



## **Composite Reinforcement with Ultra-High Strength-to-Weight Ratio.**

Continuous Composite Systems™ (CCS™) reinforcement technologies enable ultra-strong, lightweight structures at cost-competitive rates. The CCS™ continuous fiber-reinforced elements can be used as a main structure, combined with sealants or structural adhesives to create a unified macrostructure, or combined with injection molding.

[ccs.llproducts.com](http://ccs.llproducts.com)



## Enhanced Strength and Rigidity.

CCS™ reinforcements add strength, stiffness, and rigidity to lightweight structures. With extensive engineering knowledge, advanced CAE modeling, and expertise in adhesives, our highly experienced engineering team works with our customers to custom-engineer systems that meet the specific application requirements.



**2022 Altair Enlighten Award  
for vehicle weight savings in  
composite seatback.**

### KEY PRODUCT ATTRIBUTES

- Mass: 75% lighter than steel; 30% lighter than aluminum
- Corrosion resistant
- Nonconductive and insulating with a low coefficient of thermal expansion
- Excellent structural properties
- High predictability in energy management
- Consistent quality and dimensional accuracy
- Fire performance that meets UL 94 V-0 available

### ENGINEERING EXPERTISE FOR EVERY APPLICATION



#### STRENGTH

Ultra-high strength-to-weight ratio with excellent structural performance



#### ADVANCED COMPOSITES

Pioneering engineered materials that go beyond higher strength



#### PROCESS

Designed for integration and manufacturing efficiency



#### CAPABILITIES

End-to-end support from concept to validation

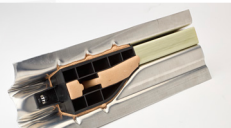
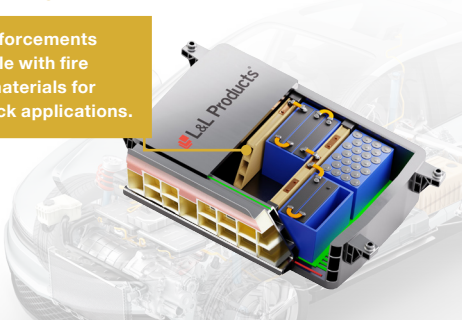


#### COMPETITIVE

High performance area without high cost

### APPLICATION

CCS™ reinforcements are available with fire resistant materials for battery pack applications.



**CCS™ crossmember  
reinforcement for  
impact resistance.**



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