

BuildCrete™ Pool Plaster Specifications

BuildCrete™ is a product of GigaCrete, StuccoMax™: Exterior Pool Coating System for Insulating Concrete Form (ICF) Swimming Pools.

Part 1- GENERAL

1) SECTION INCLUDES

- a) Materials and installation of BuildCrete Pool Plaster.

2) DESIGN REQUIREMENTS

- a) Insulating Concrete Form (ICF) Block Systems
 - i) Walls must be filled with steel reinforced concrete as per BuildBlock's recommendations.
 - ii) Concrete must have fully cured for at least 30 days prior to coating being applied.

3) CODE REQUIREMENTS

- a) Shall be acceptable for use under the building code enforcing body in the jurisdiction of the project.

4) SUBMITTALS

- a) Manufacturer's technical data sheet, specification, and Best Practice Guide.
- b) Samples for architect's approval (when specified).

5) QUALITY ASSURANCE

- a) Manufacturer
 - i) All BuildCrete can be purchased from BuildBlock. Materials are manufactured, sold, and distributed by GigaCrete, Inc. Las Vegas, NV.
- b) Contractor Requirement
 - i) Contractor must be licensed, insured, and engaged in application practices of similar materials to those herein this specification.
 - ii) Employ skilled tradesmen who are knowledgeable and experienced in similar applications and or trained BuildCrete or GigaCrete applicators.
 - iii) Contractor must provide proper equipment, manpower, and supervision on the jobsite to install the product in accordance with BuildCrete Best Practice Guide Publication.

6) DELIVER, STORAGE, AND HANDLING

- a) Delivery
 - i) Materials shall be delivered to the jobsite in their original, unopened package.
 - ii) Material shall be inspected for damages. Damaged packages should be removed from the remaining, usable stock and reported to BuildBlock.
- b) Storage
 - i) Product must be stored indoors in a dry location, free of moisture, high humidity, direct sunlight, off the floor, and under cover where condensation cannot form. (All cements go hard when exposed to moisture of any kind).

- ii) Storage location shall be protected from moisture, humidity, excessive heat or freezing conditions within the temperature range of 32°F - 100°F.
- c) Handling
 - i) Do not throw, drop, or mishandle unopened packages using caution to preserve condition of sealed packages.

7) PROJECT CONDITIONS

- a) Ambient and Surface Temperature
 - i) BuildCrete Pool Plaster shall be applied in ambient air temperatures above 35°F and rising and remain above 40°F but below 90°F for a 24-hour period.
 - ii) Do not apply BuildCrete during inclement weather or when inclement weather is inevitable unless appropriate weather protection is used.
 - iii) Do not apply BuildCrete to substrates that are wet, frozen, or contain frost.
 - iv) Avoid installing BuildCrete in direct sunlight whenever possible. Provide shading when needed.
 - v) Follow industry standards to pool plaster and stucco trades best practices, such as misting or wet curing of materials during the curing phase.
 - vi) Avoid rapid dehydration of BuildCrete which is a crystalline cement and requires several hours for crystal growth to form a bond with the substrate and reach high early strengths. Keep the BuildCrete moist for at least the first 3 hours to avoid shrinkage cracks from forming.

PART 2 – PRODUCTS

1) MANUFACTURER

- a) BuildCrete Pool Plaster is manufactured by GigaCrete Inc. Las Vegas Nevada

2) MATERIALS

- a) BuildCrete- A non-Portland cement based dry material packaged in 75 pound paper bags requiring only the addition of clean, cool, potable water.
- b) BuildCrete can be left natural (cement color) or may be washed down and painted with a color finish pool paint (either epoxy or acrylic pool paints). Integral colors are not yet available.
- c) Reinforcing Mesh (determined by architect for impact resistance requirements).
 - i) 11oz or 15oz – High Impact Resistance (recommended).
 - ii) All edges for steps require additional mesh reinforcements to resist cracking.

3) JOBSITE INGREDIENTS

- a) Clean potable water (50-75°F is ideal). Provide means to heat or chill water (ice bags) outside the specified temperature range.

4) JOBSITE MIXING

- a) Mix in accordance with Manufacturer's instructions contained within the BuildCrete Best Practices Guide.

PART 3 – EXECUTION

Installers must qualify under the Quality Assurance requirements in this specification (Part 1, Section 5b)

1) EXAMINATION

- a) Inspect EPS surface for:
 - i) Dirt, UV damage, oxidization, dust, form oil, grease, paint, laitance, concrete splatter, or any other foreign material that may act as a bond breaker.
 - ii) Moisture or trapped water within the concrete behind the ICF foam must be allowed to fully cure. ICF walls may grow or shrink slightly during the curing process and can crack coatings. Take core moisture readings to insure fully cured concrete and acceptable industry standard moisture content.
 - iii) Moisture on the surface. Ensure that the EPS is dry before application.
 - iv) Vertical wall areas must be plumb and straight within ¼" within a 4 foot radius. Identify and mark problematic wall areas.
 - v) Radius edges must be secure and not loose. This includes step edges, wall to floor covering where radiused foam sections are glued into corners, any carved shapes and details designed into the pool shape.
 - vi) Report any deviations from the specification requirements or any other conditions that may adversely affect the BuildCrete installation to the general contractor.

2) SURFACE PREPERATION

- a) Rasp the substrate to remove potential bond breakers listed in Part 3 Section 1 to insure good adhesion.
- b) Repair damage, dents, and voids in the EPS substrate with an appropriate sprayed in-place polyurethane expanding foam prior to applying BuildCrete. Do not attempt to make repairs with BuildCrete or anything other than expanded foam insulation.

3) INSTALLATION

- a) Starting at the deep end of the pool on a vertical wall surface, apply a thin layer of BuildCrete about 1/8" to 3/16" by hand or peristaltic type sprayer and embed the specified mesh overlapping all abutting mesh edges by a minimum of 4". This can be in strips covering the abutted joints or as full sheets covering the entire wall surface in vertical drops (similar to hanging wall paper). *Note: GigaCrete, the manufacturer of BuildCrete Pool Plaster, recommends a minimum 11oz mesh, which can be overlapped and has very high strengths and impact resistance.* Press the mesh with a hand trowel, filling all the open areas in the mesh, thereby imbedding the mesh and eliminating air pockets.
- b) An additional final thickness layer of BuildCrete is applied over the mesh coat while the material in the base layer is still in its plastic state and troweled smooth. A minimum thickness of ½" (half an inch) must be applied to the pool bottom. A pre-cut foam coving can be used to create curved transitions from the floor to the walls. Taper the second coat starting at the bottom with a finished thickness of ½" tapering the coating to a finished thickness at the waterline of 3/8".

- c) Remove surface irregularities before surface skin forms, generally in the application short term. Misting water on the wall surface may assist troweling. Flattening the wall surface with a damp sponge is also acceptable.
- d) Flatten the second layer of BuildCrete while it is still workable. Smooth finishes shall be specified by the architect and the responsibility of the installer. *We recommend two teams moving in opposite directions ending up together with a wet edge at the shallow end of the pool.*

4) PROTECTION

- a) Provide protection of installed BuildCrete from excessive heat, direct sunshine, extreme freezing temperatures, wind, rain, and other trade activity for a minimum of 24 hours. Moist cure BuildCrete for a minimum of 3 hours with spray misters, damp sackcloth, a hose, or any other industry standard moist curing method when temperatures are elevated above 80°F.
- b) After full curing of one week, BuildCrete must be washed clean of dust and impurities. It can then be painted with an approved pool paint. Acrylic or epoxy pool paints can be used. Check with the pool paint manufacturer whether a primer is required over cement plaster pools.
- c) Tiles may be embedded into wet BuildCrete during the coating phase or left until the end. BuildCrete will continue to bond with the previously applied BuildCrete provided that it is wetted first to stop the suction of water out of the new layer being used for patching or as a tile adhesive. BuildCrete can be used as the grout but will remain its natural color. If white is required, utilize BuildCrete as the adhesive but choose a different brand for grout.

5) CLEAN UP

- a) Use clean water to re-emulsify and wash off from tools or nearby areas where BuildCrete may have splashed. Once BuildCrete has set completely, it is waterproof and can be difficult to remove. Contact BuildBlock or GigaCrete if you have any installation questions.