

## Solvay Specialty Polymers Ryton® BR42B Polyphenylene Sulfide Compound (Unverified Data\*\*)

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS) , Polyphenylene Sulfide (PPS) with 40% Glass Fiber Filler

### Material Notes:

Natural Color Polyphenylene Sulfide Compound Ryton® BR42B is a 40% fiberglass reinforced polyphenylene sulfide compound specially formulated to have a low coefficient of friction for use in low surface friction and wear applications. Has a wear rate of 0.001 mm/hr as per ASTM D3702. Applications: Pump Vanes Comments: Test specimen molding conditions: Stock Temperature, 315-345°C; Mold Temperature, 135°C; ASTM Values Converted to SI Units Data provided by Chevron Phillips Chemical Company LP. Solvay Specialty Polymers has acquired the Ryton product line.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Solvay-Specialty-Polymers-Ryton-BR42B-Polyphenylene-Sulfide-Compound-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Ryton-BR42B-Polyphenylene-Sulfide-Compound-nbspUnverified-Data.php)

Physical Properties	Metric	English	Comments
Density	1.75 g/cc	0.0632 lb/in <sup>3</sup>	ASTM D792
Water Absorption	0.050 %	0.050 %	ASTM D570
Linear Mold Shrinkage	0.0020 cm/cm	0.0020 in/in	102 mm X 102 mm X 3.2 mm Plaques, Edge Gated
Linear Mold Shrinkage, Transverse	0.0050 cm/cm	0.0050 in/in	Measured on 102 mm X 102 mm X 3.2 mm Plaques, Edge Gated

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	170 MPa	24700 psi	ASTM D638
Elongation at Break	1.5 %	1.5 %	ASTM D638
Flexural Yield Strength	275 MPa	39900 psi	ASTM D790
Flexural Modulus	15.0 GPa	2180 ksi	ASTM D790
Compressive Yield Strength	205 MPa	29700 psi	ASTM D695
Izod Impact, Notched	0.850 J/cm	1.59 ft-lb/in	ASTM D256
Izod Impact, Unnotched	6.90 J/cm	12.9 ft-lb/in	ASTM D256
Coefficient of Friction, Dynamic	0.32	0.32	Against 52100 steel; 100 hours; 22.7 kg load (1.7 MPa); 36 RPM; Dry; Ambient Temperature; PV=2500; ASTM D3702

Thermal Properties	Metric	English	Comments
CTE, linear	11.0 µm/m-°C	6.11 µin/in-°F	Axial; ASTM E831

Thermal Properties	Metric @Temperature 100 - 200 °C	English @Temperature 212 - 392 °F	Comments
	16.0 µm/m-°C	8.89 µin/in-°F	
	@Temperature -50.0 - 50.0 °C	@Temperature -58.0 - 122 °F	Axial; ASTM E831
CTE, linear, Transverse to Flow	43.0 µm/m-°C	23.9 µin/in-°F	ASTM E831
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	98.0 µm/m-°C	54.4 µin/in-°F	ASTM E831
	@Temperature 100 - 200 °C	@Temperature 212 - 392 °F	
Thermal Conductivity	0.330 W/m-K	2.29 BTU-in/hr-ft <sup>2</sup> -°F	
Maximum Service Temperature, Air	180 °C	356 °F	UL Temperature Index per UL746B
Deflection Temperature at 1.8 MPa (264 psi)	>= 260 °C	>= 500 °F	Annealed 2 hr @ 200°C; ASTM D654
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	ASTM D257
Dielectric Constant	4.0	4.0	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	4.0	4.0	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	20.0 kV/mm	508 kV/in	ASTM D149
Dissipation Factor	0.0030	0.0030	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.0030	0.0030	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	150 V	150 V	UL 746A

## Contact Songhan Plastic Technology Co.,Ltd.

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