OnForce™ LFT LF5200-5001 FR Black

Polyolefin

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	1.50	g/cm³	ISO 1183
Molding Shrinkage [1]	0.25	%	ISO 294-4
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	12000	MPa	ISO 527-2
Tensile Stress (Break)	85.0	MPa	ISO 527-2
Tensile Strain (Break)	1.0	%	ISO 527-2
Flexural Modulus	10800	MPa	ISO 178
Flexural Stress	135	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength	14	kJ/m²	ISO 179
Charpy Unnotched Impact Strength	30	kJ/m²	ISO 179
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
1.8 MPa, not annealed	154	°C	ISO 75-2/A
8.0 MPa, not annealed	140	°C	ISO 75-2/C
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flammability Classification (1.60 to 3.20 mm)	V-0		IEC 60695-11-10, -20
Glow Wire Flammability Index (1.60 to 3.20 mm)	960	°C	IEC 60695-2-12
Injection	**Nominal Value**	**Unit**	
Drying Temperature	80.0	°C	
Drying Time	2.0	hr	
Processing (Melt) Temp	210 - 230	°C	
Mold Temperature	60.0	°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.

NOTE	
1.	Measured on a tensile specimen. Actual mold shrinkage values are highly dependant on part geometry, mold configuration, and processingconditions.

Recommended distributors for this material

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