

Solvay Specialty Polymers Ryton® R-4 02 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 02 is a 40% fiberglass reinforced polyphenylene sulfide compound which provides outstanding chemical resistance and mechanical properties even at elevated temperatures. 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-4-02-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	0.050 %	0.050 %	ASTM D570
Linear Mold Shrinkage	0.0030 cm/cm	0.0030 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	150 MPa	21800 psi	ASTM D638
Elongation at Break	1.1 %	1.1 %	ASTM D638
Flexural Yield Strength	185 MPa	26800 psi	ASTM D790
Flexural Modulus	15.0 GPa	2180 ksi	ASTM D790
Compressive Yield Strength	240 MPa	34800 psi	ASTM D695
Izod Impact, Notched	0.750 J/cm	1.41 ft-lb/in	ASTM D256
Izod Impact, Unnotched	2.70 J/cm	5.06 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	21.0 µm/m-°C	11.7 µin/in-°F	Axial; ASTM E831
	@Temperature 100 - 200 °C	@Temperature 212 - 392 °F	
	21.0 µm/m-°C	11.7 µin/in-°F	Axial; ASTM E831
	@Temperature -50.0 - 50.0 °C	@Temperature -58.0 - 122 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Transverse to Flow	84.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	46.7 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM E831
	@Temperature 20.0 $^\circ\text{C}$	@Temperature 68.0 $^\circ\text{F}$	
	84.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	46.7 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM E831
	@Temperature 100 - 200 $^\circ\text{C}$	@Temperature 212 - 392 $^\circ\text{F}$	
Thermal Conductivity	0.320 W/m-K	2.22 BTU-in/hr-ft ² - $^\circ\text{F}$	
Maximum Service Temperature, Air	200 $^\circ\text{C}$	392 $^\circ\text{F}$	UL Temperature Index 200 / 220 per UL746B
Deflection Temperature at 1.8 MPa (264 psi)	≥ 260 $^\circ\text{C}$	≥ 500 $^\circ\text{F}$	Annealed 2 hr @ 200 $^\circ\text{C}$; ASTM D659
Flammability, UL94	5VA	5VA	UL94 V-0/5VA

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	ASTM D257
Surface Resistance	1.00e+11 ohm	1.00e+11 ohm	95% RH, 48 hrs
	@Temperature 90.0 $^\circ\text{C}$	@Temperature 194 $^\circ\text{F}$	
Dielectric Constant	3.8	3.8	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	3.9	3.9	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	18.0 kV/mm	457 kV/in	ASTM D149
Dissipation Factor	0.0020	0.0020	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.0020	0.0020	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Arc Resistance	125 sec	125 sec	ASTM D495
Comparative Tracking Index	130 V	130 V	UL 746A

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