

For more information and technical assistance contact:

Chevron Phillips Chemical Company LP  
P.O. Box 4910  
The Woodlands, TX 77387-4910  
877.798.6666



## Ryton<sup>®</sup> R10-110BL

### Polyphenylene Sulfide Resins

Ryton<sup>®</sup> R10-110BL PPS is a glass and mineral filled polyphenylene sulfide compound that provides a good combination of mechanical and electrical properties with the inherent cost savings of thermoplastics.

Nominal Engineering Properties <sup>(1)</sup>	Value	Test Method
Tensile Strength, MPa	120	ISO 527
Elongation, %	0.7	ISO 527
Flexural Strength, MPa	195	ISO 178
Flexural Modulus, GPa	22	ISO 178
Notched Izod Impact, kJ/m <sup>2</sup>	5.5	ISO180/A
Unnotched Izod Impact, kJ/m <sup>2</sup>	12	ISO 180/U
Compressive Strength, MPa	255	ASTM D695
Tensile Strength, kpsi	17.0	ASTM D638
Elongation, %	0.7	ASTM D638
Flexural Strength, kpsi	26.0	ASTM D790
Flexural Modulus, Mpsi	3.1	ASTM D790
Notched Izod Impact, ft-lb/in, 1/8 in specimen	0.8	ASTM D256
Unnotched Izod Impact, ft-lb/in, 1/8 in specimen	3.0	ASTM D256
Compressive Strength, kpsi	37.0	ASTM D695
Heat Deflection Temperature, 264 psi (1.8 MPa), °C	>260	ASTM D648
Heat Deflection Temperature, 264 psi (1.8 MPa), °F	>500	ASTM D648
UL Temperature Index, °C	220 / 240	UL 746B
Coefficient of Linear Thermal Exp., X 10 <sup>-6</sup> in/in/°C		ASTM E831
Axial Direction, -50°C to 50°C	15	ASTM E831
Axial Direction, 100°C to 200°C	15	ASTM E831
Transverse Direction, -50°C to 50°C	25	ASTM E831
Transverse Direction, 100°C to 200°C	60	ASTM E831
Flammability Rating	V-0 / 5VA	UL 94
Thermal Conductivity, W/m·K	0.65	
Thermal Conductivity, BTU·in/hr·ft <sup>2</sup> ·°F	4.5	
Dielectric Strength, V/mil	400	ASTM D149
Dielectric Strength, kV/mm	16	ASTM D149

MSDS #100000000216

Revision Date December 2010

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Dielectric Constant, 1 kHz, 25°C (78°F)	5.0	ASTM D150
Dielectric Constant, 1 MHz, 25°C (78°F)	4.9	ASTM D150
Dissipation Factor, 1 kHz, 25°C (78°F)	0.009	ASTM D150
Dissipation Factor, 1 MHz, 25°C (78°F)	0.002	ASTM D150
Volume Resistivity, ohm-cm	$1 \times 10^{15}$	ASTM D257
Arc Resistance, sec	185	ASTM D495
Comparative Tracking Index, V	250	UL 746A
Insulation Resistance, ohm (90°C, 95% RH, 48 hr)	$1 \times 10^{13}$	
Mold Shrinkage <sup>(2)</sup> in/in, Flow/Transverse	0.002 / 0.004	
Density, g/cc	2.05	ASTM D792
Water Absorption, % (23°C, 24 hr)	0.02	ASTM D570
Color	Black	

(1) Test specimen molding conditions: Stock Temperature, 600-650°F (315-345°C); Mold Temperature, 275°F (135°C)

(2) Measured on 102 mm X 102 mm X 3.2 mm Plaques, Edge Gated

The nominal properties reported herein are typical of the product but do not reflect normal testing variances and therefore should not be used for specification purposes.

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