OnForce™ LFT LF0100-5004 X2 BLACK

Polyurethane

PolyOne Corporation

Message:

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.

General Information			
Filler / Reinforcement	Long carbon fiber, 20% filler by weight		
Forms	Particle		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.27	g/cm³	ISO 1183
Molding Shrinkage - Flow	0.10 - 0.20	%	ISO 294-4
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus [1]	15400	MPa	ISO 527-2
Tensile Strength (Yield)	205	MPa	ISO 527-2
Tensile Elongation [2] (Break)	2.0	%	ISO 527-2
Flexural Modulus	12000	MPa	ISO 178
Flexural Strength (Yield)	270	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength	16	kJ/m²	ISO 179
Charpy Unnotched Impact Strength	45	kJ/m²	ISO 179
Dart Drop Impact	15.6	J	ASTM D5420
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (1.8 MPa, Unannealed)	110	°C	ISO 75-2/A
Injection	**Nominal Value**	**Unit**	
Drying Temperature	90	°C	
Drying Time	8.0 - 12	hr	
Processing (Melt) Temp	220 - 250	°C	
Mold Temperature	80	°C	

Injection instructions
LFT compounds can be processed using equipment similar to that used for short fiber products. The mechanical properties of finished parts dependgreatly on the length of the fibers in the molded part; therefore processing conditions must be set carefully in order to minimize fiber breakage. A "lowshear 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.

NOTE	
1.	Type 1, 5.1 mm/min
2.	Type 1, 5.1 mm/min

Recommended distributors for this material

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