



**SOLVAY**

asking more from chemistry®

Structural Polymers for  
**Lightweight Strength  
and Premium Aesthetics**

**SPECIALTY  
POLYMERS**

Structural polymers offer strong, affordable lightweight solutions that reduce cost and weight by replacing machine-tooled metals and expensive composites. Mechanical properties can be tailored by varying the type, amount and orientation of glass fibers as well as the type of polymer used.

Glass fiber reinforcement can result in a rough-looking finish because glass fibers can be seen on the surface of the molded part. This is fine for functional applications, but very limiting when aesthetics are a key requirement. Thanks to Solvay, you now have more options.

### Ixef® PARA

Ixef® polyarylamide (PARA) compounds are ideal for molding complex parts needing overall strength and an ultra-smooth surface finish. These materials typically contain 50% and 60% short glass fiber, giving them high strength and rigidity. Xencor™ LFT, yet even with high glass fiber content, molded parts have a beautiful, resin-rich surface finish that's perfect for painting, metallization or producing a naturally reflective shell.

### Omnix® HPPA

Omnix® high-performance polyamide (HPPA) compounds provide a more cost-effective option for aesthetic applications when a superior surface finish is not required.



**e-Bike frame, rims and battery housings**

*Photo courtesy of Stajvelo*



**Stroller frames**

*Photo courtesy of Quinny*

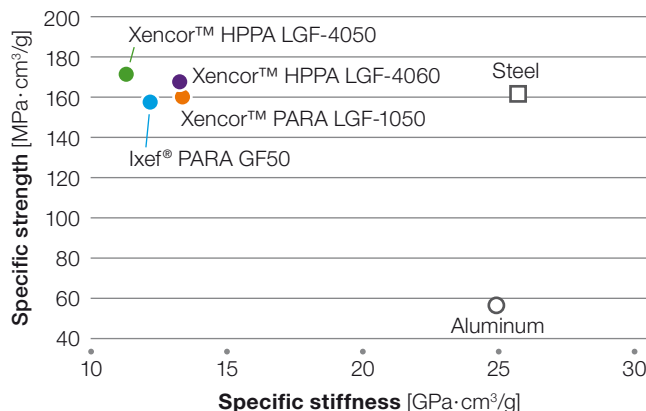


**Staircase step supports**

*Photo courtesy of Do-Up*



### Specific Strength vs. Specific Stiffness



### Xencor™ LFT

Solvay's new line of Xencor™ Long Fiber Thermoplastics (LFT) compounds bridge the price-to-performance gap between short fiber thermoplastics (SFT) and advanced composite materials. The strong fiber skeleton formed during molding provides vastly superior structural properties and dimensional stability compared to traditional highly-filled, short-fiber reinforced polymers. Xencor™ LFT compounds come in a number of resin systems, including those based on Ixef® PARA and Omnix® HPPA.

Solvay's portfolio of structural polymers provide an appealing alternative to metal in structural components used in a wide variety of industries, including:

- Healthcare
- Consumer Goods
- Automotive
- Mobile Electronics
- Construction
- Food and Beverage

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