“LOC” IN EVEN MORE PERFORMANCE AND COST ADVANTAGES





With New Fiberloc™ Optimal™ and Extreme™ Composites

FIBERLOC™ COMPOSITES

GEON® Performance Solutions

THE NEXT WAVE IN COMPOSITE TECHNOLOGY

Increase your competitive advantage by using parts made from Fiberloc™ Optimal™ or Extreme™ Composites. This new wave in composite technology from GEON® Performance Solutions **works well in either injection molding or extrusion applications** and enables you to design stronger, more durable, lighter weight and more imaginative components while also reducing your energy and product lifecycle costs.

Other engineered thermoplastics may meet your strength and stiffness requirements, but aren't designed for extrusion applications. The proprietary "low wear" technology of Fiberloc™ Optimal™ and Extreme™ was designed to specifically meet your exact product specifications without damaging your equipment – resulting in **up to a 50 percent reduction in wear** versus traditional glass composite. And either grade can be easily drilled, cut or machined on standard equipment or joined by standard welding techniques.


EXCEPTIONAL STRENGTH-TO-WEIGHT RATIO = IMPROVED EFFICIENCY, COST SAVINGS

Fiberloc™ Composites can have up to 75 percent lower specific gravity than steel and up to 25 percent lower specific gravity than aluminum, allowing replacement of heavier, less energy-efficient materials for improved efficiency without compromising performance.

CORROSION AND FATIGUE RESISTANT = LONGER PRODUCT LIFE

Fiberloc™ Composites remain durable even under the toughest conditions, such as extreme temperature fluctuations and exposure to weather, chemicals or ultraviolet light.

REDUCED EQUIPMENT WEAR = SIGNIFICANT MANUFACTURER SAVINGS

Fiberloc™ Composites reduce wear up to 50 percent, extending equipment life and increasing productivity.

EASIER PART CONSOLIDATION = LOWER ASSEMBLY COSTS, MORE IMAGINATIVE DESIGNS

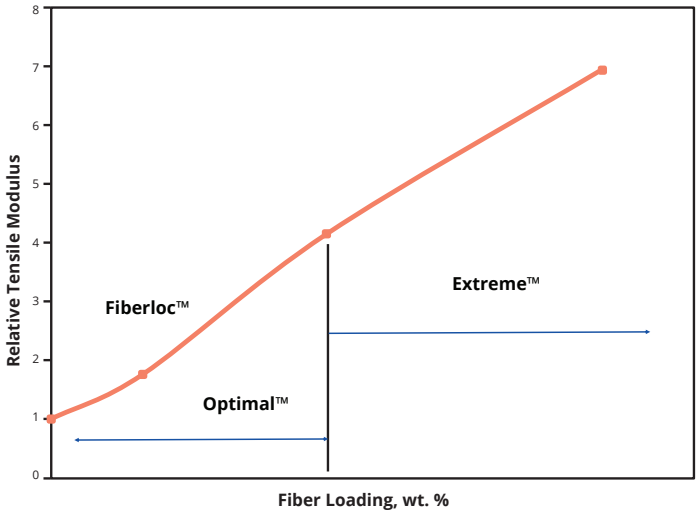
Fiberloc™ Composites enable unlimited lengths and design capabilities, which enable easier part consolidation and lower assembly costs, as well as greater design freedom.

IMPROVED PROCESSING = ENHANCED PROPERTIES

Increased processability and loading enhances the following properties:

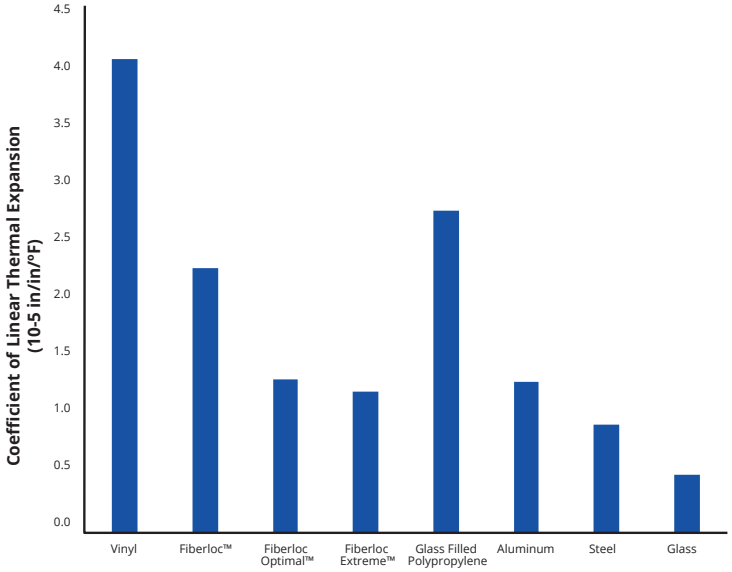
- ✓ Strength and stiffness
- ✓ Specifically flexural modulus
- ✓ Increased heat distortion temperature (HDT)
- ✓ Decreased coefficient of thermal expansion (CLTE)
- ✓ Mechanical strength
- ✓ Rigidity and hardness
- ✓ Thermal stability
- ✓ Chemical, abrasion and impact resistance

Tensile Modulus (Stiffness)



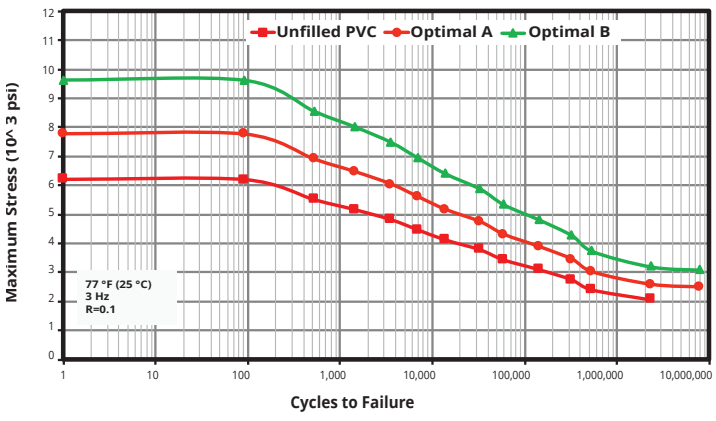
- Optimal™ Products: tensile modulus up to 1000 ksi
- Extreme™ Products: tensile modulus higher than 1000 ksi

Coefficient of Linear Thermal Expansion



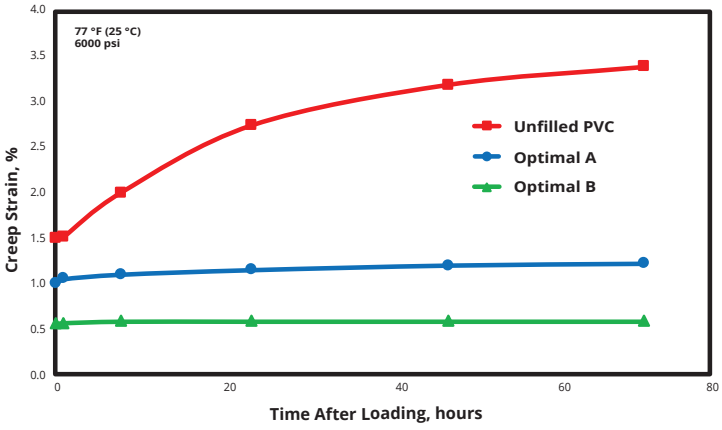
- Fiberloc™ composites exhibit low coefficient of linear thermal expansion (CLTE) suitable for applications subjected to hot/cold cycles.
- Fiberloc™ composites can achieve CLTE comparable to aluminum.

Fatigue

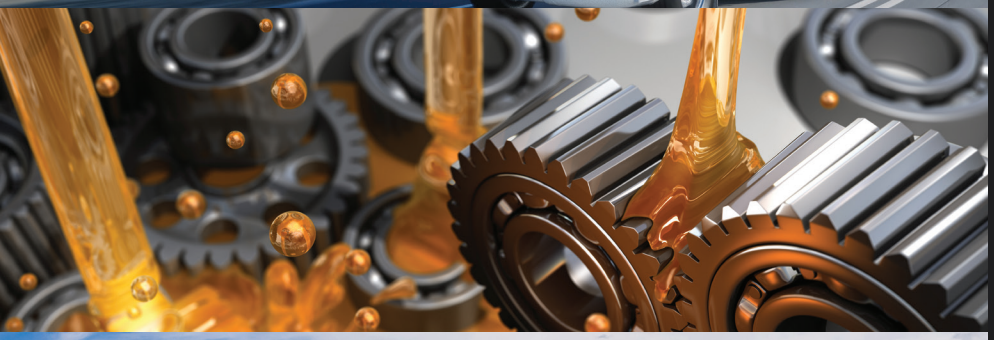


The addition of glass fiber can improve the ultimate tensile strength of the vinyl matrix, which is maintained over the entire cycling range out to a million cycles. The composites with higher loading of fiber content exhibit better fatigue resistance.

Creep Strain



Fiberloc™ composites show excellent resistance to deformation under high loads over extended periods of time. Resistance to deformation improves with increasing fiber loading.



DEVELOPING SOLUTIONS FOR A WIDE VARIETY OF APPLICATIONS AND MARKETS

GEON® Performance Solutions is a global leader and leading innovator in the formulation, development and manufacture of performance polymer solutions, delivering next-wave technology and operating excellence to drive the future of the many markets we serve.

- **Building and Construction**
- **Transportation**
- **Industrial**
- **Marine**
- **Energy**
- **Electrical**

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GEON® Performance Solutions

Take Advantage of Our Industry-Leading Expertise

Customers who partner with GEON® Performance Solutions also gain considerable cost advantages by utilizing GEON's material science, formulation expertise and industry-leading design services. Let's talk about how we can help with your applications.

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PARTICIPATING IN +VANTAGE vinyl™

A SUSTAINABLE SOLUTION GreenCircle CERTIFIED®