

Solvay Specialty Polymers Ryton® R-4XT Polyphenylene Sulfide (PPS), 40% Glass Fiber

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

Material Notes:

Ryton® R-4XT and R-4-02XT 40% glass fiber reinforced polyphenylene sulfide compounds provide enhanced mechanical strength with good electrical properties and outstanding chemical resistance, even at elevated temperatures. Features: Good Chemical Resistance; Good Electrical Properties; Good Strength Automotive Specifications GM GMP.PPS.001 Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Ryton-R-4XT-Polyphenylene-Sulfide-PPS-40-Glass-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.69 g/cc	0.0611 lb/in ³	ASTM D792
Filler Content	40 %	40 %	Glass Fiber
Water Absorption	0.020 % @Time 86400 sec	0.020 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.0020 cm/cm @Thickness 3.18 mm	0.0020 in/in @Thickness 0.125 in	
Linear Mold Shrinkage, Transverse	0.0050 cm/cm @Thickness 3.20 mm	0.0050 in/in @Thickness 0.126 in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	102	102	ASTM D785
Hardness, Rockwell R	120	120	ASTM D785
Tensile Strength	200 MPa	29000 psi	ASTM D638
Tensile Stress	195 MPa	28300 psi	ISO 527-2
Elongation at Break	1.6 %	1.6 %	ISO 527-2
	1.6 %	1.6 %	ASTM D638
Flexural Strength	276 MPa	40000 psi	ASTM D790
	280 MPa	40600 psi	ISO 178
Flexural Modulus	14.0 GPa	2030 ksi	ISO 178
	14.5 GPa	2100 ksi	ASTM D790
Compressive Strength	285 MPa	41300 psi	ASTM D695

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched	0.910 J/cm @Thickness 3.18 mm	1.70 ft-lb/in @Thickness 0.125 in	ASTM D256
Izod Impact, Unnotched	6.40 J/cm @Thickness 3.18 mm	12.0 ft-lb/in @Thickness 0.125 in	ASTM D256
Izod Impact, Notched (ISO)	9.00 kJ/mÂ²	4.28 ft-lb/inÂ²	Notch A; ISO 180
Izod Impact, Unnotched (ISO)	35.0 kJ/mÂ²	16.7 ft-lb/inÂ²	ISO 180

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	15.0 Âµm/m-Â°C @Temperature 100 - 200 Â°C	8.33 Âµin/in-Â°F @Temperature 212 - 392 Â°F	2
	20.0 Âµm/m-Â°C @Temperature -50.0 - 50.0 Â°C	11.1 Âµin/in-Â°F @Temperature -58.0 - 122 Â°F	2
CTE, linear, Transverse to Flow	40.0 Âµm/m-Â°C @Temperature -50.0 - 50.0 Â°C	22.2 Âµin/in-Â°F @Temperature -58.0 - 122 Â°F	TMA; ASTM E831
	90.0 Âµm/m-Â°C @Temperature 100 - 200 Â°C	50.0 Âµin/in-Â°F @Temperature 212 - 392 Â°F	TMA; ASTM E831
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ftÂ²-Â°F	ASTM C177
Maximum Service Temperature, Air	200 - 220 Â°C	392 - 428 Â°F	UL Temperature Rating
Deflection Temperature at 1.8 MPa (264 psi)	265 Â°C	509 Â°F	Unannealed; ASTM D648
Flammability, UL94	V-0 @Thickness 1.60 mm	V-0 @Thickness 0.0630 in	
	5VA @Thickness 1.60 mm	5VA @Thickness 0.0630 in	
Oxygen Index	53 %	53 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	ASTM D257

Electrical Properties	Metric	English	Comments
Insulation Resistance	1.00e+11 ohm @Temperature 90.0 Â°C	1.00e+11 ohm @Temperature 194 Â°F	IEC 60167
Dielectric Constant	3.8 @Frequency 1000 Hz	3.8 @Frequency 1000 Hz	ASTM D150
Dielectric Strength	3.9 @Frequency 1.00e+6 Hz	3.9 @Frequency 1.00e+6 Hz	ASTM D150
Dissipation Factor	22.0 kV/mm	559 kV/in	ASTM D149
Arc Resistance	0.0020 @Frequency 1000 Hz	0.0020 @Frequency 1000 Hz	ASTM D150
Comparative Tracking Index	0.0030 @Frequency 1.00e+6 Hz	0.0030 @Frequency 1.00e+6 Hz	ASTM D150
	125 sec	125 sec	ASTM D495
	130 V	130 V	UL 746

Descriptive Properties	Value	Comments
Availability	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Natural	
Form	Pellets	
Processing Technique	Injection Molding	
RoHS Compliance	RoHS Compliant	

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