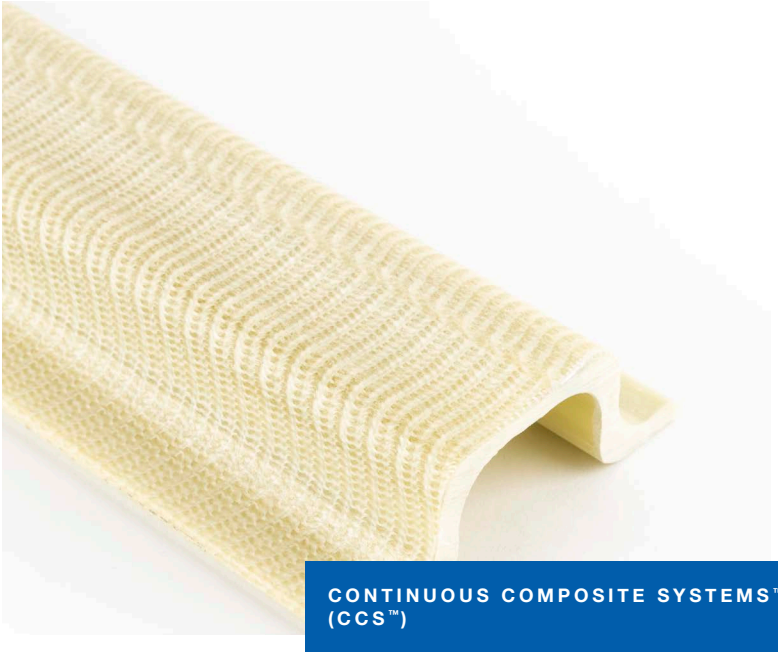
L&L Products®

CCS.™



CONTINUOUS COMPOSITE SYSTEMS™ (CCS™)

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

CCS™ enables ultra-strong, lightweight structures at cost-competitive rates. The CCS™ continuous fiber-reinforced materials can be used as a main structure, combined with sealants or structural adhesives to create a unified macrostructure, or combined with injection molding.

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L&L Products®

CCS.™

## CONTINUOUS COMPOSITE SYSTEMS™ (CCS™)

# Enhanced Strength and Rigidity.

Our CCS™ technology combines highly engineered sealants and adhesives with a fiber-reinforced composite carrier in a two-dimensional profile designed to provide strength, stiffness, and rigidity to a lightweight structure.

**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

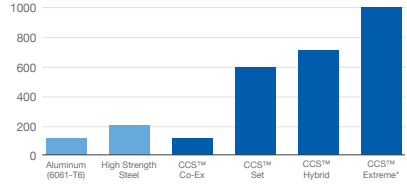
**EXPERTISE**
In-house engineering expertise

**PROCESS**
Seamless integration of adhesives

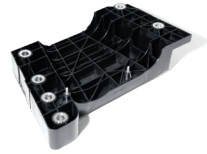
**CAPABILITIES**
Advanced CAE capabilities

**COMPETITIVE**
Competitive pricing

### ULTRA HIGH STRENGTH-TO-WEIGHT RATIO




*In development



| Products | Application type | Markets of interest |
|---|---|---|
| CCS™ Co-Ex | Crash, NVH, tube reinforcement | Automotive |
| CCS™ Set | Crash, stiffness, insulating, part consolidation | Automotive, CV, Industrial, Architectural |
| CCS™ Hybrid | Crash, stiffness, metal replacement | Automotive, CV |
| CCS™ Extreme | Crash, stiffness, wind turbine spar caps | Automotive, Aerospace, Energy |

Scan for disclaimer

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