

Solvay Specialty Polymers Ryton® R-4-222NA Polyphenylene Sulfide (PPS), 40% Glass Fiber

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

Material Notes:

Ryton® R-4-222NA 40% glass fiber reinforced polyphenylene sulfide compound provides enhanced mechanical strength after constant or repeated exposure to high temperature water and complies with United States Food and Drug Administration (FDA) and European Union (EU 10/2011 and 1183/2012) regulations for use as a component of articles intended for repeat use in contact with all types of foods. Features: Food Contact Acceptable; Good Strength Additional Properties: Hydrolytic Stability - > 80 %; Hydrolytic Stability - < 1.0 % Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Ryton-R-4-222NA-Polyphenylene-Sulfide-PPS-40-Glass-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.68 g/cc	0.0607 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	103	103	ASTM D785
Hardness, Rockwell R	122	122	ASTM D785
Tensile Strength	186 MPa	27000 psi	ASTM D638
Tensile Stress	190 MPa	27600 psi	ISO 527-2
Elongation at Break	1.6 %	1.6 %	ISO 527-2
	1.6 %	1.6 %	ASTM D638
Flexural Strength	269 MPa	39000 psi	ASTM D790
	275 MPa	39900 psi	ISO 178
Flexural Modulus	14.0 GPa	2030 ksi	ISO 178

Mechanical Properties	Metric	English	ASTM D790 Comments
Compressive Strength	275 MPa	39900 psi	ASTM D695
Poissons Ratio	0.37	0.37	ASTM E132
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
	15.0 Âµm/m-Â°C @Temperature -50.0 - 50.0 Â°C	8.33 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
	85.0 Âµm/m-Â°C @Temperature 100 - 200 Â°C	47.2 Âµin/in-Â°F @Temperature 212 - 392 Â°F	TMA; ASTM E831
Thermal Conductivity	0.310 W/m-K	2.15 BTU-in/hr-ftÂ²-Â°F	ASTM C177
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	
Oxygen Index	45 %	45 %	ASTM D2863

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

Electrical Properties	^{3.8} Metric	^{3.8} English	Comments
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	3.8	3.8	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	22.0 kV/mm	559 kV/in	ASTM D149
	0.0020	0.0020	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.0030	0.0030	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Arc Resistance	125 sec	125 sec	ASTM D495
Comparative Tracking Index	150 V	150 V	UL 746

Compliance Properties	Metric	English	Comments
FDA	Yes	Yes	

Descriptive Properties	Value	Comments
Agency Ratings	EU 10/2011; FDA Food Contact	
Availability	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Natural	
Form	Pellets	
Processing Technique	Injection Molding	
RoHS Compliance	RoHS Compliant	

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