

Ryton® R-4-244BL

polyphenylene sulfide

Ryton® R-4-244BL 40% glass fiber reinforced polyphenylene sulfide compound complies with United States Food and Drug Administration (FDA) and European Union food contact regulations. 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 ¹ • DM 174/2004 • DVGW ¹ • EU Food Contact ¹ • FDA Food Contact ¹	• KTW ¹ • NSF STD-51 • NSF STD-61 • WRAS ¹
RoHS Compliance	• RoHS Compliant	
Appearance	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding	

Physical	Typical Value	Unit	Test method
Density / Specific Gravity	1.67		ASTM D792
Molding Shrinkage			ASTM D955
Flow : 3.20 mm	0.21	%	
Across Flow : 3.20 mm	0.73	%	
Water Absorption (24 hr, 23°C)	7.0E-3	%	ASTM D570

Mechanical	Typical Value	Unit	Test method
Tensile Modulus	15600	MPa	ISO 527-1
Tensile Strength	197	MPa	ISO 527-2
Tensile Strain (Break)	1.8	%	ISO 527-2
Flexural Modulus	14900	MPa	ISO 178
Flexural Stress	273	MPa	ISO 178
Compressive Strength	164	MPa	ASTM D695
Poisson's Ratio	0.40		ISO 527

Impact	Typical Value	Unit	Test method
Notched Izod Impact Strength	10	kJ/m ²	ISO 180
Unnotched Izod Impact Strength	40	kJ/m ²	ISO 180

Ryton® R-4-244BL

polyphenylene sulfide

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			ISO 75-2/A
1.8 MPa, Unannealed	270	°C	
Melting Temperature	285	°C	
CLTE			ASTM E831
Flow : 25 to 75°C	1.6E-5	cm/cm/°C	
Flow : 125 to 150°C	1.0E-5	cm/cm/°C	
Transverse : 25 to 75°C	5.2E-5	cm/cm/°C	
Transverse : 125 to 200°C	1.3E-4	cm/cm/°C	
Thermal Conductivity	0.28	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	20	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
25°C, 1 Hz	3.84		
25°C, 1 MHz	3.95		
Dissipation Factor			ASTM D150
25°C, 1 Hz	0.0		
25°C, 1 MHz	1.0E-3		
Arc Resistance	133	sec	ASTM D495
Comparative Tracking Index (CTI)	150	V	IEC 60112
Comparative Tracking Index (CTI)	PLC 3		UL 746A

Flammability	Typical Value	Unit	Test method
Flame Rating (0.75 mm)	V-0		UL 94

Injection	Typical Value	Unit
Drying Temperature	135 to 150	°C
Drying Time	2.0 to 4.0	hr
Rear Temperature	295 to 315	°C
Middle Temperature	305 to 325	°C
Front Temperature	315 to 345	°C
Nozzle Temperature	305 to 325	°C
Processing (Melt) Temp	320 to 330	°C
Mold Temperature	135 to 150	°C

Ryton® R-4-244BL

polyphenylene sulfide

Notes

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

¹ For specific clearances, please contact your Solvay representative.

www.syensqo.com

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 Syensqo 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 Syensqo'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 Syensqo'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 Syensqo or their respective owners.

© 2024 2023 Syensqo. All rights reserved.

