Ryton® BR111BL
polyphenylene sulfide

Ryton® BR111BL is a black-colored glass fiber and mineral filled polyphenylene sulfide compound that provides enhanced mechanical strength with good electrical properties and outstanding chemical resistance, even at elevated temperatures.

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Glass Fiber\Mineral	
Features	• Chemical Resistant • Good Electrical Properties	• Good Strength
Uses	• Automotive Applications	
RoHS Compliance	• RoHS Compliant	
Automotive Specifications	• STELLANTIS SPA X62 4142	• STELLANTIS SPA X62 5104
Appearance	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding	

Physical	Typical Value	Unit	Test method
Density / Specific Gravity	1.94		ASTM D792
Molding Shrinkage			
Flow : 3.20 mm	0.20	%	
Across Flow : 3.20 mm	0.40	%	
Water Absorption			
24 hr, 23°C	0.020	%	ASTM D570
Saturation, 23°C	0.10	%	Internal Method

Mechanical	Typical Value	Unit	Test method
Tensile Modulus	21000	MPa	ISO 527-1
Tensile Stress			
--	155	MPa	ISO 527-2
--	145	MPa	ASTM D638
--[1]	158	MPa	ISO 527-2
Tensile Elongation			
Break	1.0	%	ASTM D638 ISO 527-2
Break[1]	1.1	%	ISO 527-2
Flexural Modulus			
--	19300	MPa	ASTM D790
--	19000	MPa	ISO 178

Mechanical	Typical Value	Unit	Test method
Flexural Strength			
--	228	MPa	ASTM D790
--	235	MPa	ISO 178
Compressive Strength	295	MPa	ASTM D695
Poisson's Ratio	0.34		ISO 527

Impact	Typical Value	Unit	Test method
Charpy Notched Impact Strength	6.6	kJ/m²	ISO 179
Charpy Unnotched Impact Strength			ISO 179
--	28	kJ/m²	
--[1]	27	kJ/m²	
Notched Izod Impact			
3.18 mm	59	J/m	ASTM D256
--	7.0	kJ/m²	ISO 180/A
Unnotched Izod Impact			
3.18 mm	270	J/m	ASTM D4812
--	20	kJ/m²	ISO 180

Hardness	Typical Value	Unit	Test method
Rockwell Hardness			ASTM D785
M-Scale	101		
R-Scale	119		

Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	265	°C	
CLTE			ASTM E831
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	3.0E-5	cm/cm/°C	
Transverse : 100 to 200°C	7.0E-5	cm/cm/°C	
Thermal Conductivity	0.51	W/m/K	
UL Temperature Rating	220 to 240	°C	UL 746B

Electrical	Typical Value	Unit	Test method
Surface Resistivity	1.0E+16	ohms	ASTM D257
Volume Resistivity	1.0E+15	ohms·cm	ASTM D257
Dielectric Strength	18	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
25°C, 1 kHz	4.70		
25°C, 1 MHz	4.60		
Dissipation Factor			ASTM D150
25°C, 1 kHz	2.0E-3		
25°C, 1 MHz	3.0E-3		
Arc Resistance	180	sec	ASTM D495

Ryton® BR111BL
polyphenylene sulfide

Electrical	Typical Value	Unit	Test method
Comparative Tracking Index (CTI)	275	V	IEC 60112
Comparative Tracking Index (CTI)	PLC 3		UL 746A
Insulation Resistance [2] (90°C)	1.0E+10	ohms	

Flammability		Typical Value	Unit	Test method
Flame Rating (1.6 mm)	•	V-0		UL 94
	•	5VA		
Oxygen Index		65	%	ASTM D2863

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

Notes

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

[1] Conditioned data is meant to simulate 23°C 50% RH equilibrium values. Conditioning of specimens was achieved per ISO 1110 by exposing specimens for 11 days, 70°C and 62% RH.

[2] 95%RH, 48 hr

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.

© 2026 2023 Syensqo. All rights reserved.