

GigaCrete Specification – STMX

StuccoMax™: Exterior Wall Coating System for Insulated Concrete Forms Construction (ICF) GigaCrete PanelSystems™ GeoFoam Block

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Materials and installation of StuccoMax™ exterior wall coating for ICF construction and PanelSystems.

1.02 DESIGN REQUIREMENTS

- A. Insulated Concrete Form (ICF) Wall Systems, PanelSystems and GeoFoam Blocks.
 - 1. Wall dimensional tolerance is ¼” within a 4 foot radius.
 - 2. Inclined surfaces shall have a rise to run ratio of not less than 1:2 with a maximum run dimension of 12 inches.
 - 3. Flashing shall be designed and installed to prevent water infiltration behind the coating system.
 - 4. Flashing shall be continuous and water tight.
 - 5. Expansion joint placement shall be specified by the architect and installed according to the manufacturer's recommendation. For GeoFoam Blocks, stay minimum 6” away from block joints.

1.03 CODE REQUIREMENTS

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

1.05 SUBMITTALS

- A. Manufacturer's technical data sheet, specifications and Best Practice Guide.
- B. Samples for architect's approval (when specified).

1.06 QUALITY ASSURANCE



- A. Manufacturer
 - 1. All materials manufactured, sold and distributed by GigaCrete, Inc. Las Vegas, NV.
- B. Contractor Requirement.
 - 1. Contractor must be licensed, insured and engaged in application practices of similar materials to those herein this specification.
 - 2. Employ skilled mechanics who are knowledgeable and experienced in similar material applications and or trained GigaCrete applicators.
 - 2. Contractor must provide proper equipment, manpower and supervision on the jobsite to install the product in accordance with StuccoMax™ Best Practice Guide publication.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Delivery
 - 1. Material shall be delivered to the jobsite in their original unopened package.
 - 2. Material shall be inspected for damages. Damaged packages should be removed from the remaining usable stock.
- B. Storage
 - 1. Product shall be stored indoors in a dry location free of moisture, high humidity, direct sunlight, off the floor and under cover.
 - 2. Storage location shall be protected from moisture, humidity, excessive heat or freezing conditions within the temperature range of 32°F - 100°F.
- C. Handling
 - 1. Do not to throw, drop or mishandle unopened packages using caution to preserve condition of sealed packages.

1.08 PROJECT CONDITIONS

- A. Ambient and Surface Temperature.
 - 1. StuccoMax™ 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.
 - 2. Do not apply StuccoMax™ during inclement weather or when inclement weather is inevitable unless appropriate weather protection is used.
 - 3. Do not apply StuccoMax™ to substrates that are below 32°F or that are wet, frozen or contain frost.
 - 4. Avoid installing StuccoMax™ in direct sunlight whenever possible. Provide shading when needed.



5. Follow industry standards typical to stucco trades best practices, such as misting or wet curing of materials during the curing phase.
6. Avoid rapid hydration of StuccoMax which is crystalline cement and requires several hours for crystal growth to form a bond with the substrate and reach high early strengths. Keep the StuccoMax moist for the first 3 hours to avoid shrinkage cracks from forming.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. GigaCrete Inc. Las Vegas, Nevada.

2.02 MATERIALS

- A. StuccoMax™ - A non Portland cement based dry material packaged in 75 pound paper bags requiring only the addition of clean, cool potable water.
- B. StuccoMax™ can be left natural if properly sealed or may be washed down and primed with a masonry primer and painted with a color finish coat.
- C. Reinforcing Mesh (determined by architect for impact resistance requirement).
 1. 4.2 oz – Standard Mesh (Minimal Impact Resistance) used only where 11 ounce mesh cannot be used such as V grooves or bent around corners.
 2. 11, 15 and 20 oz – High Impact Resistance (recommended).
 3. All corners of all openings including doors and windows require additional mesh reinforcements such as pre cut or manufactured onsite “L” and “T” mesh band-aids on all corners to resist cracking.

2.04 JOBSITE INGREDIENTS

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

2.03 JOBSITE MIXING

- A. Mix in accordance with Manufacturer’s instructions contained within StuccoMax Best Practice Guide.

PART 3 – EXECUTION



- A. Installers must qualify under the Quality Assurance requirement in this specification (section 1.06).

3.01 EXAMINATION

- A. Inspect EPS surface for:
 - 1. Dirt, UV damage, dust, form oil, grease, paint, laitance, concrete spatter or any other foreign material that may act as a bond breaker.
 - 2. Moisture or trapped water within the concrete behind the ICF foam. This water must be allowed to hydrate out leaving the concrete fully cured. ICF walls heave and shrink during the curing period and will crack coatings. Take core moisture readings to insure fully cured concrete and acceptable industry standard moisture content.
 - 3. Moisture on the surface. Ensure that the EPS is dry before the application.
 - 4. Wall areas must be plumb, square and straight within ¼" within a 4 foot radius. Identify and mark problematic wall areas.
- B. Report any deviations from the specification requirements or any other conditions that may adversely affect the StuccoMax installation to the general contractor.

3.02 SURFACE PREPARATION

- A. Rasp the substrate to remove potential bond breakers listed in section 3.01A.1 and to ensure good adhesion.
- B. Repair damage, dents and voids in the EPS substrate with an appropriate "same foam" replacement or expanded insulation prior to applying StuccoMax™. Do not attempt to make repairs with StuccoMax™ or anything other than expanded foam insulation.

3.03 INSTALLATION

- A. Apply a thin layer of StuccoMax™ by hand or peristaltic type sprayer and embed 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. *Note: GigaCrete recommends 11oz mesh which can be overlapped and has very high strengths and impact resistance.*
- B. An additional thin layer of StuccoMax™ is re applied over the mesh coat(s) while the material in the base layer is still in its plastic state.
- C. Remove surface irregularities by trowel 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. Texturing may be done to the second StuccoMax™ layer while still workable. Texture finishes shall be specified by the architect and the responsibility of the installer.

3.04 PROTECTION

- A. Provide protection of installed StuccoMax™ from excessive heat, direct hot sunshine, extreme freezing temperatures, wind, rain and other trade activity for 24 hours minimum. Moist cure StuccoMax for minimum 3 hours with spray misters, damp sackcloth, water down with hose or any other industry standard moist curing methods when temperatures are elevated above 80F.