

Ryton® R-4-244NA

polyphenylene sulfide

Ryton® R-4-244NA 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.

This grade has been approved for use with potable water in the United States, France, Germany, and the United Kingdom.

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	• ACS Unspecified Rating • DM 174/2004 • EU 10/2011 • FDA Food Contact, Unspecified Rating • KTW Unspecified Rating • NSF STD-51 • 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
Density / Specific Gravity	1.65		ASTM D792
Molding Shrinkage			ASTM D955
Flow : 3.20 mm	0.22	%	
Across Flow : 3.20 mm	0.72	%	
Water Absorption (24 hr, 23°C)	4.0E-3	%	ASTM D570

Mechanical	Typical Value	Unit	Test method
Tensile Modulus	15900	MPa	ISO 527-2
Tensile Strength	212	MPa	ISO 527-2
Tensile Strain (Break)	1.8	%	ISO 527-2
Flexural Modulus	15100	MPa	ISO 178
Flexural Stress	292	MPa	ISO 178
Compressive Strength	158	MPa	ASTM D695
Poisson's Ratio	0.40		ISO 527

Impact	Typical Value	Unit	Test method
Notched Izod Impact Strength	10	kJ/m²	ISO 180
Unnotched Izod Impact Strength	42	kJ/m²	ISO 180

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Hardness	Typical Value	Unit	Test method
Rockwell Hardness			ASTM D785
M-Scale	104		
R-Scale	123		
Thermal	Typical Value	Unit	Test method
Heat Deflection Temperature			ISO 75-2/A
1.8 MPa, Unannealed	270	°C	
Melting Temperature	285	°C	
CLTE			ASTM E831
Flow : 25 to 50°C	1.4E-5	cm/cm/°C	
Flow : 125 to 200°C	1.1E-5	cm/cm/°C	
Transverse : 25 to 75°C	5.3E-5	cm/cm/°C	
Transverse : 75 to 125°C	1.2E-3	cm/cm/°C	
Thermal Conductivity	0.29	W/m/K	ASTM E1530
Electrical	Typical Value	Unit	Test method
Surface Resistivity	5.2E+15	ohms	ASTM D257
Volume Resistivity	1.4E+16	ohms·cm	ASTM D257
Dielectric Strength	470	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
25°C, 1 kHz	3.83		
25°C, 1 MHz	3.80		
Dissipation Factor			ASTM D150
25°C, 1 kHz	0.0		
25°C, 1 MHz	1.0E-3		
Arc Resistance	140	sec	ASTM D495
Comparative Tracking Index (CTI)	143	V	UL 746

Notes

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



Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

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