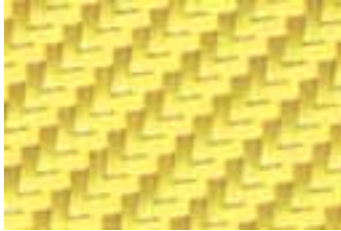


3102, 2x2 Twill Weave Prepreg Kevlar Fabric



Prepreg Overview:

Prepreg fabrics are pre-impregnated with an epoxy resin system. As a result, nearly perfect resin content and maximum, repeatable strength properties are attainable. When properly fabricated, parts made with Fibre Glast prepregs will have a clear shine and be free of air bubbles. Although prepreg material addresses many of the nagging challenges of composite fabrication, the user's fabrication techniques will directly affect the finished properties and cosmetics.

Fibre Glast prepregs are easy to handle and are able to be stored, shipped and handled at room temperatures. These prepregs have a shelf life of 12 months when the maximum storage temperature does not exceed 75°F and 6 months when it does not exceed 90°F.

There are 3 recommended cure cycles for Fibre Glast prepregs. All 3 will produce similar properties. Proper fabrication requires vacuum bagging and oven curing or vacuum bagging and curing in an autoclave.

All curing cycles begin with a temperature ramp up and end with a ramp down. The difference is the target temperature and the amount of time required for a complete cure. Always ramp up at a rate of no more than 5°F per minute until the target temperature is attained. Maintain the target temperature throughout the cure cycle and then ramp down at a rate of less than 5°F per minute to at least 150°F (66°C) before removing from the oven. Resin content 33.0% - 39.0%.

Target Temperature	Hold For
310°F (154°C)	1 Hour
290°F (143°C)	2 Hours
270°F (132°C)	4 Hours

Fibre Glast prepregs are also environmentally friendly as they are solvent and MDS free. However, safety precautions are still necessary for handling, including eye and skin protection as well as excellent ventilation.

Kevlar® Fabric Overview:

This was one of the first high strength synthetic fibers to gain acceptance in the reinforced plastic industry. Unlike the previous synthetic reinforcing fibers, Kevlar® has a considerably higher tensile strength and modulus than fiberglass. Kevlar® is usually used for structures requiring good stiffness, high abrasion resistance, and light weight. Current applications include lightweight boat hulls such as kayaks and canoes, aircraft fuselage panels and pressure vessels. May be used with epoxy or vinyl ester resins.

Specific Fabric Properties:

Warp Raw Material	1140 denier Kevlar 49
Filling Raw Material	1140 denier Kevlar 49
Weave Style	2x2 Twill
Fabric Areal Weight	5.3 osy approx.
Warp Ends/Inch	17 epi approx.
Pick/Inch	17 ppi approx
Fabric Width	50 inches

Neat Resin Properties:

Density	Tg (°F/°C) (from G" DMA Curve)	Tensile Modulus (ksi/GPa)	Tensile Strength (ksi/MPa)	Elongation at Break (%)	Tg after 24-Hr Water-Boil (°F/°C)	Water Absorption (%)
1.229	270/132	440/3.03	10.7/73.77	4.0	169/76	3.9