

Solvay Specialty Polymers Ryton® BR42B Polyphenylene Sulfide (PPS), 40% Glass Fiber

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

Material Notes:

Ryton® BR42B 40% glass fiber reinforced polyphenylene sulfide compound is specially formulated to provide low coefficient of friction and reduced wear rate for use in applications requiring low surface friction and/or wear. Features: Good Wear Resistance; Low Friction
Additional Properties: Wear Rate - ASTM D3702 5.00E-5 m/hr
Automotive Specifications PSA Peugeot-Citroën SPA X62 5102
Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Ryton-BR42B-Polyphenylene-Sulfide-PPS-40-Glass-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.76 g/cc	0.0636 lb/in ³	ASTM D792
Filler Content	40 %	40 %	Glass Fiber
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	0.0050 cm/cm @Thickness 3.20 mm	0.0050 in/in @Thickness 0.126 in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	97	97	ASTM D785
Hardness, Rockwell R	117	117	ASTM D785
Tensile Strength	186 MPa	27000 psi	ASTM D638
Tensile Stress	190 MPa	27600 psi	ISO 527-2
Elongation at Break	1.6 %	1.6 %	ISO 527-2
	1.6 %	1.6 %	ASTM D638
Flexural Strength	269 MPa	39000 psi	ASTM D790
	280 MPa	40600 psi	ISO 178
Flexural Modulus	14.0 GPa	2030 ksi	ISO 178
	14.5 GPa	2100 ksi	ASTM D790

Mechanical Properties	Metric	English	Comments
Poissons Ratio	0.40	0.40	ASTM E132
Izod Impact, Notched	0.910 J/cm @Thickness 3.18 mm	1.70 ft-lb/in @Thickness 0.125 in	ASTM D256
Izod Impact, Unnotched	7.50 J/cm @Thickness 3.18 mm	14.1 ft-lb/in @Thickness 0.125 in	ASTM D256
Izod Impact, Notched (ISO)	9.50 kJ/mÂ²	4.52 ft-lb/inÂ²	Notch A; ISO 180
Izod Impact, Unnotched (ISO)	40.0 kJ/mÂ²	19.0 ft-lb/inÂ²	ISO 180
Coefficient of Friction, Dynamic	0.32	0.32	vs. Itself; ASTM D1894

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	10.0 Âµm/m-Â°C @Temperature 100 - 200 Â°C	5.56 Âµin/in-Â°F @Temperature 212 - 392 Â°F	2
	15.0 Âµm/m-Â°C @Temperature -50.0 - 50.0 Â°C	8.33 Âµin/in-Â°F @Temperature -58.0 - 122 Â°F	2
CTE, linear, Transverse to Flow	40.0 Âµm/m-Â°C @Temperature -50.0 - 50.0 Â°C	22.2 Âµin/in-Â°F @Temperature -58.0 - 122 Â°F	TMA; ASTM E831
	80.0 Âµm/m-Â°C @Temperature 100 - 200 Â°C	44.4 Âµin/in-Â°F @Temperature 212 - 392 Â°F	TMA; ASTM E831
Thermal Conductivity	0.330 W/m-K	2.29 BTU-in/hr-ftÂ²-Â°F	ASTM C177
Maximum Service Temperature, Air	180 Â°C	356 Â°F	UL Temperature Rating
Deflection Temperature at 1.8 MPa (264 psi)	265 Â°C	509 Â°F	Unannealed; ASTM D648
Flammability, UL94	V-0 @Thickness 1.60 mm	V-0 @Thickness 0.0630 in	
Oxygen Index	48 %	48 %	ASTM D2863

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

Surface Resistance Electrical Properties	1.00e+16 ohm Metric	1.00e+16 ohm English	ASTM D257 Comments
Insulation Resistance	1.00e+11 ohm @Temperature 90.0 Â°C	1.00e+11 ohm @Temperature 194 Â°F	IEC 60167
Dielectric Constant	3.7 @Frequency 1000 Hz	3.7 @Frequency 1000 Hz	ASTM D150
	3.7 @Frequency 1.00e+6 Hz	3.7 @Frequency 1.00e+6 Hz	ASTM D150
Dielectric Strength	22.0 kV/mm	559 kV/in	ASTM D149
Dissipation Factor	0.0020 @Frequency 1000 Hz	0.0020 @Frequency 1000 Hz	ASTM D150
	0.0030 @Frequency 1.00e+6 Hz	0.0030 @Frequency 1.00e+6 Hz	ASTM D150
Comparative Tracking Index	150 V	150 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	

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