

**SECTION 06 82 00 (068200/06610)**  
**ARCHITECTURAL FIBERGLASS REINFORCED POLYESTER**  
**FIRE RETARDANT RESIN**

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\*\* NOTE TO SPECIFIER \*\*

Fibertech for Standard and Custom fabrications

This section is based on the Architectural Fiberglass Reinforced Polyester fabrications of:

Wilson Composites, LLC  
P.O. Box 845  
4110 Old Greenville Highway  
Central, SC 29630  
Telephone: 864-646-3000  
FAX: 864-654-1800  
Web site: [www.fibertech.net](http://www.fibertech.net)  
[sales@wilsoncomposites.com](mailto:sales@wilsoncomposites.com)

Fibertech fabrications by Wilson Composites include custom cornices, columns, pilasters, pediments, brackets, capitals, domes, spheres, decorative panels, finials, spires, balustrades, canopies, window surrounds, soffits, arches, and custom shapes.

Standard items are available in a wide variety of designs and sizes.

To specify standard designs, obtain catalog information, or receive quotes call our representatives or use our web site: [www.fibertech.net](http://www.fibertech.net)

Verify lead times on custom items.

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## **SECTION 06 82 00 (06610)**

### **ARCHITECTURAL FIBERGLASS REINFORCED POLYESTER**

#### **PART 1 - GENERAL**

##### **1.01 RELATED DOCUMENTS**

- A. Drawings, Conditions of the Contract and Division 1 Specifications sections, apply to work of this section.

##### **1.02 SUMMARY**

- A. Section Includes: Fiberglass reinforced resin fabrications.

##### **1.03 RELATED SECTIONS**

- A. Section 05 12 13 (05120): Architecturally-Exposed Structural Steel Framing: Support framing for fiberglass fabrications.
- B. Section 06 10 53 (06100): Miscellaneous Rough Carpentry: Framing of Openings and Blocking.
- C. Section 07 92 13 (07900): Elastomeric Joint Sealants.

##### **1.04 REFERENCE STANDARDS**

- A. ASTM D638: Test Method for Tensile Properties of Plastic.
- B. ASTM D695: Test Method for Compressive Strength of Rigid Plastics.
- C. ASTM D790: Test Methods for Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- D. ASTM E84: Test Method for Surface Burning Characteristics of Building Materials.

##### **1.05 SUBMITTALS**

- A. Shop Drawings: Dimensions, adjacent construction, materials, thicknesses, fabrications details, required clearances, field jointing, tolerances, colors, finishes, methods of support, integration of components and anchorages.
- B. Parts List: Complete list of parts with numbers.
- C. Product Data: Manufacturer's product data and installation and maintenance instructions.
- D. Manufacturer's Instructions: Manufacturer's instructions and recommendations for product delivery, storage and handling.
- E. Product Samples: Minimum 3 inch x 3 inch sample. Match sample provided by Architect.

##### **1.06 QUALITY ASSURANCE**

- A. Inspect each molded piece to ensure that it complies with specified requirements, including nominal dimensions.

#### **1.07 MANUFACTURER'S QUALIFICATIONS**

- A. The fiberglass manufacturer shall be one who is currently in the business of manufacturing and supplying architectural fiberglass components for the building construction industry and who can demonstrate this capability. This manufacturer shall have been manufacturing fiberglass architectural components in the United States for at least 10 years doing work with projects comparable to that specified and shown.

#### **1.08 DELIVERY, STORAGE AND HANDLING**

- A. Handle, store and transport fiberglass fabrications according to manufacturer's recommendations and in a manner that prevents damage.
- B. Protect fabrications from damage by retaining shipping protection in place until installation.
- C. Damage Responsibility: Except for damage caused by others, the installer is responsible for chipping, cracking, or other damage to fiberglass fabrications, after delivery to the job site and until installation is completed and inspected and approved by the Owner's representative.

#### **1.09 WARRANTY**

- A. Warrant fabrications to be free from defects due to materials and workmanship for one year.

### **PART 2 - PRODUCTS**

#### **2.01 ACCEPTABLE MANUFACTURERS**

- A. Fibertech by Wilson Composites, LLC, 4110 Old Greenville Hwy, Central, SC (864) 646-3000 [www.fibertech.net](http://www.fibertech.net) sales@wilsoncomposites.com

#### **2.02 MATERIAL CHARACTERISTICS**

- A. Molded Exterior Surfaces: U-V inhibited, NPG-ISO polyester gelcoat, 16 to 22 mils thick. Gelcoat Color: Match Sample supplied by Architect.
- B. Back up Laminate:
  - 1. Resin: Fire Retardant Polyester resin. E-84 Class 1 Fire Rating of Flame Spread of 25 or Less and Smoke Developed under 450

2. Fiberglass Reinforcement
  - a) "E" type fiberglass.
  - b) Random chopped glass fibers.
  - c) Glass content approximately 25% to 30% except for filled resin systems.
3. Laminate Thickness
  - a) Nominal thickness 1/8"
  - b) Additional thickness and reinforcement, and sandwich structures as indicated and as required for structural integrity.

**2.03 AVERAGE MECHANICAL PROPERTIES:**

PROPERTY	VALUE	TEST METHOD
Tensile strength	12,000 PSI	ASTM D638
Flexural strength	20,000 PSI	ASTM D790
Flexural modulus	0.9 x 10 <sup>6</sup> PSI	ASTM D790
Compressive strength	17,000 PSI	ASTM D695
Bearing strength	9,000 PSI	ASTM D638
Thermal expansion	10 x 10 <sup>-6</sup> (degrees F)	
Specific gravity	1.5	

**2.04 FINISH**

- A. Color as selected by the Architect.
- B. Surface Texture as selected by the Architect.
- C. Finish as selected by the Architect.

**2.05 TOLERANCES**

- A. Part Thickness: + or - 1/16 inch.
- B. Gel Coat Thickness: + or - 3 mils.
- C. Length: + or - 1/8 inch.
- D. Variation from Square: 1/8 inch.
- E. Hardware Location Variation: + or - 1/4 inch.

**2.06 IDENTIFICATION**

- A. Identify each part with a permanent serial number.
- B. Number parts to coordinate with shop drawings.

**2.07 CURING AND CLEANING**

- A. Cure and clean components prior to shipment.

**2.08 ANCHORS AND FASTENERS**

- A. The installer will provide anchors, fasteners and other accessories required for proper installation of fabrications as recommended and approved by fiberglass fabrication manufacturer.

## **PART 3 - EXECUTION**

### **3.01 PRE-INSTALLATION EXAMINATION**

- A. Observe field conditions and verify that substrates are ready for installation of fiberglass fabrications.
- B. Check field dimensions affecting the installation of fiberglass fabrications.
- C. Verify that bearing surfaces are true and level.
- D. Verify that support framing has been constructed to allow accurate placement, alignment and connection of fabrication to structure.
- E. Report discrepancies between design dimensions and field dimensions, which could adversely affect installation, to the Architect.
- F. Do not proceed with installation until discrepancies are corrected, or until installation requirements are modified and approved by the Architect.
- G. Beginning of installation means acceptance of existing conditions.

### **3.02 INSTALLATION**

- A. Installation Contractor to have at completed at least 2 similar installations of architectural Glass Fiber Reinforced Polyester materials within the previous 12 months. Experience should be documented for approval by material manufacturer and references of completed work available for review.
- B. Install fabrications in accordance with manufacturer's instructions and approved shop drawings.

### **3.03 ALLOWABLE TOLERANCES FOR INSTALLED UNITS**

- A. Maximum Offset from True Alignment: 1/8 inch in 20 feet.
- B. Maximum Variation from True Position: 1/4 inch in 20 feet.

### **3.04 CLEANING**

- A. Clean installed fiberglass fabrications using cleaning methods and materials approved by manufacturer.

### **3.05 PROTECTION OF INSTALLED FABRICATIONS**

- A. Comply with manufacturer's recommendations and instructions for protecting installed fabrications during construction activities.

## **END OF SECTION**