

Xencor Long Fiber Thermoplastics (LFTs)

The Xencor™ family of long fiber thermoplastics (LFT) are innovative, long-fiber reinforced structural products that target challenging metal replacement applications and semi-structural applications. The Xencor™ compounds are designed specifically to achieve maximum synergy between **high performance, design freedom, function integration, weight reduction, and per-part cost economy** through fast cycle times. The function of LFTs is to create, during the injection molding process, a unique 3D entangled long fiber network inside the **molded part**. This fiber network forms a strong **fiber skeleton**, which ensures optimal dimensional stability and significantly improves the thermal-mechanical properties compared to traditional highly filled short-fiber plastics.

Xencor™ Product Line: High Performance

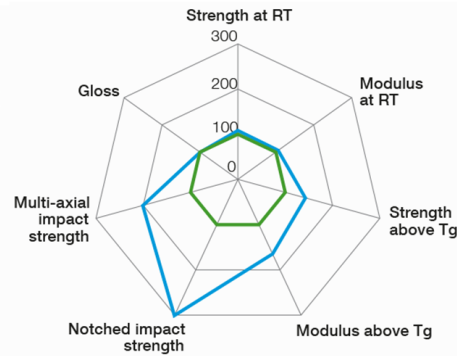
Xencor™ LFT compounds are formulated using **specialty polymers**, including: polyphenylene sulfide (PPS); polyphthalamide (PPA); polyarylamide (PARA); high-performance polyamide (HPPA); and **engineering polymers**, such as polyamide 66 (PA66). Depending on the grade, they are available in black or natural colors. Standard pellet length is 9 mm.



Molded part



Fiber skeleton (as retrieved after burning off the resin)



— Xencor™ LFT compounds
— Short-fiber compound
RT Room Temperature
Tg Polymer Glass Transition Temperature

Typical Xencor™ LFT compounds
short-term property improvement
(expressed in % of performance
improvement vs. short-fiber
compound of same composition)

- LFT is a polymer composite with long fiber reinforcement > 1 mm. (Typical fiber length is ~0.2 mm)
- Due to the longer fibers, LFT has excellent mechanical properties.