Ryton® R-4-270NA

polyphenylene sulfide

Ryton® R-4-270NA 40% glass fiber reinforced polyphenylene sulfide compound provides enhanced mechanical strength after constant or repeated exposure to high temperature water.

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Glass Fiber, 40% Filler by Weight	
Features	• Chemical Resistant • Good Processability	• High Strength
RoHS Compliance	• RoHS Compliant	
Appearance	• Natural Color	
Forms	• Pellets	

Physical	Typical Value	Unit	Test method
Density / Specific Gravity [1]	1.67		ISO 1183
Molding Shrinkage [2]			
Flow : 3.20 mm	0.20	%	
Across Flow : 3.20 mm	0.50	%	
Water Absorption (24 hr, 23°C)	0.020	%	ASTM D570

Mechanical	Typical Value	Unit	Test method
Tensile Strength	190	MPa	ISO 527
Tensile Elongation (Break)	1.8	%	ISO 527
Flexural Modulus	13000	MPa	ISO 178
Flexural Stress	280	MPa	ISO 178
Compressive Strength	285	MPa	ASTM D695

Impact	Typical Value	Unit	Test method
Notched Izod Impact Strength	9.0	kJ/m²	ISO 180/A
Unnotched Izod Impact Strength	45	kJ/m²	ISO 180

Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	265	°C	
CLTE			ISO 11359-2
Flow : -50 to 50°C	1.5E-5	cm/cm/°C	
Flow : 100 to 200°C	1.0E-5	cm/cm/°C	
Transverse : -50 to 50°C	4.5E-5	cm/cm/°C	
Transverse : 100 to 200°C	8.5E-5	cm/cm/°C	
Thermal Conductivity	0.32	W/m/K	ASTM E1530

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Electrical	Typical Value	Unit	Test method
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	20	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
25°C, 1 kHz	4.00		
25°C, 1 MHz	4.00		
Dissipation Factor			ASTM D150
25°C, 1 kHz	2.0E-3		
25°C, 1 MHz	2.0E-3		
Arc Resistance	125	sec	ASTM D495
Comparative Tracking Index (CTI)	130	V	UL 746

Flammability	Typical Value	Unit	Test method
Flame Rating [3] (1.6 mm)	V-0		UL 94

Additional Information	Typical Value	Unit
Hydrolytic Stability [4]		
Tensile Strength Retained	> 75	%
Weight Gain	< 0.50	%

Notes

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

[1] Method A

[2] Measured on 102 mm x 102 mm x 3.2 mm plaques, edge gated.

[3] This product is not currently UL listed; test results indicate this level of performance.

[4] Test specimens aged 1000 hours in water at 140°C (248°F).

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