

Solvay Specialty Polymers Ryton® R-7-220BL Polyphenylene Sulfide (PPS), GlassMineral Filled

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

Material Notes:

Ryton® R-7-220BL glass fiber and mineral filled polyphenylene sulfide compound provides enhanced mechanical strength after constant or repeated exposure to high temperature water. Features: Good Strength Additional Properties: Hydrolytic Stability - > 75 %; 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-7-220BL-Polyphenylene-Sulfide-PPS-GlassMineral-Filled.php

Physical Properties	Metric	English	Comments
Density	1.95 g/cc	0.0704 lb/in ³	ASTM D792
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	0.0040 cm/cm @Thickness 3.20 mm	0.0040 in/in @Thickness 0.126 in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	99	99	ASTM D785
Hardness, Rockwell R	116	116	ASTM D785
Tensile Strength	152 MPa	22000 psi	ASTM D638
Tensile Stress	155 MPa	22500 psi	ISO 527-2
Elongation at Break	1.0 %	1.0 %	ISO 527-2
	1.0 %	1.0 %	ASTM D638
Flexural Strength	234 MPa	33900 psi	ASTM D790
	240 MPa	34800 psi	ISO 178
Flexural Modulus	19.0 GPa	2760 ksi	ISO 178
	19.3 GPa	2800 ksi	ASTM D790
Compressive Strength	295 MPa	42800 psi	ASTM D695
Poissons Ratio	0.35	0.35	ASTM E132

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched	2.70 J/cm @Thickness 3.18 mm	5.06 ft-lb/in @Thickness 0.125 in	ASTM D256
Izod Impact, Unnotched	2.70 J/cm @Thickness 3.18 mm	5.06 ft-lb/in @Thickness 0.125 in	ASTM D256
Izod Impact, Notched (ISO)	8.00 kJ/m ²	3.81 ft-lb/in ²	Notch A; ISO 180
Izod Impact, Unnotched (ISO)	20.0 kJ/m ²	9.52 ft-lb/in ²	ISO 180

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	10.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 100 - 200 $\text{Å}^\circ\text{C}$	5.56 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 212 - 392 $\text{Å}^\circ\text{F}$	2
	15.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature -50.0 - 50.0 $\text{Å}^\circ\text{C}$	8.33 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature -58.0 - 122 $\text{Å}^\circ\text{F}$	2
CTE, linear, Transverse to Flow	30.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature -50.0 - 50.0 $\text{Å}^\circ\text{C}$	16.7 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature -58.0 - 122 $\text{Å}^\circ\text{F}$	TMA; ASTM E831
	70.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 100 - 200 $\text{Å}^\circ\text{C}$	38.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 212 - 392 $\text{Å}^\circ\text{F}$	TMA; ASTM E831
Thermal Conductivity	0.510 W/m-K	3.54 BTU-in/hr-ft ² - $\text{Å}^\circ\text{F}$	ASTM C177
Maximum Service Temperature, Air	220 - 240 $\text{Å}^\circ\text{C}$	428 - 464 $\text{Å}^\circ\text{F}$	UL Temperature Rating
Deflection Temperature at 1.8 MPa (264 psi)	265 $\text{Å}^\circ\text{C}$	509 $\text{Å}^\circ\text{F}$	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	62 %	62 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Surface Resistance	1.00e+16 ohm	1.00e+16 ohm	ASTM D257

Electrical Properties	Metric	English	Comments
Insulation Resistance	1.00e+11 ohm @Temperature 90.0 Â°C	1 ohm @Temperature 194 Â°F	IEC 60167
Dielectric Constant	4.9 @Frequency 1.00e+6 Hz	4.9 @Frequency 1.00e+6 Hz	ASTM D150
Dielectric Strength	5.0 @Frequency 1000 Hz	5.0 @Frequency 1000 Hz	ASTM D150
Dielectric Strength	18.0 kV/mm	457 kV/in	ASTM D149
Dissipation Factor	0.010 @Frequency 1.00e+6 Hz	0.010 @Frequency 1.00e+6 Hz	ASTM D150
Dissipation Factor	0.020 @Frequency 1000 Hz	0.020 @Frequency 1000 Hz	ASTM D150
Arc Resistance	185 sec	185 sec	ASTM D495
Comparative Tracking Index	175 V	175 V	UL 746

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

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