OnForce™ LFT LF0100-5001 NATURAL

Polyurethane

PolyOne Corporation

Message:

Polyvan's long fiber thermoplastic polymers are used in situations where high hardness and good impact resistance are required, such as metal substitution or other structural applications. These products exhibit enhanced physical and mechanical properties compared to staple fiber products. Its advantages include improved impact strength, elasticity and material strength in different temperature ranges. In addition, compared with traditional high-filled short fiber products, long fiber thermoplastic polymers show improved properties in terms of creep and fatigue resistance, improved dimensional stability and unique surface finish.

General Information			
Filler / Reinforcement	Long glass fiber, 40% filler by weight		
Forms	Particle		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.51	g/cm³	ISO 1183
Molding Shrinkage - Flow			
--	0.080	%	ASTM D955
--	0.10 - 0.20	%	ISO 294-4
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
--	10900	MPa	ASTM D638
-- [1]	10700	MPa	ISO 527-2
Tensile Strength			
Yield	190	MPa	ISO 527-2
Fracture	188	MPa	ASTM D638
Tensile Elongation			
Fracture [2]	2.0 - 3.0	%	ISO 527-2
Fracture	2.5	%	ASTM D638
Flexural Modulus			
--	9640	MPa	ASTM D790
--	8300	MPa	ISO 178
Flexural Stress			
--	269	MPa	ASTM D790
Yield	260	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength	35	kJ/m²	ISO 179
Charpy Unnotched Impact Strength	80	kJ/m²	ISO 179
Notched Izod Impact	370	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
1.8 MPa, not annealed	99.0	°C	ASTM D648

1.8 MPa, not annealed	110	°C	ISO 75-2/A

Injection	Nominal Value	Unit
Drying Temperature	90.0	°C
Drying Time	8.0 - 12	hr
Processing (Melt) Temp	220 - 250	°C
Mold Temperature	80.0	°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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