

**Subject:** [Newsletter] Teijin's CFRTP Composite Technology to Revolutionize Manufacturing with Enhanced Production Speed and Recyclability

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## NEWSLETTER

### Teijin's CFRTP Composite Technology to Revolutionize Manufacturing with Enhanced Production Speed and Recyclability

In 2011, Teijin built a 4-seater concept car with Teijin's Carbon Fiber Reinforced Thermoplastic (CFRTP) body structure. The body was formed in one minute and weighs only 47kg, merely a fifth of a comparable steel structure, achievements that represent a new world of mass production applications for carbon fiber composites.



Carbon fiber has 10 times the strength but just a fourth of the weight of steel. Composite materials made of carbon fibers and resins are already widely used to reduce the weight of aircraft and other industrial materials. However, conventional thermoset-formed carbon fiber composites are rarely seen in mass production due to its slow takt time.

Teijin tackled this problem by developing a thermoplastic resin that softens when heat is applied and quickly hardens when it cools, without losing its desirable properties. Not only does that make the material ideal for mass production applications, it also means it can be recycled and reused. Teijin has branded this world's first CFRTP technology as Sereebo™, an acronym for Save the Earth, Revolutionary & Evolutionary Carbon, and is now bringing it closer to commercial use in high-volume production.

Teijin is currently working with automakers worldwide, including [General Motors](#), to accelerate development of Sereebo-branded composites for mass production of reduced-weight vehicles that meet demand for energy savings and CO2 reductions. Teijin is spearheading the collaborative effort, which involves technical facilities in both Japan and the USA and a pilot plant in Japan. Collaborative developments with consumer electronics makers and precision equipment makers are also in progress, and [Nikon](#) has already adopted Sereebo to manufacture structural parts for a digital SLR camera.

The Teijin Group aims to become a global leader in the development of advanced solutions incorporating carbon fiber composites, targeting annual sales of JPY 150 to 200 billion (USD 1.5 to 2.0 billion) by around 2020.

See also:

- [Fibers that Create the Future of Mobility](#)
- [Thermoplastic CFRP Technology Promises to Speed Eco-car Adoption](#)
- [Advanced Carbon Fiber Nears Broad Automotive Use](#)
- [Teijin's CFRTP Components Pilot Plant Begins Operations](#)
- [Teijin Expands CFRTP Composite Business - Opens U.S. Composite Application Center](#)
- [Teijin Introduces Sereebo™ Brand for Coming CFRTP Products](#)

### **About the Teijin Group**

Teijin (TSE: 3401) is a technology-driven global group offering advanced solutions in the areas of sustainable transportation, information and electronics, safety and protection, environment and energy, and healthcare. Its main fields of operation are high-performance fibers such as aramid, carbon fibers & composites, healthcare, films, resin & plastic processing, polyester fibers, products converting and IT. The group has some 150 companies and around 16,000 employees spread out over 20 countries worldwide. It posted consolidated sales of JPY784.4 billion (USD 7.7 billion) and total assets of JPY 768.4 billion (USD 7.5 billion) in the fiscal year ending March 31, 2014. Please visit [www.teijin.com](http://www.teijin.com).

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