

ISO 180/1U

Ryton° XE5430BL polyphenylene sulfide alloy

Unnotched Izod Impact Strength

Ryton® XE5430BL 30% glass fiber reinforced polyphenylene sulfide alloy compound provides high ductility and impact resistance along with good thermal stability.

 55 kJ/m^2

General			
Material Status	 Commercial: Active 		
Availability	Asia PacificEurope	Latin America North America	
Filler / Reinforcement	Glass Fiber		
Features	Chemical ResistantDuctile	Good Toughness High Strength	
RoHS Compliance	 RoHS Compliant 		
Appearance	• Black		
Forms	• Pellets		
Physical		Typical Value Unit	Test method
Density ¹		1.52 g/cm³	ISO 1183
Water Absorption (24 hr, 23°C)		0.020 %	ASTM D570
Mold Shrinkage ²			
Flow		0.20 %	
Transverse		0.60 %	
Mechanical		Typical Value Unit	Test method
Tensile Modulus		10800 MPa	ISO 527
Tensile Strength		163 MPa	ISO 527
Tensile Elongation (Break)		2.1 %	ISO 527
Flexural Modulus		9600 MPa	ISO 178
Flexural Strength		235 MPa	ISO 178
Compressive Strength		215 MPa	ISO 604
Poisson's Ratio		0.38	ISO 527
Impact		Typical Value Unit	Test method
Charpy Notched Impact Strength		9.4 kJ/m²	ISO 179/1A
Charpy Unnotched Impact Strength		60 kJ/m²	ISO 179/1U
Notched Izod Impact Strength		11 kJ/m²	ISO 180/1A

Ryton° XE5430BL polyphenylene sulfide alloy

CLTE ISO 11359-2 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 5.5E-5 cm/cm/°C Transverse: 100 to 200°C 9.0E-5 cm/cm/°C Thermal Conductivity 0.27 W/m/k ASTM E1530 Heat Deflection Temperature - 1.8 MPa 255 °C ASTM D648 Electrical Typical Value Unit Test method Volume Resistivity 1.0E+16 ohms-cm ASTM D257 Dielectric Strength 20 kV/mm ASTM D150 25°C, 1 kHz 3.70 ASTM D150 25°C, 1 kHz 3.70 ASTM D150 25°C, 1 kHz 3.70 ASTM D150 25°C, 1 kHz 2.0E-3 ASTM D450 25°C, 1 kHz 2.0E-3 ACCE-3 25°C, 1 kHz 2.0E-3 <t< th=""><th>Thermal</th><th>Typical Value</th><th>Unit</th><th>Test method</th></t<>	Thermal	Typical Value	Unit	Test method
Flow: 100 to 200°C	CLTE			ISO 11359-2
Transverse : -50 to 50°C 5.5E-5 cm/cm/°C Transverse : 100 to 200°C 9.0E-5 cm/cm/°C Thermal Conductivity 0.27 W/m/k ASTM E1530 Heat Deflection Temperature - 1.8 MPa 255 °C ASTM D648 Electrical Typical Value Unit Test method Volume Resistivity 1.0E+16 ohms-cm ASTM D257 Dielectric Strength 20 kV/mm ASTM D149 Dielectric Constant 3.70 ASTM D150 25°C, 1 kHz 3.70 ASTM D150 25°C, 1 kHz 3.70 ASTM D150 25°C, 1 kHz 2.0E-3 ASTM D150 25°C, 1 kHz 2.0E-3 ASTM D450 25°C, 1 kHz 2.0E-3 ASTM D495 Comparative Tracking Index 150 V IEC 60112 Flammability Typical Value Unit Test method	Flow: -50 to 50°C	2.0E-5	cm/cm/°C	
Transverse : 100 to 200°C 9.0E-5 cm/cm/°C Thermal Conductivity 0.27 W/m/k ASTM E1530 Heat Deflection Temperature - 1.8 MPa 255 °C ASTM D648 Electrical Typical Value Unit Test method Volume Resistivity 1.0E+16 ohms·cm ASTM D257 Dielectric Strength 20 kV/mm ASTM D149 Dielectric Constant 3.70 ASTM D150 25°C, 1 kHz 3.70 ASTM D150 25°C, 1 kHz 3.70 ASTM D150 25°C, 1 kHz 2.0E-3 ASTM D150 25°C, 1 kHz 2.0E-3 ASTM D150 25°C, 1 kHz 2.0E-3 ASTM D495 Comparative Tracking Index 150 V IEC 60112 Flammability Typical Value Unit Test method Flamme Rating (1.5 mm) V-0 UL 94 Injection Typical Value Unit Test method Floate Temperature 85 °C C Drying Time 4.0 to 6.0 hr C Rear Temperature 305 to 315 °C Middle Temperature 3	Flow: 100 to 200°C	1.0E-5	cm/cm/°C	
Thermal Conductivity 0.27 W/m/k ASTM E1530 Heat Deflection Temperature − 1.8 MPa 255 °C ASTM D648 Electrical Typical Value Unit Test method Volume Resistivity 1.0E+16 ohms-cm ASTM D257 Dielectric Strength 20 kV/mm ASTM D149 Dielectric Constant ASTM D150 ASTM D150 25°C, 1 kHz 3.70 ASTM D150 25°C, 1 kHz 3.70 ASTM D150 25°C, 1 kHz 2.0E-3 ASTM D150 25°C, 1 kHz 2.0E-3 ASTM D150 25°C, 1 kHz 2.0E-3 ASTM D495 Comparative Tracking Index 150 V IEC 60112 Flammability Typical Value Unit Test method Flamma Rating (1.5 mm) V-0 UL 94 Injection Typical Value Unit Test method Injection Typical Value Unit Test metho	Transverse: -50 to 50°C	5.5E-5	cm/cm/°C	
Electrical Typical Value Unit Test method Volume Resistivity 1.0E+16 ohms-cm ASTM D257 Dielectric Strength 20 kV/mm ASTM D149 Dielectric Constant 3.70 ASTM D150 25°C, 1 kHz 3.70 ASTM D150 25°C, 1 kHz 3.70 ASTM D150 25°C, 1 kHz 2.0E-3 ASTM D150 25°C, 1 kHz 2.0E-3 ASTM D150 25°C, 1 kHz 2.0E-3 ASTM D495 Arc Resistance 125 sec ASTM D495 Comparative Tracking Index 150 V IEC 60112 Flammability Typical Value Unit Test method Flame Rating (1.5 mm) V-0 UL 94 Injection Typical Value Unit Test method Flame Rating (1.5 mm) V-0 UL 94 Injection Typical Value Unit Test method From Temperature 85 °C C Drying Time 4.0 to 6.0 hr C Rear Temperature 305 to 315 °C Nozzle Temperature 305 to 315 °C	Transverse : 100 to 200°C	9.0E-5	cm/cm/°C	
Electrical Typical Value Unit Test method Volume Resistivity 1.0E+16 ohms-cm ASTM D257 Dielectric Strength 20 kV/mm ASTM D149 Dielectric Constant ASTM D150 25°C, 1 kHz 3.70 25°C, 1 kHz 3.70 25°C, 1 kHz 2.0E-3 20E-3 2.0E-3 20E-3<	Thermal Conductivity	0.27	W/m/K	ASTM E1530
Volume Resistivity 1.0E+16 ohms·cm ASTM D257 Dielectric Strength 20 kV/mm ASTM D149 Dielectric Constant ASTM D150 25°C, 1 kHz 3.70 25°C, 1 MHz 3.70 Dissipation Factor ASTM D150 25°C, 1 kHz 2.0E-3 25°C, 1 MHz 2.0E-3 Arc Resistance 125 sec ASTM D495 Comparative Tracking Index 150 V IEC 60112 Flammability Typical Value Unit Test method Flame Rating (1.5 mm) V-0 UL 94 Injection Typical Value Unit Test method Flame Properature 85 °C UL 94 Injection Typical Value Unit Test method Proping Temperature 4.0 to 6.0 hr UL 94 Rear Temperature 295 to 305 °C Unit Middle Temperature 305 to 315 °C Nozzle Temperature 305 to 315 °C Processing (Melt) Temp 310 to 320 °C	Heat Deflection Temperature - 1.8 MPa	255	°C	ASTM D648
Dielectric Strength 20 kV/mm ASTM D149 Dielectric Constant ASTM D150 25°C, 1 kHz 3.70 25°C, 1 MHz 3.70 Dissipation Factor ASTM D150 25°C, 1 kHz 2.0E-3 25°C, 1 MHz 2.0E-3 Arc Resistance 125 sec ASTM D495 Comparative Tracking Index 150 V IEC 60112 Flammability Typical Value Unit Test method Flame Rating (1.5 mm) V-0 UL 94 Injection Typical Value Unit Unit Drying Temperature 85 °C C Drying Time 4.0 to 6.0 hr C Rear Temperature 300 to 310 °C C Middle Temperature 305 to 315 °C C Nozzle Temperature 305 to 315 °C C Processing (Melt) Temp 310 to 320 °C C	Electrical	Typical Value	Unit	Test method
Dielectric Constant ASTM D150 25°C, 1 kHz 3.70 25°C, 1 MHz 3.70 Dissipation Factor ASTM D150 25°C, 1 kHz 2.0E-3 25°C, 1 MHz 2.0E-3 Arc Resistance 125 sec ASTM D495 Comparative Tracking Index 150 V IEC 60112 Flammability Typical Value Unit Test method Flame Rating (1.5 mm) V-0 UL 94 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	Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
25°C, 1 kHz 3.70 25°C, 1 MHz 3.70 Dissipation Factor ASTM D150 25°C, 1 kHz 2.0E-3 25°C, 1 MHz 2.0E-3 Arc Resistance 125 sec ASTM D495 Comparative Tracking Index 150 V IEC 60112 Flammability Typical Value Unit Test method Flame Rating (1.5 mm) V-0 UL 94 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	Dielectric Strength	20	kV/mm	ASTM D149
25°C, 1 MHz 3.70 Dissipation Factor ASTM D150 25°C, 1 kHz 2.0E-3 25°C, 1 MHz 2.0E-3 Arc Resistance 125 sec ASTM D495 Comparative Tracking Index 150 V IEC 60112 Flammability Typical Value Unit Test method Flame Rating (1.5 mm) V-0 UL 94 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	Dielectric Constant			ASTM D150
Dissipation Factor ASTM D150 25°C, 1 kHz 2.0E-3 25°C, 1 MHz 2.0E-3 Arc Resistance 125 sec ASTM D495 Comparative Tracking Index 150 V IEC 60112 Flammability Typical Value Unit Test method Flame Rating (1.5 mm) V-0 UL 94 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	25°C, 1 kHz	3.70		
25°C, 1 kHz 2.0E-3 25°C, 1 MHz 2.0E-3 Arc Resistance 125 sec ASTM D495 Comparative Tracking Index 150 V IEC 60112 Flammability Typical Value Unit Test method Flame Rating (1.5 mm) V-0 UL 94 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	25°C, 1 MHz	3.70		
25°C, 1 MHz 2.0E-3 Arc Resistance 125 sec ASTM D495 Comparative Tracking Index 150 V IEC 60112 Flammability Typical Value Unit Test method Flame Rating (1.5 mm) V-0 UL 94 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	Dissipation Factor			ASTM D150
Arc Resistance 125 sec ASTM D495 Comparative Tracking Index 150 V IEC 60112 Flammability Typical Value Unit Test method Flame Rating (1.5 mm) V-0 UL 94 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	25°C, 1 kHz	2.0E-3		
Comparative Tracking Index 150 V IEC 60112 Flammability Typical Value Unit Test method Flame Rating (1.5 mm) V-0 UL 94 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	25°C, 1 MHz	2.0E-3		
Flammability Typical Value Unit Test method Flame Rating (1.5 mm) V-0 UL 94 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	Arc Resistance	125	sec	ASTM D495
Flame Rating (1.5 mm) V-0 UL 94 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	Comparative Tracking Index	150	V	IEC 60112
InjectionTypical Value UnitDrying Temperature85 °CDrying Time4.0 to 6.0 hrRear Temperature295 to 305 °CMiddle Temperature300 to 310 °CFront Temperature305 to 315 °CNozzle Temperature305 to 315 °CProcessing (Melt) Temp310 to 320 °C	Flammability	Typical Value	Unit	Test method
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	Flame Rating (1.5 mm)	V-0		UL 94
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	Injection	Typical Value	Unit	
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	Drying Temperature	85	°C	
Middle Temperature300 to 310 °CFront Temperature305 to 315 °CNozzle Temperature305 to 315 °CProcessing (Melt) Temp310 to 320 °C	Drying Time	4.0 to 6.0	hr	
Front Temperature 305 to 315 °C Nozzle Temperature 305 to 315 °C Processing (Melt) Temp 310 to 320 °C	Rear Temperature	295 to 305	°C	
Nozzle Temperature 305 to 315 °C Processing (Melt) Temp 310 to 320 °C	Middle Temperature	300 to 310	°C	
Processing (Melt) Temp 310 to 320 °C	Front Temperature	305 to 315	°C	
	Nozzle Temperature	305 to 315	°C	
Mold Temperature 135 to 150 °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.

¹ Method A

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

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