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 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	• 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 527-2
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

Impact	Typical Value	Unit	Test method
Notched Izod Impact			
3.18 mm	66	J/m	ASTM D256
--	9.0	kJ/m²	ISO 180/A
-40°C	9.6	kJ/m²	ISO 180
Unnotched Izod Impact			
3.18 mm	300	J/m	ASTM D4812
--	20	kJ/m²	ISO 180

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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 746

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