

PolyOne OnForce™ LFT SF-40LGF/001 Natural Polyphenylene Sulfide (PPS)

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS)

Material Notes:

PolyOne's Long Fiber Thermoplastic (LFT) compounds are formulated for demanding applications which require high stiffness and good impact such as metal replacement or other structural applications. These products exhibit enhanced physical and mechanical properties versus standard short fiber products. Benefits of LFT compounds include improved impact strength, elastic modulus, and material strength across wide temperature ranges from subambient to highly elevated. Furthermore, LFT compounds have been shown to offer improved performance in the areas of creep and fatigue performance, improved dimensional stability, and exhibit an exceptional surface finish when compared to traditional highly filled short fiber products. LFT compounds can be processed using equipment similar to that used for short fiber products. The mechanical properties of finished parts depend greatly on the length of the fibers in the molded part; therefore processing conditions must be set carefully in order to minimize fiber breakage. A low shear process is advised, with low back pressure, low screw speed and low-to-medium injection speed. Information provided by PolyOne

Order this product through the following link:

http://www.lookpolymers.com/polymer_PolyOne-OnForce-LFT-SF-40LGF001-Natural-Polyphenylene-Sulfide-PPS.php

Physical Properties	Metric	English	Comments
Density	1.60 g/cc	0.0578 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.0030 cm/cm	0.0030 in/in	Measured on a tensile specimen.; ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	160 MPa	23200 psi	ISO 527-2
Elongation at Break	1.5 %	1.5 %	ISO 527-2
Tensile Modulus	13.0 GPa	1890 ksi	ISO 527-2
Flexural Strength	230 MPa	33400 psi	ISO 178
Flexural Modulus	11.0 GPa	1600 ksi	ISO 178
Charpy Impact Unnotched	5.00 J/cm ²	23.8 ft-lb/in ²	ISO 179
Charpy Impact, Notched	1.50 J/cm ²	7.14 ft-lb/in ²	ISO 179
Gardner Impact	8.81 J	6.50 ft-lb	ASTM D5420

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	264 °C	507 °F	Unannealed; ISO 75-2/A
Flammability, UL94	V-0 @Thickness 0.800 mm	V-0 @Thickness 0.0315 in	UL 94

Thermal Properties	Metric	English	Comments
	@Thickness 1.60 mm	@Thickness 0.0630 in	UL 94

Processing Properties	Metric	English	Comments
Melt Temperature	320 - 340 °C	608 - 644 °F	
Mold Temperature	150 °C	302 °F	
Drying Temperature	150 °C	302 °F	
Dry Time	4.00 - 6.00 hour	4.00 - 6.00 hour	
Back Pressure	1.00 MPa	145 psi	

Descriptive Properties	Value	Comments
Features	Heat Stabilized	
Filler / Reinforcement	Long Glass Fiber, 40% Filler by Weight	
Forms	Pellets	
Generic Material	PPS	
Generic Name	Polyphenylene Sulfide (PPS)	
Injection Rate	Slow-Moderate	
Regional Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	

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