

Ryton® R-7-232NA

polyphenylene sulfide

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

Ryton R-7-232NA 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	• Natural Color	
Forms	• Pellets	
Processing Method	• Injection Molding	

Physical

	Typical Value	Unit	Test method
Density / Specific Gravity	1.97		ASTM D792
Molding Shrinkage			
Flow : 3.20 mm	0.18	%	
Across Flow : 3.20 mm	0.57	%	
Water Absorption (24 hr, 23°C)	0.013	%	ASTM D570

Mechanical

	Typical Value	Unit	Test method
Tensile Modulus	21500	MPa	ISO 527-1
Tensile Stress	150	MPa	ISO 527-2
Tensile Strain (Break)	1.0	%	ISO 527-2
Flexural Modulus	20500	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	66	J/m	ASTM D256
--	9.0	kJ/m ²	ISO 180/A
-40°C	9.6	kJ/m ²	ISO 180
Unnotched Izod Impact			
3.18 mm	300	J/m	ASTM D4812
--	20	kJ/m ²	ISO 180
Hardness	Typical Value	Unit	Test method
Rockwell Hardness			ASTM D785
M-Scale	101		
R-Scale	121		
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 : 120 to 200°C	1.1E-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 : 125 to 200°C	7.9E-5	cm/cm/°C	
Thermal Conductivity	0.31	W/m/K	
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	13	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
25°C, 1 kHz	4.13		
25°C, 1 MHz	4.16		
Dissipation Factor			ASTM D150
25°C, 1 kHz	2.0E-3		
25°C, 1 MHz	4.0E-3		
Arc Resistance	190	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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