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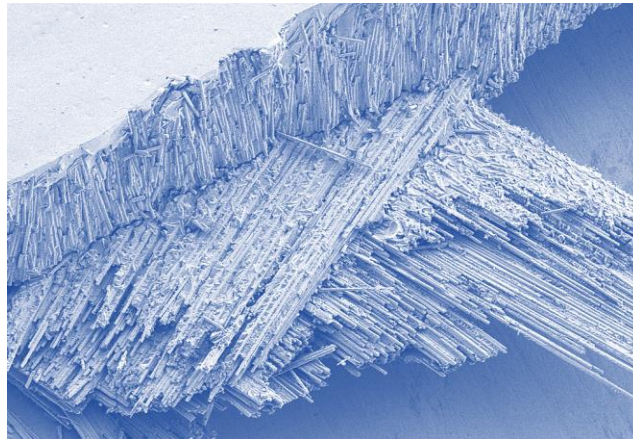
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Re: Carbon Supercomposites White Paper

Boston Materials offers a breakthrough material that bridges the performance gap between metal alloys and composites. Boston Materials' proprietary **Carbon Supercomposite** combines the homogeneity and toughness of metal alloys with the lightweight and stiffness of carbon fiber composites.

Carbon Supercomposites feature a novel **3-dimensional carbon fiber reinforcement** that enables the production of impact resistant and durable components designed for high-stress and high-temperature applications.

Prepreg variants of Carbon Supercomposite are designed for immediate use in layup manufacturing and are purpose-built for applications in the pressure vessel, marine, tooling, wind energy, and aerospace industries.



Vertically aligned short carbon fibers pin and reinforce a carbon fiber fabric in the through-thickness and interlaminar regions – forming a homogeneous composite

Carbon Supercomposite prepregs are formed from standard carbon fiber fabrics reinforced with vertically aligned short carbon fibers. The resultant carbon fiber ply is impregnated with a thermoset or thermoplastic binder, yielding a **truly-isotropic carbon fiber prepreg**.

Most notably, Carbon Supercomposites provide **500% enhancement to Z-axis strength and 150% increase in interlaminar shear strength** compared to conventional 2-dimensional carbon fiber composites – greatly improving impact performance and eliminating delamination.

Boston Materials manufactures Carbon Supercomposites in prepreg, thermoplastic tape, and preconsolidated sheet formats.