

Ryton® R-4-242NA

polyphenylene sulfide

Ryton® R-4-242NA 40% glass fiber reinforced polyphenylene sulfide compound complies with United States Food and Drug Administration (FDA) and European

Union (EU 10/2011 and 1183/2012) regulations for use as a component of articles intended for repeat use in contact with all types of foods.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 40% Filler by Weight
Features	• Food Contact Acceptable
Uses	• Appliance Components
Agency Ratings	• AAMA 303 • ACS Unspecified Rating • DVGW W270 • EU 10/2011 • FDA Food Contact, Unspecified Rating • KTW Unspecified Rating • NSF STD-61 • WRAS Unspecified Rating
RoHS Compliance	• RoHS Compliant
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Injection Molding

Physical

	Typical Value	Unit	Test method
Specific Gravity	1.68		ASTM D792
Molding Shrinkage			
Flow : 3.20 mm	0.20	%	
Across Flow : 3.20 mm	0.50	%	
Water Absorption (23°C, 24 hr)	0.014	%	ASTM D570

Mechanical

	Typical Value	Unit	Test method
Tensile Modulus	15100	MPa	ISO 527-2
Tensile Strength	190	MPa	ISO 527-2
Tensile Strain (Break)	1.7	%	ISO 527-2
Flexural Modulus	14700	MPa	ISO 178
Flexural Stress	270	MPa	ISO 178
Compressive Strength	270	MPa	ASTM D695
Poisson's Ratio	0.39		ISO 527

Impact

	Typical Value	Unit	Test method
Notched Izod Impact			
3.18 mm	85	J/m	ASTM D256
--	10	kJ/m ²	ISO 180/A
-40°C	11	kJ/m ²	ISO 180
Unnotched Izod Impact			
3.18 mm	640	J/m	ASTM D4812
--	36	kJ/m ²	ISO 180

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Hardness	Typical Value	Unit	Test method
Rockwell Hardness			ASTM D785
M-Scale	103		
R-Scale	123		

Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	268	°C	
Melting Temperature	285	°C	
CLTE			ASTM E831
Flow : -50 to 50°C	1.4E-5	cm/cm/°C	
Flow : 50 to 100°C	1.4E-5	cm/cm/°C	
Flow : 125 to 200°C	1.1E-5	cm/cm/°C	
Transverse : -50 to 50°C	4.2E-5	cm/cm/°C	
Transverse : 50 to 100°C	5.1E-5	cm/cm/°C	
Transverse : 125 to 200°C	1.1E-4	cm/cm/°C	
Thermal Conductivity	0.31	W/m/K	

Electrical	Typical Value	Unit	Test method
Surface Resistivity	5.2E+15	ohms	ASTM D257
Volume Resistivity	1.5E+16	ohms-cm	ASTM D257
Dielectric Constant			ASTM D150
25°C, 1 kHz	3.49		
25°C, 1 MHz	3.49		
Dissipation Factor			ASTM D150
25°C, 1 kHz	1.0E-3		
25°C, 1 MHz	2.0E-3		

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

Notes

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

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