

# FIBROPLUS™ FRP

## Technical Data

### PRODUCT:

FibroPlus™ is a durable, semi-rigid fiberglass reinforced polyester resin material (frp). The surface is gel-coated and highly resistant to scratches and abrasions with excellent weathering characteristics.

### PURPOSE:

FibroPlus™ products are designed for exterior use in the recreational vehicle, bus, transit, marine, automotive, trucking and construction industries.

### ATTENTION:

The non-gel coat side is suitable for lamination. Follow the adhesive manufacturer's recommendations for coverage and thickness. FRP must be free of dust, moisture, particulates or other contaminants to insure 100% bond.

### SPECIFICATIONS

FibroPlus is manufactured in lengths and widths as ordered.

### COMPOSITION

Random chopped fiberglass reinforcement with unsaturated polyester resin, fillers and pigments.

PHYSICAL PROPERTIES			
TYPICAL AVERAGE VALUES			
PROPERTY	FIBROPLUS™ 0.050"		TEST METHOD
Flexural Modulus	665 ksi	4585 N/mm <sup>2</sup>	ASTM D790-10
Tensile Modulus	1040 ksi	7170 N/mm <sup>2</sup>	ASTM D638-10
High Speed Puncture Properties of Plastics	133 lbf	591 N	ASTM D3763-10
Fiberglass Content %	26.16	26.16	ASTM D2584-1
Barcol Hardness (934-1)	51	51	ASTM D2583-07
Surface Gloss (60°)	90.3	90.3	ASTM D523-08
Water Absorption %	0.4	0.4	ASTM D570-98

PRODUCT CODE	NOMINAL THICKNESS	NOMINAL WEIGHT	FINISH	WIDTH	LENGTH	MINIMUM BEND RADIUS
FibroPlus	0.050" 1.3mm (± 5%)	0.37 lbs/ft <sup>2</sup> 1.81 kg/m <sup>2</sup> (± 1-5%)	Smooth	36" – 120" 0.9m – 3.05m	Typical 500' 152.4m	6" 152mm

### FINISHED PANEL QUALITY

Panels will have a smooth finish on the front side and are of uniform color. Blemishes on the rear side which do not affect functional properties are not cause for rejection. For physical properties see table on front. Dimensions as specified on purchase order subject to the following tolerances:

Width	±1/8" (±3.2mm)
Length	±1/8" (±3.2mm) up to 8' (2.4m) ±1/4" (±6.4mm) up to 40' (12.2m)
Squareness	1/8" (3.2mm) in 48" (1.2m) of width

### FABRICATING RECOMMENDATIONS

**Note:** Protect your eyes with goggles; cover your nose and mouth with a filter mask; cover exposed skin when cutting Fibrosan panels.

**Cutting:** Sheet metal shears or circular saw with reinforced carborundum or carbide-tipped blade.

**Stapling:** Standard pneumatic stapler.

Fabrication by hand: Drilling use high speed drill bit (60° cutting angle, with 12°-15° clearance) or hole saw.

**Production fabrication:** Use carbide-tipped tools. Straight cuts can be sheared (90° cutting edge with 0.002" [0.05mm] clearance) or sawed. For irregular cuts, use die punch or band saw.

**Paintable:** Yes

**Painting preparation:** Always begin by cleaning the surface with a cleaning agent recommended by your paint supplier. Surface must be dry and residue free. If sanding is necessary, start with fine sandpaper (600 grit) followed by increasingly fine grain sandpaper followed by removal of all dust. Consult your paint supplier for further recommendations. Elastification agents should not be added to the paint used.

**RV Cleaning Instructions:** See Care and Maintenance Guide.

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### STORAGE REQUIREMENTS:

Careful handling during the manufacturing process is important to ensure optimal installation. Avoid excessive clamping, dropping or scraping. Keep dry and store indoors. Storing coiled or flat FRP outdoors may interfere with the lamination process.

### PLEASE NOTE THE FOLLOWING PRODUCT USE INFORMATION:

While products manufactured for Vixen Composites by Fibrosan conform to strict quality criteria, by nature FRP may occasionally have small areas that are aesthetically unacceptable for use. Panels should be inspected on-site before lamination and installation; the coil/tag number should be removed and retained. If any portion of the panel is not acceptable, report the non-conforming product at once to Vixen Composites referencing the coil/tag number. Upon verification, Vixen Composites will replace or refund the purchase price of the unacceptable product at Vixen Composites discretion.

### LAMINATION

Vixen Composites recommends that the moisture content of lauan substrate be no greater than 12% at the time of lamination. Glue coverage between the panel and substrate must be 100% and follow the recommendation(s) of the glue supplier. All Vixen FRP materials and adhesives should be allowed to acclimate to ambient temperature of the lamination area 48 hours prior to lamination. Before lamination, insure that both the side to be laminated of FRP panel and the substrate itself is free of dust, moisture, and particulates to insure a 100% bond. Vixen Composites will not be responsible for any loss resulting from a sub-standard lamination processes.

Non-lauan substrates, such as layered paper based products, do not perform well and may cause the lamination to fail. Use of any substrate other than lauan plywood must be pre-approved by Vixen Composites. Once laminated, do not subject the substrate to water intrusion as this may cause delamination and/or gel-coat blistering which is not covered under warranty.

### SIDEWALL CONSTRUCTION WITHOUT SUBSTRATES

Vixen Composites should be consulted before specifying and installing any substrate-free FRP.

### MINIMUM BEND RADIUS

Vixen Composites recommends all radius bends be supported by a solid substrate and does not exceed the minimum bend radius specified by Vixen Composites.

### DARK COLORS/DECALS/PAINT FINISHES

Dark colors whether gel-coated, painted or decals affect performance. Dark colored panels should be tested for performance under all appropriate conditions to make sure colors will meet the requirements of the application. Dark colors/decals may cause excessive heat build-up resulting in possible panel delamination, cracking, rippling or decal failure. Dark colors, dark decals and dark paint must be pre-approved by Vixen Composites to be covered under warranty. The use of a heat gun to apply or remove decals is not recommended as it will cause cracking of the gel-coat finish and void the warranty.

### COLOR CHANGE

All products, when exposed to weathering and sunlight, change color over time as part of the natural aging process.

### NOTE:

Neither Fibrosan® nor Vixen Composites make any claims as to the combustibility ratings of the products listed on these data sheets.

This product is not intended for interior use that requires a Class C fire rating.

All specifications are based on the latest information at the time of publication. Vixen Composites assumes no responsibility for any error in type or print reproduction in this document. Vixen Composites reserves the right to make changes in price, color, materials, equipment and specifications and to discontinue panels at any time without notice. Vixen FRP is produced and warranted by Fibrosan®. The information contained herein is approved by Fibrosan®.



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