Good Thermal Stability	• High Impact Resistance
Uses	• Automotive Applications	
RoHS Compliance	• RoHS Compliant	
Appearance	• Black	
Forms	• Pellets	

Physical	Typical Value	Unit	Test method
Density / Specific Gravity	1.68		ASTM D792
Molding Shrinkage			
Flow : 3.20 mm	0.20	%	
Across Flow : 3.20 mm	0.40	%	
Water Absorption (24 hr, 23°C)	0.050	%	ASTM D570

Mechanical	Typical Value	Unit	Test method
Tensile Modulus	10300	MPa	ISO 527-1
Tensile Stress	140	MPa	ISO 527-2
Tensile Strain (Break)	1.8	%	ISO 527-2
Flexural Modulus	11000	MPa	ISO 178
Flexural Stress	200	MPa	ISO 178
Compressive Strength	200	MPa	ASTM D695
Poisson's Ratio	0.37		ISO 527

Impact	Typical Value	Unit	Test method
Notched Izod Impact Strength	9.0	kJ/m <sup>2</sup>	ISO 180/1A
Unnotched Izod Impact Strength	40	kJ/m <sup>2</sup>	ISO 180/1U

Hardness	Typical Value	Unit	Test method
Rockwell Hardness			ASTM D785
M-Scale	74		
R-Scale	110		



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Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load 1.8 MPa, Unannealed	250	°C	ASTM D648
CLTE			ASTM E831
Flow : -50 to 50°C	2.0E-5	cm/cm/°C	
Flow : 100 to 200°C	1.0E-5	cm/cm/°C	
Transverse : -50 to 50°C	5.0E-5	cm/cm/°C	
Transverse : 100 to 200°C	8.5E-5	cm/cm/°C	
Thermal Conductivity	0.37	W/m/k	

Electrical	Typical Value	Unit	Test method
Surface Resistivity	1.0E+16	ohms	ASTM D257
Volume Resistivity	1.0E+14	ohms·cm	ASTM D257
Dielectric Strength	20	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
25°C, 1 kHz	4.30		
25°C, 1 MHz	4.20		
Dissipation Factor			ASTM D150
25°C, 1 kHz	3.0E-3		
25°C, 1 MHz	8.0E-3		
Arc Resistance	130	sec	ASTM D495
Comparative Tracking Index (CTI)	PLC 3		UL 746A
Comparative Tracking Index	175	V	IEC 60112
Insulation Resistance <sup>1</sup> (90°C)	1.0E+11	ohms	

Flammability	Typical Value	Unit	Test method
Flame Rating (1.5 mm)	V-0		UL 94
Oxygen Index	25	%	ASTM D2863

Injection	Typical Value	Unit
Drying Temperature	85	°C
Drying Time	4.0 to 6.0	hr
Rear Temperature	295 to 305	°C
Middle Temperature	300 to 310	°C
Front Temperature	305 to 315	°C
Nozzle Temperature	305 to 315	°C
Processing (Melt) Temp	310 to 320	°C
Mold Temperature	135 to 150	°C

## Notes

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

<sup>1</sup> 95%RH, 48 hr

