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 Strength			
--	124	MPa	ASTM D638
--	135	MPa	ISO 527-2
Tensile Elongation (Break)	1.9	%	ASTM D638 ISO 527-2
Flexural Modulus			
--	10300	MPa	ASTM D790
--	10000	MPa	ISO 178
Flexural Strength			
--	186	MPa	ASTM D790
--	195	MPa	ISO 178
Compressive Strength	200	MPa	ASTM D695
Poisson's Ratio	0.37		ISO 527

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Impact	Typical Value	Unit	Test method
Notched Izod Impact			
3.18 mm	80	J/m	ASTM D256
--	8.0	kJ/m²	ISO 180/A
Unnotched Izod Impact			
3.18 mm	640	J/m	ASTM D4812
--	40	kJ/m²	ISO 180

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

Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	250	°C	
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[1] (90°C)	1.0E+11	ohms	

Flammability	Typical Value	Unit	Test method
Flame Rating (1.6 mm, Tested by CP Chemical)	V-0		UL 94
Oxygen Index	25	%	ASTM D2863

Notes

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

[1] 95%RH, 48 hr

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