



Specifications for Glass Fiber Reinforced Concrete

QUALIFICATIONS FOR MANUFACTURER:

- A. All GFRC elements shall be manufactured by a firm presently specializing in the manufacture of the type shown on the drawings
- B. Manufacture's plant shall have been in continuous production for the last five (5) years.
- C. Proof of successful continuous experience in similar work over the past five (5) years must be presented and approved by the Architect prior to bidding.

GFRC QUALITY:

GFRC made of cement, glass fibers, sand and water is non-combustible and meets the requirements of the A.S.T.M. E-136.

Tensile and flexural strengths are the primary properties in the design of GFRC. Yield strengths are primarily influenced by the matrix, its type, density and degree of cure.

FINISH AND SAMPLES:

- A. The finish of the exposed to view surfaces shall be (state type)
 - 1) Acid Etch
 - 2) Light Sandblast
- B. The finish shall match approved sample on file in Architects office.

CASTING:

- A. Casting shall be accomplished by methods and equipment that are in conformance with generally acceptable systems for this type of work. Work shall be accomplished at manufacturing plant only.
- B. GFRC shall be so handled as to prevent segregation of materials.
- C. All precautions must be taken to keep the reinforcing steels in the proper location during placing and consolidation of the GFRC. Embedded items shall be accurately placed and maintained in their proper location during the casting process.



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D. Casting and overall dimensions tolerances shall be in accordance with the following:

- 1) Overall dimension (height and width) plus or minus 1/8 inch.
- 2) Thickness – plus or minus 1/8 inch

CURING:

Curing shall be accomplished by methods generally accepted for this type of work.

MOLDS:

- A. The selection of the materials from which molds are to be fabricated (i.e) steel, fiberglass, reinforced plastic, rubber, wood or concrete shall be at manufacturer's option.
- B. All elements shall be cast in molds of rigid construction, accurate in detail with precise corners and arises, and so designed as to provide a close control of dimensions and details as indicated on the drawings.
- C. Prior to casting GFRC elements, molds shall have all surface joints, radii, corners, etc., filled, ground, filed, straightened or other wise removed to provide a finished surface that is smooth and dense, free of honeycombing, air pockets, offsets, sinkages or other irregularities.

MATERIALS:

- A. Cement shall be Portland Cement conforming to A.S.T.M. C-150 Types I and II or III.
- B. Sand shall be washed and dried, or sands free of contaminants and lumps meeting compositional requirements of A.S.T.M. C-144.
- C. Glass fiber shall be High Zirlonia Alkali Resistant fibers.
- D. Water shall be clean, potable, free from injurious amounts of oil, alkalis, organic materials and other deleterious substances.
- E. Admixtures will conform to the requirements of A.S.T.M. C-494. Standard commercially available admixtures such as water reducers, accelerators, retarders, air-entraining agents, and acrylic thermoplastic copolymer dispersions may be used to impart specific properties to GFRC.



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