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GigaCrete Specification – STMX

StuccoMax™: Manufactured Stone and Brick Veneer System for Insulated Concrete Forms Construction (ICF) and EPS Foam Wall Systems.

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Materials and installation of StuccoMax™ exterior wall coating for ICF construction and EPS based wall systems.

1.02 DESIGN REQUIREMENTS

- A. Insulated Concrete Form (ICF) Wall Systems, Panel Systems 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. 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.
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 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 40°F and rising and remain above 40°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.

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 potable water.
- B. StuccoMax™ can be left natural or may be primed with a masonry primer and painted with a color finish coat with or without texture.
- C. Reinforcing Mesh used behind StuccoMax above manufactured stone and brick veneer embeds (determined by architect for impact resistance requirement).
 - 1. 4.2 ounce per sq-yd – Standard Mesh (No Impact Resistance) and used above traffic zones where impact resistance is not needed.
 - 2. 11–15 and 20 ounce per sq-yd – High Impact Resistance (recommended) in all traffic zones where impacts are expected.
 - 3. Mesh is not required beneath stone and brick veneers.

2.04 JOBSITE INGREDIENTS

- A. Clean potable water (50-75°F ideal). Provide means to heat or chill water 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.
 - 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 PlasterMax installation to the general contractor.

3.02 SURFACE PREPARATION

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

3.03 INSTALLATION OF MANUFACTURED STONE AND BRICK VENEER FACINGS

- A. Inspect the veneers to be applied to the wall surfaces for loose particles, laitance, dust or dirt and wipe with a damp sponge. Trim off excess casting materials on edges to ensure the back of the veneer is flat.
- B. Mix StuccoMax as per Mixing instructions and mix only enough to cover an area that can be installed within a twenty minute (20 mins) period.
- C. Apply a thin layer of StuccoMax™ by hand or peristaltic type sprayer directly over the prepared EPS to a thickness of approximately ¼" (5mm) thickness and trowel reasonably flat with the flat side of a ½" notched trowel.
- D. With a ½" notched trowel, comb the StuccoMax on the wall leaving horizontal lines across the surface making sure to leave an even amount of material.
- E. Select the stone or brick veneer and apply a thin skim coat of StuccoMax to the back of the veneer.
- F. Press the veneer into the StuccoMax wall coating where desired and slide diagonally about 1" away from the final placement location and then slide back to the final desired position while maintaining an even pressure. Excess material will be squeezed out from the veneer which is removed with the trowel and applied to the back side of the next veneer piece to be installed. Check regularly by pulling off a veneer to see if the amount of coating meets code.
- G. The final step is to apply StuccoMax as grout in between the veneers. This is done by using a grout application bag with the tip cut to the width of the grout lines.
- H. Apply the StuccoMax to the joints making sure the material is forced into all voids leaving no air pockets.
- I. When the grout has begun to cure to thumbprint hardness, excess materials can be removed with a wood or metal grout finishing tool to the desired appearance. Brush down and finally wipe down with a damp sponge.

3.04 PROTECTION

- A. Provide protection of installed StuccoMax™ from excessive heat, cold, wind and other trade activity. StuccoMax™ may be allowed to get wet once it has gained enough initial strength.