OnForce™ LFT LF6400-5004 X2 NHFR NATURAL

Polyamide 610

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 glass fiber		
Forms	Particle		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.35	g/cm³	ISO 1183
shrinkage-Flow (3.20 mm)	0.20	%	ISO 294-4
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	9000	MPa	ISO 527-2
Tensile Stress (Break)	145	MPa	ISO 527-2
Tensile Strain (Break)	2.6	%	ISO 527-2
Flexural Modulus	7500	MPa	ISO 178
Flexural Stress	220	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength	18	kJ/m²	ISO 179
Charpy Unnotched Impact Strength	78	kJ/m²	ISO 179
Dart Drop Impact	105	J	ASTM D5420
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
1.8 MPa, not annealed	214	°C	ISO 75-2/A
8.0 MPa, not annealed	173	°C	ISO 75-2/C
Injection	**Nominal Value**	**Unit**	
Drying Temperature	80	°C	
Drying Time	4.0	hr	
Processing (Melt) Temp	260 - 290	°C	
Mold Temperature	90	°C	
Injection Rate	Slow-Moderate		
Back Pressure	1.00	MPa	
Injection instructions			

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.

Recommended distributors for this material

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