

Solvay Specialty Polymers Ryton® R-4-220BL Polyphenylene Sulfide Compound (Unverified Data**)

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

Material Notes:

Black Polyphenylene Sulfide Compound Ryton® R-4-220BL is an advanced 40% fiberglass reinforced polyphenylene sulfide compound formulated for enhanced hydrolytic stability in applications requiring constant or repeated exposure to high temperature water. Retains 80% of its tensile strength and gains 1% in rate. 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-R-4-220BL-Polyphenylene-Sulfide-Compound-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.65 g/cc	0.0596 lb/in ³	ASTM D792
Water Absorption	0.020 %	0.020 %	ASTM D570
Linear Mold Shrinkage	0.0090 cm/cm	0.0090 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	180 MPa	26100 psi	ISO 527
Elongation at Break	1.4 %	1.4 %	ISO 527
Flexural Yield Strength	240 MPa	34800 psi	ISO 178
Flexural Modulus	14.0 GPa	2030 ksi	ISO 178
Compressive Yield Strength	235 MPa	34100 psi	ASTM D695
Izod Impact, Unnotched	3.00 J/cm	5.62 ft-lb/in	J/cm ² ; ISO 180A
Izod Impact Resistance	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 180A

Thermal Properties	Metric	English	Comments
CTE, linear	14.0 µm/m-°C	7.78 µin/in-°F	Axial; ASTM E831
	@Temperature 100 - 200 °C	@Temperature 212 - 392 °F	
	16.0 µm/m-°C	8.89 µin/in-°F	

Thermal Properties	Metric @Temperature -50.0 - 50.0 °C	English @Temperature -58.0 - 122 °F	Axial: ASTM E831 Comments
CTE, linear, Transverse to Flow	40.0 µm/m-°C @Temperature 20.0 °C	22.2 µin/in-°F @Temperature 68.0 °F	ASTM E831
	94.0 µm/m-°C @Temperature 100 - 200 °C	52.2 µin/in-°F @Temperature 212 - 392 °F	ASTM E831
Maximum Service Temperature, Air	200 °C	392 °F	UL Temperature Index 200 / 220 per UL746B
Deflection Temperature at 1.8 MPa (264 psi)	>= 260 °C	>= 500 °F	Annealed 2 hr @ 200°C; ASTM D653
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	5.00e+14 ohm-cm	5.00e+14 ohm-cm	ASTM D257
Surface Resistance	1.00e+12 ohm @Temperature 90.0 °C	1.00e+12 ohm @Temperature 194 °F	95% RH, 48 hrs
Dielectric Constant	4.0 @Frequency 1000 Hz	4.0 @Frequency 1000 Hz	ASTM D150
	4.0 @Frequency 1e+6 Hz	4.0 @Frequency 1e+6 Hz	ASTM D150
Dielectric Strength	20.0 kV/mm	508 kV/in	ASTM D149
Dissipation Factor	0.0020 @Frequency 1000 Hz	0.0020 @Frequency 1000 Hz	ASTM D150
	0.0040 @Frequency 1e+6 Hz	0.0040 @Frequency 1e+6 Hz	ASTM D150
Arc Resistance	125 sec	125 sec	ASTM D495
Comparative Tracking Index	150 V	150 V	UL 746A

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