

PolyOne OnForce™ LFT UR-40 LGF/000 Natural Polyurethane, Unspecified (PUR, Unspecified)

Category : Polymer , Thermoplastic , Polyurethane, TP

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. This grade must be dried in a dessicant dryer with a dew point set at -40°C. Information provided by PolyOne

Order this product through the following link:

http://www.lookpolymers.com/polymer_PolyOne-OnForce-LFT-UR-40-LGF000-Natural-Polyurethane-Unspecified-PUR-Unspecified.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.51 g/cc	1.51 g/cc	ASTM D792
Linear Mold Shrinkage, Flow	0.0010 - 0.0020 cm/cm	0.0010 - 0.0020 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	221 MPa	32100 psi	ASTM D638
Elongation at Break	2.0 - 3.0 %	2.0 - 3.0 %	Type I, 5.1 mm/min; ASTM D638
Tensile Modulus	11.0 GPa	1600 ksi	Type I, 5.1 mm/min; ASTM D638
Flexural Yield Strength	307 MPa	44500 psi	ASTM D790
Flexural Modulus	11.0 GPa	1600 ksi	ASTM D790
Izod Impact, Notched	3.70 J/cm @Thickness 3.18 mm, Temperature 23.0 °C	6.93 ft-lb/in @Thickness 0.125 in, Temperature 73.4 °F	Injection Molded; ASTM D256
Izod Impact, Unnotched	14.0 J/cm	26.2 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	113 °C	235 °F	Unannealed; ASTM D648

Processing Properties	Metric	English	Comments
Melt Temperature	220 - 250 °C	428 - 482 °F	
Mold Temperature	80.0 °C	176 °F	
Drying Temperature	90.0 °C	194 °F	Desiccant Dryer
Dry Time	8.00 - 12.0 hour	8.00 - 12.0 hour	

Descriptive Properties	Value	Comments
Filler / Reinforcement	Long Glass Fiber, 40% Filler by Weight	
Forms	Pellets	
Generic Material	PUR, Unspecified	
Generic Name	Polyurethane, Unspecified (PUR, Unspecified)	
Regional Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	

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