

Ryton® R-7-150BL

polyphenylene sulfide

Ryton® R-7-150BL glass fiber and mineral filled polyphenylene sulfide compound provides

enhanced mechanical strength after constant or repeated exposure to high temperature water.

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	1.95	g/cm ³	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	165	MPa	ISO 527
Tensile Elongation (Break)	1.1	%	ISO 527
Flexural Modulus	19000	MPa	ISO 178
Flexural Strength	255	MPa	ISO 178
Compressive Strength	300	MPa	ASTM D695

Impact

	Typical Value	Unit	Test method
Notched Izod Impact Strength	8.0	kJ/m ²	ISO 180/A
Unnotched Izod Impact Strength	25	kJ/m ²	ISO 180

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	1.0E-5	cm/cm/°C	
Transverse : -50 to 50°C	3.0E-5	cm/cm/°C	
Transverse : 100 to 200°C	7.5E-5	cm/cm/°C	
Thermal Conductivity	0.53	W/m/K	ASTM E1530
Heat Deflection Temperature - 1.8 MPa	265	°C	ASTM D648

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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	5.10		
25°C, 1 MHz	5.10		
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) ³	150	V	UL 746A
Insulation Resistance – 95% RH, 48 hr (90°C)	1.00E+13	ohms	

Flammability	Typical Value	Unit	Test method
Flame Rating ³ (1.6 mm)	V-0		UL 94

Additional Information	Typical Value	Unit
Hydrolytic Stability ⁴		
Tensile Strength Retained	> 75	%
Weight Gain	< 1.0	%

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.

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

⁴ Test specimens aged 1000 hours in water at 140°C (284°F).

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