

Ryton® R-7-232BL

polyphenylene sulfide

Ryton® R-7-232BL glass fiber and mineral filled polyphenylene sulfide compound provides enhanced mechanical strength after constant or repeated exposure to high temperature environments.

Ryton R-7-232BL complies with United States Food and Drug Administration (FDA) and European Union food contact regulations.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Glass Fiber\Mineral
Features	• Good Strength
Uses	• Food Service Applications
Agency Ratings	• EU Food Contact ¹ • FDA Food Contact ¹ • NSF STD-51
RoHS Compliance	• RoHS Compliant
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

Physical

	Typical Value Unit	Test method
Density / Specific Gravity	1.98	ASTM D792
Molding Shrinkage		
Flow : 3.20 mm	0.18 %	
Across Flow : 3.20 mm	0.59 %	
Water Absorption (24 hr, 23°C)	8.0E-3 %	ASTM D570

Mechanical

	Typical Value Unit	Test method
Tensile Modulus	21400 MPa	ISO 527-1
Tensile Stress	150 MPa	ISO 527-2
Tensile Strain (Break)	0.90 %	ISO 527-2
Flexural Modulus	20800 MPa	ISO 178
Flexural Stress	230 MPa	ISO 178
Compressive Strength	265 MPa	ASTM D695
Poisson's Ratio	0.34	ISO 527

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Impact	Typical Value	Unit	Test method
Notched Izod Impact			
3.18 mm	59	J/m	ASTM D256
--	10	kJ/m ²	ISO 180/A
-40°C	9.2	kJ/m ²	ISO 180
Unnotched Izod Impact			
3.18 mm	290	J/m	ASTM D4812
--	21	kJ/m ²	ISO 180
Hardness	Typical Value	Unit	Test method
Rockwell Hardness			ASTM D785
M-Scale	101		
R-Scale	120		
Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	262	°C	
Melting Temperature	285	°C	
CLTE			ASTM E831
Flow : -50 to 50°C	1.2E-5	cm/cm/°C	
Flow : 50 to 100°C	1.3E-5	cm/cm/°C	
Flow : 125 to 200°C	1.2E-5	cm/cm/°C	
Transverse : -50 to 50°C	2.6E-5	cm/cm/°C	
Transverse : 50 to 100°C	3.7E-5	cm/cm/°C	
Transverse : 100 to 200°C	7.5E-5	cm/cm/°C	
UL Temperature Rating	220 to 240	°C	UL 746B
Electrical	Typical Value	Unit	Test method
Surface Resistivity	5.2E+15	ohms	ASTM D257
Volume Resistivity	1.5E+16	ohms·cm	ASTM D257
Dielectric Strength	12	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
25°C, 1 kHz	4.24		
25°C, 1 MHz	4.20		
Dissipation Factor			ASTM D150
25°C, 1 kHz	2.0E-3		
25°C, 1 MHz	1.0E-3		
Arc Resistance	192	sec	ASTM D495
Comparative Tracking Index (CTI)	225	V	UL 746A
Flammability	Typical Value	Unit	Test method
Flame Rating	•	V-0	UL 94
	•	5VA	

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Notes

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

¹ For specific clearances, please contact your Solvay representative.

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