

# SUBMITTAL AND PRODUCT DATA SHEET

## STROMBERG GRC

### High Strength Glass Fiber Reinforced Concrete Shapes and Elements



#### BENEFITS AND ADVANTAGES



*Anthropologie • GRC Rain Screen*

Stromberg GFRC is a composite of high-strength concrete and glass fibers, which can be factory molded into virtually any size or shape.

- Design Freedom. Stromberg GFRC can be made in almost any shape you can imagine.
- Lightweight. Less than 6 lbs per square foot when 1/2" thick.
- 100% non-combustible. Stromberg GFRC is made from minerals and will not burn.
- Stable. Made from high strength cement, Stromberg GFRC is dimensionally stable under normal conditions.
- An upgrade to standard GFRG.
- Higher impact strength than normal GFRG.
- Contains no paper or cellulose that can serve as food for mold.

#### PRODUCT DESCRIPTION

Stromberg GFRC elements are designed and tested to offer high strength with a wide range of possibilities in shape, detail and finish. There is glass fiber reinforcing in a high strength Portland cement concrete matrix. Proprietary polymers in the system improve performance and increase impact resistance.

Since items are custom made, the Stromberg GFRC is molded in the thickness most appropriate for the application. Stromberg GFRC is cast in a variety of thicknesses, based on size of panel and need from between 1/8" to 1" (3 to 5 mm). Edges are slightly thicker and may be reinforced for fasteners.

Stromberg GFRC weighs just 5 to 11 pounds per square foot (based on thickness).

Stromberg GFRC is a non-combustible mineral composite. It will not burn.

#### Typical Uses Include:

- Columns and Column Covers
- Domes
- Decorative Ceiling Panels
- Complex details, double curves or shapes
- Sculpture
- Moldings
- Light Coves



*Portofino • GRC Columns, Panels,  
Medallions • Surrounds*

Most projects are custom. Comprehensive shop drawings show shapes and dimensions and indicate layout and fastening methods.

## SIZES

Products are made to the size ordered. Maximum size is restricted by transportation and handling. Almost any size may be cast, but typical sizes able to be handled are around 5' by 10' for panels and 8' to 12' long for moldings and column sections. Special provisions must be made for shipping and handling larger elements.

## STROMBERG GFRC MANUFACTURING PROCESS

1. From the architect's drawings, Stromberg CAD department generates shop drawings showing parts and installation.
2. Once the shop drawings are approved, a combination of the latest computer-driven CAM equipment as well as old-fashioned artistic skill produces the models from which molds will be made.
3. Molds are produced from models.
4. High-strength concrete and glass reinforcing fiber is cast into the molds.
5. When the concrete has hardened, the parts are removed, cleaned, dried and quality inspected.
6. Parts are packaged for shipment to the jobsite.

## STROMBERG GFRC PROPERTIES

### Fire Performance

GFRC is composed of minerals and will not burn.

Stromberg GFRC meets or exceeds the requirement of Class I Flame Spread Classification under the Uniform Fire Code.

Flame Spread Index is 0 and Smoke Developed Index is less than 20 (primarily water vapor) when tested per ASTM E, 84-01 "Standard Test Method for Surface Burning Characteristics of Building Materials". (NFPA 255, ANSI/UL 723 and UBC 8-1)

### Replication and Mold-ability

Cast elements in Stromberg GFRC offer designers a range of options. It can capture very fine and intricate details or produce sweeping curves and complex shapes.

## TECHNICAL PROPERTIES

DESCRIPTION	TYPICAL VALUES
Glass fiber	5 - 6% by weight
Shell thickness	1/2" to 1"
Weight	5.8 lbs. to 11 lbs.
ASTM D790 Tensile strength	1360 psi (9.4 MPa)
Flexural strength	4220 psi (28.4 MPa)

### Control Joints in GFRC

**Control joints should be used where the GFRC:**

- Crosses a construction joint (expansion, seismic or building control element) in the base building structure.
- Runs in an uninterrupted straight plane that exceed 30 linear feet (9 m).
- Where specified by the architect or designer as a design accent.

## LIMITATIONS

Safety. Follow good safety and industrial hygiene practices during handling and installation. Always follow OSHA and other safety rules. Read material safety data sheets on products before installation. Cutting GFRC generates silica dust and precautions should be taken to avoid inhaling the dust.

## SPECIFICATIONS

In North America GFRC is typically specified under CSI Division 3.

## AVAILABILITY AND PRODUCTION CAPACITY

Stromberg GFRC products are available worldwide. Lead times vary depending upon the size and complexity of the project. Production capacity is over 500,000 sq. ft. per month.

## WARRANTY

Stromberg Architectural Products, Inc. standard warranty is 1 year from receipt of the materials.

## TECHNICAL SERVICES

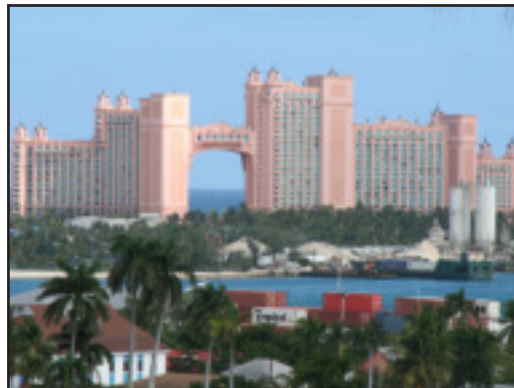
For technical assistance, including more detailed product information, literature, assistance with detailing, testing and assistance with project specifications, call (903) 454-0904 or visit [www.strombergarchitectural.com](http://www.strombergarchitectural.com).

## SUBMITTAL APPROVAL

Job Name	
Contractor	Date



Clay Academy • GRC Columns



Atlantis Resort • GRC Panels



Winstar World Casino • GRC Wall Panel System

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