

Chevron Phillips Ryton® R10-110BL Polyphenylene Sulfide Compound (discontinued **)

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

Material Notes:

Black Polyphenylene Sulfide Compound Ryton® R10-110BL is a glass and mineral filled polyphenylene sulfide compound which provides a good combination of mechanical and electrical properties. Applications: Insulating Components 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. This product was discontinued prior to the acquisition and is listed under the Chevron Phillips name for historical purposes.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Chevron-Phillips-Ryton-R10-110BL-Polyphenylene-Sulfide-Compound-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	2.05 g/cc	0.0741 lb/in ³	ASTM D792
Water Absorption	0.030 %	0.030 %	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	0.0040 cm/cm	0.0040 in/in	Measured on 102 mm X 102 mm X 3.2 mm Plaques, Edge Gated

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	115 MPa	16700 psi	ASTM D638
Elongation at Break	0.70 %	0.70 %	ASTM D638
Flexural Yield Strength	185 MPa	26800 psi	ASTM D790
Flexural Modulus	21.0 GPa	3050 ksi	ASTM D790
Compressive Yield Strength	240 MPa	34800 psi	ASTM D695
Izod Impact, Notched	0.550 J/cm	1.03 ft-lb/in	ASTM D256
Izod Impact, Unnotched	1.60 J/cm	3.00 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	9.00 µm/m-°C	5.00 µin/in-°F	Axial; ASTM E831
	@Temperature 100 - 200 °C	@Temperature 212 - 392 °F	
	13.0 µm/m-°C	7.22 µin/in-°F	Axial; ASTM E831
	@Temperature -50.0 -	@Temperature -58.0 -	

Thermal Properties	50.0 °C Metric	122 °F English	Comments
CTE, linear, Transverse to Flow	24.0 µm/m-°C	13.3 µin/in-°F	ASTM E831
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	70.0 µm/m-°C	38.9 µin/in-°F	ASTM E831
	@Temperature 100 - 200 °C	@Temperature 212 - 392 °F	
Thermal Conductivity	0.650 W/m-K	4.51 BTU-in/hr-ft ² -°F	
Maximum Service Temperature, Air	220 °C	428 °F	UL Temperature Index 220 / 240 per UL746B
Deflection Temperature at 1.8 MPa (264 psi)	>= 260 °C	>= 500 °F	Annealed 2 hr @ 200°C; ASTM D664
Flammability, UL94	5VA	5VA	UL94 V-0/5VA

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	ASTM D257
Surface Resistance	5.00e+13 ohm	5.00e+13 ohm	95% RH, 48 hrs
	@Temperature 90.0 °C	@Temperature 194 °F	
Dielectric Constant	5.4	5.4	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	5.5	5.5	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	16.0 kV/mm	406 kV/in	ASTM D149
Dissipation Factor	0.0020	0.0020	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	0.0040	0.0040	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Arc Resistance	183 sec	183 sec	ASTM D495
Comparative Tracking Index	250 V	250 V	UL 746A

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