



GFRP (Glass Fiber Reinforced Polymer)

CSI Section 06610 Translucent Fiberglass

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Glass fiber reinforced plastic fabrications as indicated on the drawings.

1.2 RELATED SECTIONS

- A. Section 05500 - Metal Fabrications: Supplementary supports for large items.
- B. Section 02881 - Playground Equipment and Structures

1.3 REFERENCES

- A. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics; 1999.
- B. ASTM D 648 - Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position; 1998c.
- C. ASTM D 790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials; 1999.
- D. ASTM D 695 - Standard Test Method for Compressive Properties of Rigid Plastics; 1996.
- E. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 1999.
- F. ASTM F1487-11- Standard Consumer Safety Performance Specification for Playground Equipment for Public Use
- G. ASTM F2373-11 - Standard Consumer Safety Performance Specification for Public Use Playground Equipment for Children 6 Months through 23 Months
- H. Consumer Product Safety Council (CPSC) Handbook for Public Playground Safety

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.





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- B. Product Data: Manufacturer's data sheets on each product to be used, including dimensions, finishes, storage and handling requirements and recommendations, and installation recommendations.
- C. Shop Drawings: For custom items, provide drawings showing dimensions, layout, details, and interface with adjacent work; include use zones if critical to proper installation.
- D. Samples: For each custom finish specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Transport, lift, and handle units with care, avoiding excessive stress and preventing damage; use appropriate equipment.
- B. Store products in manufacturer's unopened packaging until ready for installation; store units upright.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: The 4 Kids; 4400 Oneal, Greenville, TX 75404. ASD. Tel: (903) 454-9237. Fax: (903) 454-3642. Email: info@the4kids.com, www.the4kids.com
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 MATERIALS

- A. Glass Fiber Reinforced Plastic Fabrications: Molded surface coat over polyester resin laminate reinforced with glass fiber and structural reinforcing as required.
 - 1. Surface Coat: Ultraviolet inhibited coat.





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2. Surface Coat: As selected.
3. Color: _____.
4. Texture on Exposed Side: _____.
5. Glass Fiber: "E" type random chopped fibers.
6. Glass Content: 10 to 30 percent by weight.
7. Shell Thickness: 3/16 inch (5 mm), minimum.
8. Compressive Strength: 17000 psi (117 MPa), when tested in accordance with ASTM D 695.
9. Thermal Expansion Coefficient: 10×10^{-6} per degree F (5.56×10^{-6} per degree C).
10. Specific Gravity: 1.5.
11. Variation in Thickness From Nominal: Plus or minus 1/4" (6 mm).
12. Variation in Thickness of Gel Coat: Plus and minus 2.5 mils (0.06 mm), maximum.
13. Provide concealed reinforced anchorage points for anchors of type recommended by manufacturer.
14. Cure and clean prior to shipment; remove material that may be toxic to plant or animal life or incompatible with adjacent building materials.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly constructed.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.





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- C. Check field dimensions before beginning installation. If dimensions vary too much from design dimensions for proper installation, notify Architect and wait for instructions before beginning installation.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Install supplementary temporary and permanent supports as required for proper installation.

3.3 INSTALLATION

- A. Install in accordance with applicable code and manufacturer's recommendations; shim where necessary.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.
- C. Do not allow access until protective ground surfacing is in place, and inspections are complete.

END OF SECTION

