

Teijin Panlite® BS-8120R Friction and Abrasion Resistant, Carbon Fiber Reinforced Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Carbon Fiber Reinforced

Material Notes:

CF 20% reinforced grade, meeting UL 94 V-2. it is compounded with fluorine powder to improve friction and abrasion resistance and also exhibits a mold release property, maintaining excellent characteristics of polycarbonate resin. Applications: Mechanical, electric and electronic components that need abrasion and friction resistance. Information provided by Teijin Chemicals Ltd.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Teijin-Panlite-BS-8120R-Friction-and-Abrasion-Resistant-Carbon-Fiber-Reinforced-Polycarbonate-Resin.php

Physical Properties	Metric	English	Comments
Density	1.36 g/cc	0.0491 lb/in ³	ISO 1183
Water Absorption	0.14 %	0.14 %	in water, 23°C, 24h; ISO 62
Linear Mold Shrinkage	0.00020 - 0.0020 cm/cm @Thickness 4.00 mm	0.00020 - 0.0020 in/in @Thickness 0.157 in	
Linear Mold Shrinkage, Transverse	0.0040 - 0.0060 cm/cm @Thickness 4.00 mm	0.0040 - 0.0060 in/in @Thickness 0.157 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	120 MPa	17400 psi	50mm/min; ISO 527
Elongation at Break	1.5 %	1.5 %	50mm/min; ISO 527
Tensile Modulus	13.6 GPa	1970 ksi	1mm/min; ISO 527
Flexural Strength	170 MPa	24700 psi	2mm/min; ISO 178
Flexural Modulus	12.0 GPa	1740 ksi	2mm/min; ISO 178
Charpy Impact Unnotched	2.50 J/cm ²	11.9 ft-lb/in ²	ISO 179
Charpy Impact, Notched	0.700 J/cm ²	3.33 ft-lb/in ²	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	20.0 Åµm/m-Å°C	11.1 Åµin/in-Å°F	ISO 11359
	@Temperature 20.0 Å°C	@Temperature 68.0 Å°F	
	60.0 Åµm/m-Å°C	33.3 Åµin/in-Å°F	

CTE, linear, Transverse to Flow Thermal Properties	Metric @Temperature 20.0 °C	English @Temperature 68.0 °F	ISO 11359 Comments
Deflection Temperature at 0.46 MPa (66 psi)	150 °C	302 °F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	147 °C	297 °F	ISO 75
Vicat Softening Point	152 °C	306 °F	50°C/hr, 50N; ISO 306
UL RTI, Electrical	80.0 °C @Thickness 1.47 mm	176 °F @Thickness 0.0579 in	UL 746B
UL RTI, Mechanical with Impact	80.0 °C @Thickness 1.47 mm	176 °F @Thickness 0.0579 in	UL 746B
UL RTI, Mechanical without Impact	80.0 °C @Thickness 1.47 mm	176 °F @Thickness 0.0579 in	UL 746B
Flammability, UL94	V-2 @Thickness 0.750 mm	V-2 @Thickness 0.0295 in	
	V-1 @Thickness 1.50 mm	V-1 @Thickness 0.0591 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	0.10 - 10 ohm-cm	0.10 - 10 ohm-cm	IEC 60093
Surface Resistance	1.0 - 100 ohm	1.0 - 100 ohm	IEC 60093

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