Supercomp™ 1015 Bi-Axial

Product Data Sheet

DRY SKU:	*PW01-0110*
PREPREG (NEWPORT NB301) SKU:	*PW01-0110-P2.1*
PREPREG (TCR UF3225) SKU:	*PW01-0110-P3.1*
TOOLING PREPREG (SHD LTC216) SKU:	*PW01-0110-P5.1*

Quick Facts

- Plain weave fabric coated with 150µm milled carbon fibers
- Milled fibers are aligned in the Z-axis (i.e. orthogonal to fabric)
- Areal weight and ply thickness of the base fabric is increased
- Better damage tolerance & Z-axis conductivity
- Retain key in-plane properties with less in-plane fiber
- Available as a cost-effective prepreg for composite tooling

Compatibility

Supercomp dry products can be used in RTM/VARTM and wet layup or they can be supplied as prepregs for compression molding, autoclave, or out-of-autoclave processing. Thermoplastic composites have also been made using Supercomp products. Contact Boston Materials for any questions about the compatibility of Supercomp products for your application.

Comparative Properties

A test panel made with two layers of Supercomp 1015 Bi-Axial prepreg was tested against a baseline test panel made with four layers of 3Kx3K plain weave prepreg. The two Supercomp 1015 Bi-Axial layers were oriented such that their Z-axis milled fiber surfaces faced each other at the mid-plane. Both panels used a 250°F cure epoxy (Newport NB 301) and were cured at 50 psi for 1 hour via compression molding. Test coupons were machined from the panels using an abrasive water jet.

**Normalized to 55% Fiber Volume*

	Test Standard	Supercomp 1015 Bi-Axial	Baseline	Unit
Z-axis Thermal Conductivity	ASTM E1461	1.52	0.68	W/m-K
*Flexural Strength	ASTM D790	546	511	MPa
*Flexural Modulus	ASTM D790	25.4	20.1	GPa
*In-Plane Tensile Strength	ASTM D3039	547	751	MPa
*In-Plane Compression Strength	ASTM D6641	467	423	MPa

Physical Properties

	Supercomp 1015 Bi-Axial	Baseline	Unit
In-Plane Fiber	T300, 3K x 3K, Plain Weave	T300, 3K x 3K, Plain Weave	-
Z-Axis Fiber	PX30, 150µm, Milled	-	-
Ply Thickness @ 55% FV	0.38 [0.015]	0.20 [0.008]	mm [in]
Total Fiber Areal Weight	370	200	g/m^2
In-Plane Fiber Areal Weight	*200*	*200*	*g/m^2*
Z-axis Fiber Areal Weight	*170*	*0*	*g/m^2*

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