

CONTINUOUS COMPOSITE SYSTEMS™  
(CCS™)

## Enhanced Strength and Rigidity.

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.

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

**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**

- Consistent quality
- Mass: 75% lighter than steel; 30% lighter than aluminum
- Low line rates and inexpensive die costs
- Corrosion resistant
- Nonconductive and insulating with a low coefficient of thermal expansion
- Excellent structural properties
- High predictability in energy management

**ENGINEERING EXPERTISE FOR EVERY APPLICATION**



**STRENGTH**

Ultra-high strength-to-weight ratio



**EXPERTISE**

In-house engineering expertise



**PROCESS**

Seamless integration of adhesives



**CAPABILITIES**

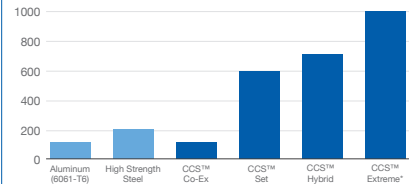
Advanced CAE capabilities



**COMPETITIVE**

Competitive pricing

**ULTRA HIGH STRENGTH-TO-WEIGHT RATIO**



\*In development



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



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