

Ryton® R-4-270BL

polyphenylene sulfide

Ryton® R-4-270BL 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	• Black	
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	180	MPa	ISO 527
Tensile Elongation (Break)	1.6	%	ISO 527
Flexural Modulus	13000	MPa	ISO 178
Flexural Stress	260	MPa	ISO 178
Compressive Strength	285	MPa	ASTM D695

Impact

	Typical Value	Unit	Test method
Notched Izod Impact Strength	8.0	kJ/m ²	ISO 180/A
Unnotched Izod Impact Strength	40	kJ/m ²	ISO 180

Thermal

	Typical Value	Unit	Test method
Deflection Temperature Under Load 1.8 MPa, Unannealed	265	°C	ASTM D648
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

Ryton® R-4-270BL

polyphenylene sulfide

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 (284°F).



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.

Neither Solvay Specialty Polymers nor any of its affiliates makes any warranty, express or implied, including merchantability or fitness for use, or accepts any liability in connection with this product, related information or its use. Some applications of which Solvay's products may be proposed to be used are regulated or restricted by applicable laws and regulations or by national or international standards and in some cases by Solvay's recommendation, including applications of food/feed, water treatment, medical, pharmaceuticals, and personal care. Only products designated as part of the Solviva® family of biomaterials may be considered as candidates for use in implantable medical devices. The user alone must finally determine suitability of any information or products for any contemplated use in compliance with applicable law, the manner of use and whether any patents are infringed. The information and the products are for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right.

All trademarks and registered trademarks are property of the companies that comprise the Solvay Group or their respective owners.

© 2019 Solvay Specialty Polymers. All rights reserved.