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## GigaCrete Specification – STMX

### StuccoMax™: Exterior Wall Coating System for Insulated Concrete Forms Construction (ICF)

#### PART 1 - GENERAL

##### 1.01 SECTION INCLUDES

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

##### 1.02 REFERENCED DOCUMENTS

- A. ASTM Standards:

- ASTM D2247 - Standard Practice for Testing Water Resistance of Coatings in 100 Percent Relative Humidity. *(pending)*
- ASTM E-84 - Standard Test Method for Surface Burning Characteristics of Building Materials *(pending)*
- ASTM B117 - Standard Test Method for Salt Spray Testing *(pending)*
- ASTM E331 - Standard test method for Water Penetration by Uniform Static Air pressure Difference. *(pending)*
- ASTM E2485 - Standard test Method for Freeze/Thaw Resistance of Exterior Insulation and Finish Systems and Water Resistive Barrier Coatings. *(pending)*
- ASTM E2486 - Standard Test method for Impact Resistance. *(pending)*
- ASTM G155 and G153 – Accelerated Weathering for Exposure of Nonmetallic Materials. *(pending)*

##### 1.03 DESIGN REQUIREMENTS

- A. Insulated Concrete Form (ICF) Wall Systems
  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.

**1.04 PERFORMANCE 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 damaged packages with damaged packages removed the from the 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 40°F - 90°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 45°F and rising and remain above 45°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 45°F or that are wet, frozen or contain frost.
  - 4. Avoid installing StuccoMax™ in direct sunlight Whenever possible.

## **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 jobsite water
- B. Optional elastomeric color finish coat with or without texture
- C. Reinforcing Mesh (determined by architect for impact resistance requirement)
  - 1. 4.2 ounce per sq-yd – Standard Mesh (No Impact Resistance)
  - 2. 11 ounce per sq-yd – Intermediate Impact Resistance
  - 3. 15 ounce per sq-yd – High Impact Resistance
  - 4. 20 ounce per sq-yd – Very High impact Resistance.

### **2.04 JOBSITE INGREDIENTS**

- A. Clean potable water from a municipal source

### **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, form oil, grease, paint, laitance, concrete spatter or any other foreign material that may act as a bond breaker.
  - 2. Moisture on the surface. Ensure that the EPS is dry before the application.
  - 3. 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 and 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**

- A. Apply a thin layer of StuccoMax™ by hand or sprayer and embed specified mesh overlapping all abutting mesh edges by a minimum of 2.5". High abuse 15 and 20 oz per yd meshes shall not overlap and abut tightly at all edges. High abuse meshes shall receive an additional layer of StuccoMax™ and 4.2 oz per yd mesh layer during this step.
- 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.
- E. Optional color finish coats may be applied to the StuccoMax™ within the same application day and when the StuccoMax™ has gained sufficient strength. Finish coats may be applied at any time and not limited to the same application day.

**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.