

PRODUCT DATA SHEET	May 2015
GFRP	

- **Trade Name:** Stucchitalia® GFRP
- **Common Names:** Vetroresina / GFRP  
Polyester reinforced Glass Fiber
- **Manufacturer:** **Stucchitalia International LLC**  
1220 New Market Street - Suite 808, 19801 Wilmington  
New Castle – Delaware, U.S.A.  
[www.stucchitalia.com](http://www.stucchitalia.com) – [info@stucchitalia.com](mailto:info@stucchitalia.com)

## Summary

Stucchitalia® GFRP is a polyester composite that is lightweight, high strength, corrosion resistant, and durable. This fiberglass composite has a Class A1 fire rating making it suitable for use in a broad range of architectural applications. It can be produced in virtually any shape and with smooth, textured, perforated or patterned surfaces providing architects with abundant design flexibility. Stucchitalia® GFRP is commonly supplied pre-finished with integral cast in color, or primed ready for on-site painting, depending on the application.

## Detailed Description

Stucchitalia® is a glass fiber reinforced polyester used to make architectural elements. It is catalyzed thermoset plastic composite that is durable, chemical resistant and has excellent weathering, flexural and tensile physical properties. This makes it a versatile material that provides cost effective solutions for the construction or renovation of buildings, particularly with respect to exterior applications. It is also a lightweight material, weighing approximately 10 Kg/m<sup>2</sup> which reduces transportation, handling and installation costs.

The standard GFRP surface consists of a UV stabilized Isophthalic neopentylglycol polyester gelcoat which is provided in a white color for field finishing. The back-up laminate consists of layers of glass fiber and polyester resin. The Stucchitalia® GFRP composite material has a Class A1 fire rating. When GFRP is molded into shapes, the geometry of the shape imparts physical properties to the parts, such as strength and stiffness. For example, the design profiles of GFRP parts that include recesses, projections, grooves, curves or ornamentation make the parts stronger. The nominal shell thickness of parts is 4/6 mm. However, areas of parts that have flat regions are cast thicker by encapsulating core materials into the laminate that provide added strength and stiffness. GFRP offers some unique advantages for Architects and Designers in providing the capability to make large parts in any shape and size that would otherwise require more costly support structures and increased installation costs (as compared to other materials such as precast concrete).

In most cases, GFRP molded parts are secured to the building's structural framing and substrate with concealed fasteners. Joints between parts should be minimized and advantageously positioned in consideration of part size and design, overall appearance, and installation. GFRP parts are typically supplied with factory-molded corners to minimize field mitering.

PRODUCT DATA SHEET	May 2015
GFRP	

Some typical architectural applications of GFRP include façade panels, columns, cornices, pendants, storefront entries, cupolas and other decorative elements such as friezes and signage. GFRP is also used in interior or exterior applications, where a high impact resistant and lightweight material is desired. Molded GFRP products can replicate many common materials such as slate, cast iron, and wood grained surfaces to name just a few.

Most items are custom made to meet project design requirements and specifications.

Stucchitalia® work with Architects and Designers to create a practical plan for the parts and assemblies they envision through 3D modeling or scaled or full size mock-ups. Detailed shop drawings and material samples are prepared for approval prior to manufacture of molds or custom parts.

## Physical and Mechanical Properties

GFRP is a fiberglass reinforced polyester resin plastic composite with a nominal thickness of 4/6 mm. It has 25 to 30% glass fiber content (by weight) in the form of multiple layers of chopped strand mat.

Matrix: Polyester Resin

Finish: White, ready for field paint standard.  
Custom colored gel coat  
Matching available.

Surface: Smooth is standard. Molded textures available.

Density: 1760 Kg/m<sup>3</sup> ⇔ Pcf 110

Weight: 8.5-11 kg/m<sup>2</sup> Typical weights – parts with deep surface relief, etc. may weight more. Submit drawings for a more accurate estimate.

Shell thickness: 4.5 mm nominal Subject to manufacturing tolerances. Weight and measurement conversions may be rounded.

Embedments: Core mat or other reinforcement as profile, shape or design requires.

Glass Fiber: 25-30% typical

Max. length moldings: 4.5 m

Max. size molded parts: 6.5 m<sup>2</sup>

PRODUCT DATA SHEET	May 2015
GFRP	

### Site Conditions

Site conditions are to be reviewed for compliance with Stucchitalia®' requirements, installation tolerances and any other conditions that may effect the installation and performance of GFRP parts. Any unsatisfactory conditions are to be corrected prior to installation. Field measurements are to be taken to verify the dimensions, including those not shown on the drawings, and provide specific details of any changes for inclusion into the Stucchitalia® shop drawings prior to it commencing the manufacture of custom molds and GFRP parts. Stucchitalia® will produce parts in accordance with the approved shop drawings only and is NOT responsible for any deviations between the site conditions and the approved drawings.