



# OnForce™ LFT LF5200-5007 BLACK UV

## Polypropylene Homopolymer

### Key Characteristics

#### Product Description

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

Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East	• Europe	• North America
	• Asia Pacific	• Latin America	
Filler / Reinforcement	• Long Glass Fiber		
Features	• UV Resistant		
Forms	• Pellets		

### Technical Properties <sup>1</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	1.34 g/cm <sup>3</sup>	1.34 g/cm <sup>3</sup>	ISO 1183
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus	1.65E+6 psi	11400 MPa	ISO 527-2
Tensile Stress (Break)	17400 psi	120 MPa	ISO 527-2
Tensile Strain (Break)	1.5 %	1.5 %	ISO 527-2
Flexural Modulus	1.39E+6 psi	9600 MPa	ISO 178
Flexural Stress	27600 psi	190 MPa	ISO 178
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Charpy Notched Impact Strength	9.0 ft·lb/in <sup>2</sup>	19 kJ/m <sup>2</sup>	ISO 179
Charpy Unnotched Impact Strength	25 ft·lb/in <sup>2</sup>	52 kJ/m <sup>2</sup>	ISO 179
Notched Izod Impact Strength	8.6 ft·lb/in <sup>2</sup>	18 kJ/m <sup>2</sup>	ISO 180
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Heat Deflection Temperature 264 psi (1.8 MPa), Unannealed	309 °F	154 °C	ISO 75-2/A
Heat Deflection Temperature 1160 psi (8.0 MPa), Unannealed	282 °F	139 °C	ISO 75-2/C

### Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	176 °F	80.0 °C
Drying Time	2.0 hr	2.0 hr
Processing (Melt) Temp	410 to 446 °F	210 to 230 °C
Mold Temperature	140 to 176 °F	60.0 to 80.0 °C
Injection Rate	Slow-Moderate	Slow-Moderate
Back Pressure	725 psi	5.00 MPa

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**Injection Notes**

LFT compounds can be processed using equipments similar to those used for short fiber products. The mechanical properties depend greatly on the length of the fibers in the moulded 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.

**Notes**

<sup>1</sup> Typical values are not to be construed as specifications.

**CONTACT INFORMATION****Americas**

United States - Avon Lake  
+1 440 930 1000

United States - McHenry  
+1 815 385 8500

**Asia**

China - Guangzhou  
+86 20 8732 7260

China - Shenzhen  
+86 755 2969 2888

China - Suzhou  
+86 512 6823 24 38

China - Suzhou  
+86 512 6265 2600

Hong Kong -  
+852 2690 5332

Taiwan - Yonghe City,  
+886 9396 99740, +886 2929 1849

**Europe**

Germany - Gaggenau  
+49 7225 6802 0

Spain - Barbastró (Huesca)  
+34 974 310 314



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www.polyone.com

**PolyOne Americas**

33587 Walker Road  
Avon Lake, Ohio 44012  
United States  
+1 440 930 1000  
+1 866 POLYONE

**PolyOne Asia**

No. 88 Guoshoujing Road  
Z.J Hi-tech Park, Pudong  
Shanghai, 201203, China  
+86 21 5080 1188

**PolyOne Europe**

6 Giällewee  
+352 269 050 35

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