

GFRC Material Specifications

Cement	Type I, white Portland Cement of one type, brand, source, and lot throughout entire project, and meeting requirements of ASTM C150 "Specification for Portland Cement."
Fine Aggregate	Fine, clean, dry sand, able to pass a No.16 (Max 2% passing No 100) sieve, free of contaminants or deleterious matter, of one source throughout the project, and meeting composition requirements of ASTM C144 "Specification for Aggregate for Masonry Mortar."
Water	Fresh, clean, potable and free of any deleterious matter.that may affect color stability, setting, staining or strength of GFRC backing or face mix.
Glass Fibers	High zirconium content (minimum 16%) alkali resistant glass fibers specifically designed for use in concrete; with density of 2.7 g/crn3 and length of 1-1/2" to 2", and complying with PCI MNL 130-07 Second Edition.
Concrete Pigment	Harmless to concrete strength and set, stable at high temperatures, sunlight fast, alkali-resistant, not to exceed 10% of amount of cement, and conforming to the requirements of ASTM C979 "Specification for Pigments for Integrally Colored Concrete."
Coarse Aggregate	Clean, hard, strong, durable and inert, free of deleterious or staining material. Conforming to the requirements of ASTM C33 "Specification for Concrete Aggregates," except for gradation.
Water Reducing Admixture	Conforming to the requirements of ASTM C494 "Specification for Chemical Admixtures for Concrete", and containing not more than 0.1 percent chloride ions.
Polymer Curing Admixture	Acrylic Thermoplastic copolymer conforming to the curing compound specifications in Division 3 of the second edition of the Precast-Prestressed Concrete Institute's "Manual for Quality Control for Plants and Production of GFRC Products".
Flex Anchors	Steel anchors shall conform to the requirements of ASTM A29 or A108, Ductile materials shall be used. Corrosion Protection for flex anchors shall conform to the requirements of ASTM B633 for electro-deposited zinc.
Steel Framing	Galvanized studs and track formed from steel conforming to ASTM A446 with a minimum G-60 galvanized coating. Studs will have a minimum yield strength of 40 ksi, and tracks will have a minimum yield of 30 ksi. Light gage steel materials shall be either painted or galvanized to inhibit corrosion.
Tube Steel Sections	Formed from steel that conforms to the requirements of ASTM A500 Grade B, or ASTM A513, "Specifications for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes," and having a minimum yield strength of 46 ksi.