TEXALIUM ♦ 3D COMPOSITE FABRICS ♦ FAQS ♦

What is Texalium™?

Texalium™ is the name for an innovative fabric developed at the Hexcel Corporation. ***Texalium™*** is a fiberglass fabric with a proprietary finish and a thin coating of aluminum on the surface of the fabric. The aluminum coating is 99.99% pure and approximately 200 angstroms in thickness. An angstrom is one billionth of a meter. The coating produces a highly reflective surface on the fabric, which can be used to achieve a decorative look in composites made from ***Texalium™*** fabric.

Where is *Texalium™* used?

Performance and high tech cosmentics ***Texalium™*** can be used wherever carbon, aramid, and fiberglass fabrics are used. Applications to date have been in the areas of recreational sports and automotive. The use of ***Texalium™*** as the surface ply in a composite yields a high tech look of woven metal.

What are the styles of *Texalium™*?

Currently there are three styles provided in 50-inch widths. All ***Texalium™*** fabrics are woven in a 2/2 Twill style. Standard roll lengths are 100 & 250 yards for pre-pregging. 10, 25 & 50 yard lengths are also available.

STYLE	WEIGHT (OZ/YD2)	CONSTRUCTION	YARNS
1102	8.55	17 X 17	ECG 25 1/0
1035	5.85	35 X 35	ECG 75 1/0
122	3.16	60 X 58	ECG 225 1/0

In addition to the ***Texalium™*** original product, which has the silver metal appearance, there are four post treatments in which the metallization is tinted to give a colored look to the fabric. The available post treatments are as follows:

Finish Treatment	Appearance
Methyl	Blue
Radium	Yellow
Graphite	Black
Red	Red

How can *Texalium™* be processed?

Successful part production has proven that the fabric works in solution prepreging and wet lay-up processes. In working with ***Texalium™*** it is important to guard against touching the metal surface, as skin oils can cause resist areas in the resin. The 2/2 Twill fabric is less stable than a plain weave fabric and care needs to be taken to prevent distortion on the weave. This is especially true for highly curved surfaces. The distortion can shift the fibers so that the material underneath shows through the metal because this is a surface treatment. Where the fiber bundles cross there is no metal on the bottom bundle.