

## Solvay Specialty Polymers Ryton® BR111 Polyphenylene Sulfide (PPS), GlassMineral Filled

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS) , Polyphenylene Sulfide (PPS), Mineral/Glass-Fiber Filled

### Material Notes:

Ryton® BR111 is a natural-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. Features: Good Chemical Resistance; Good Electrical Properties; Good Strength. Information provided by Solvay Specialty Polymers.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Solvay-Specialty-Polymers-Ryton-BR111-Polyphenylene-Sulfide-PPS-GlassMineral-Filled.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Ryton-BR111-Polyphenylene-Sulfide-PPS-GlassMineral-Filled.php)

Physical Properties	Metric	English	Comments
Density	1.94 g/cc	0.0701 lb/in <sup>3</sup>	ASTM D792
Water Absorption	0.020 % @Time 86400 sec	0.020 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.0020 cm/cm @Thickness 3.18 mm	0.0020 in/in @Thickness 0.125 in	
Linear Mold Shrinkage, Transverse	0.0040 cm/cm @Thickness 3.20 mm	0.0040 in/in @Thickness 0.126 in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	101	101	ASTM D785
Hardness, Rockwell R	119	119	ASTM D785
Tensile Strength	159 MPa	23100 psi	ASTM D638
Tensile Stress	165 MPa	23900 psi	ISO 527-2
Elongation at Break	1.1 %	1.1 %	ISO 527-2
	1.1 %	1.1 %	ASTM D638
Flexural Strength	241 MPa	35000 psi	ASTM D790
	255 MPa	37000 psi	ISO 178
Flexural Modulus	19.0 GPa	2760 ksi	ISO 178
	19.3 GPa	2800 ksi	ASTM D790
Compressive Strength	295 MPa	42800 psi	ASTM D695
Poissons Ratio	0.34	0.34	ASTM E132

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched	3.20 J/cm @Thickness 3.18 mm	5.99 ft-lb/in @Thickness 0.125 in	ASTM D256
Izod Impact, Unnotched	3.20 J/cm @Thickness 3.18 mm	5.99 ft-lb/in @Thickness 0.125 in	ASTM D256
Izod Impact, Notched (ISO)	8.00 kJ/m <sup>2</sup>	3.81 ft-lb/in <sup>2</sup>	Notch A; ISO 180
Izod Impact, Unnotched (ISO)	24.0 kJ/m <sup>2</sup>	11.4 ft-lb/in <sup>2</sup>	ISO 180

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	10.0 Åµm/m-Å°C	5.56 Åµin/in-Å°F	2
	@Temperature 100 - 200 Å°C	@Temperature 212 - 392 Å°F	
	15.0 Åµm/m-Å°C	8.33 Åµin/in-Å°F	2
	@Temperature -50.0 - 50.0 Å°C	@Temperature -58.0 - 122 Å°F	
CTE, linear, Transverse to Flow	30.0 Åµm/m-Å°C	16.7 Åµin/in-Å°F	TMA; ASTM E831
	@Temperature -50.0 - 50.0 Å°C	@Temperature -58.0 - 122 Å°F	
	70.0 Åµm/m-Å°C	38.9 Åµin/in-Å°F	TMA; ASTM E831
	@Temperature 100 - 200 Å°C	@Temperature 212 - 392 Å°F	
Thermal Conductivity	0.510 W/m-K	3.54 BTU-in/hr-ft <sup>2</sup> -Å°F	ASTM C177
Maximum Service Temperature, Air	220 - 240 Å°C	428 - 464 Å°F	UL Temperature Rating
Deflection Temperature at 1.8 MPa (264 psi)	265 Å°C	509 Å°F	Unannealed; ASTM D648
Flammability, UL94	V-0	V-0	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	5VA	5VA	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Oxygen Index	65 %	65 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Surface Resistance	1.00e+16 ohm	1.00e+16 ohm	ASTM D257

Electrical Properties	1.00e+10 ohm Metric	English 1.0 ohm	Comments
Insulation Resistance	@Temperature 90.0 Â°C	@Temperature 194 Â°F	IEC 60167
Dielectric Constant	4.6	4.6	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	4.7	4.7	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dissipation Factor	18.0 kV/mm	457 kV/in	ASTM D149
Arc Resistance	0.0020	0.0020	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Comparative Tracking Index	0.0030	0.0030	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Arc Resistance	180 sec	180 sec	ASTM D495
Comparative Tracking Index	225 V	225 V	UL 746

Descriptive Properties	Value	Comments
Availability	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Natural	
Form	Pellets	
Processing Technique	Injection Molding	
RoHS Compliance	RoHS Compliant	

## Contact Songhan Plastic Technology Co.,Ltd.

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