

## Solvay Specialty Polymers Ryton® R-4 02XT 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 02XT is a 40% fiberglass reinforced polyphenylene sulfide compound that takes advantage of state-of-the-art polymerization technology to improve ductility and impact strength. Applications: Blower

Housing 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-4-02XT-Polyphenylene-Sulfide-Compound-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Ryton-R-4-02XT-Polyphenylene-Sulfide-Compound-nbspUnverified-Data.php)

Physical Properties	Metric	English	Comments
Density	1.65 g/cc	0.0596 lb/in <sup>3</sup>	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
Hardness, Rockwell R	124	124	
	124	124	ASTM D785
Tensile Strength, Ultimate	180 MPa	26100 psi	ASTM D638
Elongation at Break	1.5 %	1.5 %	ASTM D638
Modulus of Elasticity	15.2 GPa	2200 ksi	
	15.2 GPa	2200 ksi	Loading Rate 0.1 inch/min
Flexural Yield Strength	250 MPa	36300 psi	ASTM D790
Flexural Modulus	15.0 GPa	2180 ksi	ASTM D790
Compressive Yield Strength	275 MPa	39900 psi	ASTM D695
Fatigue Strength	85.0 MPa	12300 psi	10 Hz, ASTM Type I tensile bar
	@# of Cycles 1.00e+6	@# of Cycles 1.00e+6	
Izod Impact, Notched	0.750 J/cm	1.41 ft-lb/in	ASTM D256
Izod Impact, Unnotched	5.30 J/cm	9.93 ft-lb/in	ASTM D256

Mechanical Properties	Metric	English	Comments
Thermal Properties	Metric	English	Comments
CTE, linear	12.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	6.67 $\mu\text{in}/\text{in}\cdot\text{°F}$	Axial; ASTM E831
	@Temperature 100 - 200 $\text{°C}$	@Temperature 212 - 392 $\text{°F}$	
	15.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	8.33 $\mu\text{in}/\text{in}\cdot\text{°F}$	Axial; ASTM E831
	@Temperature -50.0 - 50.0 $\text{°C}$	@Temperature -58.0 - 122 $\text{°F}$	
CTE, linear, Transverse to Flow	40.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	22.2 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM E831
	@Temperature 20.0 $\text{°C}$	@Temperature 68.0 $\text{°F}$	
	83.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	46.1 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM E831
	@Temperature 100 - 200 $\text{°C}$	@Temperature 212 - 392 $\text{°F}$	
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ft <sup>2</sup> -°F	
Maximum Service Temperature, Air	200 $\text{°C}$	392 $\text{°F}$	UL Temperature Index 200 / 220 per UL746B
Deflection Temperature at 1.8 MPa (264 psi)	$\geq 260 \text{°C}$	$\geq 500 \text{°F}$	Annealed 2 hr @ 200 $\text{°C}$ ; ASTM D657
Flammability, UL94	5VA	5VA	UL94 V-0/5VA

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+11 ohm-cm	1.00e+11 ohm-cm	ASTM D257
Surface Resistance	1.00e+11 ohm	1.00e+11 ohm	95% RH, 48 hrs
	@Temperature 90.0 $\text{°C}$	@Temperature 194 $\text{°F}$	
Insulation Resistance	1.00e+11 ohm	1.00e+11 ohm	Accelerated; 194 $\text{°F}$ ; 95% RH; 2 days; ASTM D257
Dielectric Constant	4.1	4.1	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	4.1	4.1	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	20.0 kV/mm	508 kV/in	ASTM D149
Dissipation Factor	0.0020	0.0020	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.0040	0.0040	ASTM D150

Electrical Properties	@Frequency 1e+6 Hz Metric	@Frequency 1e+6 Hz English	Comments
Arc Resistance	125 sec	125 sec	ASTM D495
Comparative Tracking Index	130 V	130 V	UL 746A

## Contact Songhan Plastic Technology Co.,Ltd.

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