

PolyOne OnForce™ LFT AM-40LGF/001 Natural Polyphthalamide (PPA)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA)

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-AM-40LGF001-Natural-Polyphthalamide-PPA.php

Physical Properties	Metric	English	Comments
Density	1.53 g/cc	0.0553 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.0020 cm/cm	0.0020 in/in	Measured on a tensile specimen.; ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	230 MPa	33400 psi	ISO 527-2
Elongation at Break	2.0 %	2.0 %	ISO 527-2
Tensile Modulus	14.5 GPa	2100 ksi	ISO 527-2
Flexural Strength	350 MPa	50800 psi	ISO 178
Flexural Modulus	12.0 GPa	1740 ksi	ISO 178
Charpy Impact Unnotched	8.00 J/cm ²	38.1 ft-lb/in ²	ISO 179
Charpy Impact, Notched	2.00 J/cm ²	9.52 ft-lb/in ²	ISO 179
Gardner Impact	11.3 J	8.33 ft-lb	ASTM D5420

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	289 °C	552 °F	Unannealed; ISO 75-2/A

Processing Properties	Metric	English	Comments
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Melt Temperature Processing Properties	300 - 330 °C Metric	572 - 626 °F English	Comments
Mold Temperature	140 - 180 °C	284 - 356 °F	
Drying Temperature	120 °C	248 °F	
Dry Time	4.00 hour	4.00 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	PPA	
Generic Name	Polyphthalamide (PPA)	
Injection Rate	Slow-Moderate	
Regional Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	

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