

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 is for applications which require food approvals and is in line with current FDA and EU Food 10/2011 regulations.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Glass\Mineral
Features	• Good Strength
Uses	• Food Service Applications
Agency Ratings	• 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 527-2
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

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

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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 746
Flammability	Typical Value	Unit	Test method
Flame Rating	• •	V-0 5VA	UL 94