Ryton® R-7-190BL
polyphenylene sulfide

Ryton® R-7-190BL glass fiber and mineral filled polyphenylene sulfide compound provides enhanced strength and low maintenance molding using conventional molding equipment.

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Glass Fiber\Mineral	
Features	• Chemical Resistant • Good Electrical Properties	• Good Strength
RoHS Compliance	• RoHS Compliant	
Appearance	• Black	
Forms	• Pellets	

Physical	Typical Value	Unit	Test method
Density [1]	2.00	g/cm³	ISO 1183
Water Absorption (24 hr, 23°C)	0.020	%	ASTM D570
Mold Shrinkage [2]			
Flow	0.20	%	
Transverse	0.40	%	

Mechanical	Typical Value	Unit	Test method
Tensile Strength	140	MPa	ISO 527
Tensile Elongation (Break)	1.0	%	ISO 527
Flexural Modulus	18000	MPa	ISO 178
Flexural Strength	220	MPa	ISO 178
Compressive Strength	275	MPa	ISO 604

Impact	Typical Value	Unit	Test method
Charpy Notched Impact Strength	7.0	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength	22	kJ/m²	ISO 179/1eU
Notched Izod Impact Strength	7.0	kJ/m²	ISO 180/A
Unnotched Izod Impact Strength	20	kJ/m²	ISO 180

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Thermal	Typical Value	Unit	Test method
CLTE			ISO 11359-2
Flow : -50 to 50°C	1.5E-5	cm/cm/°C	
Flow : 100 to 200°C	1.5E-5	cm/cm/°C	
Transverse : -50 to 50°C	2.5E-5	cm/cm/°C	
Transverse : 100 to 200°C	6.5E-5	cm/cm/°C	
Thermal Conductivity	0.64	W/m/K	ASTM E1530
Heat Deflection Temperature - 1.8 MPa	265	°C	ASTM D648
Temperature Index	220 to 240	°C	UL 746B

Electrical	Typical Value	Unit	Test method
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	18	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
25°C, 1 kHz	5.20		
25°C, 1 MHz	5.00		
Dissipation Factor			ASTM D150
25°C, 1 kHz	2.0E-3		
25°C, 1 MHz	2.0E-3		
Arc Resistance	185	sec	ASTM D495
Comparative Tracking Index (CTI)	250	V	IEC 60112
Comparative Tracking Index (CTI)	PLC 2		UL 746A
Insulation Resistance - 95% RH, 48 hr (90°C)	1.00E+13	ohms	

Flammability	Typical Value	Unit	Test method
Flame Rating (1.6 mm)	• V-0 • 5VA		UL 94

Additional Information
Test specimen molding conditions: Stock temperature, 315-345°C; Mold temperature, 135°C

Injection	Typical Value	Unit
Drying Temperature	135 to 150	°C
Drying Time	2.0 to 4.0	hr
Rear Temperature	295 to 315	°C
Middle Temperature	305 to 325	°C
Front Temperature	315 to 345	°C
Nozzle Temperature	305 to 325	°C
Processing (Melt) Temp	320 to 330	°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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