

SECTION 068000
COMPOSITE PANELING
POLYMER MODIFIED GLASS FIBER REINFORCED GYPSUM- FORTON MG
FOR EXTERIOR USE

PART 1 – GENERAL

1.01 SUMMARY

- A. Fabricate finish material to dimensions, profiles, and details shown on the plans / shop drawings.
- B. Install all items straight, true, level, plumb, and firmly anchored in place. Where blocking or backing is required, coordinate as necessary with other trades to ensure placement of blocking and backing in a timely manner.
- C. Install the materials tight, finished smooth per manufacturer's requirements.
- D. Forton MG joint finishing compound for those projects that require taped joints in lieu of caulked joints. Follow the manufacturer recommendations for all aspects of the manufacturing through final installation.
- E. Related Work:
 - 1. Section 06100 – Rough Carpentry
 - 2. Section 07240 – Exterior Insulation Finish System
 - 3. Section 07900 – Joint Sealers
 - 4. Section 09900 – Painting

1.02 REFERENCES

- A. ASTM International (ASTM)
 - 1. C1381 Standard Specification for Molded Glass Fiber Reinforced Gypsum Parts.
 - 2. C1467 Standard Specification for the Installation of Molded Glass Fiber Reinforced Gypsum Parts.
 - 3. C1355 Standard Specification of Glass Fiber Reinforced Gypsum Composites.
 - 4. C1007 Specification for Installation of Load Bearing (Traverse and Axial) Steel Studs and Related Accessories.

1.03 SUBMITTALS

Within 30 days after Contractor's receipts of Owner's Notice to Proceed, submit:

- 1. Manufacturer's printed product information, including specifications, and installation instructions.
- 2. Shop Drawings: Shall illustrate dimensions, adjacent construction, materials, thickness, fabrications details, required clearances, field jointing, tolerances, colors, finishes, methods of support, attachments, anchorage to substrates and integration of components
- 3. Relevant samples of product representation.
- 4. Product Samples: Submit minimum 6-inch x 5-inch samples in specified color, texture and finish when applicable

1.04 WARRANTY

Warrant Forton MG fabrications to be free from defect due to materials and workmanship for one (1) year.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: All products will be safely wrapped, packed, labeled, palletized and delivered to the job site by manufacturer.
- B. Storage: Store pallets in a flat and dry location off the ground (flat, smooth and level surface), and in such a manner to prevent damage or intrusion of foreign matters. Although all our products are proven to withstand all weather conditions, it is the packaging that requires protections from the elements. Therefore, all unopened packaging must be stored under a roof from time of delivery to site until time of installation. Store units upright and not stacked unless permitted by the manufacturer.
- C. Handling: Haul, handle and lift all packages with care and according to manufacturer's recommendation in a manner that prevents damage. Avoid excessive stress and use appropriate equipment.
- D. Damage responsibility: All Shipments will be carefully inspected and packed before leaving the warehouse. Except for damage caused by others, the installers are responsible for cracking, chipping or other damages to the products, after delivery, and until the installation is completed, inspected and approved by a contractor on the job site.
- E. Protection: Protect installed Forton MG material from damage by other trades until Painting Subcontractors acceptance of the work. Advise Contractor of required protection procedures.

1.06 QUALITY ASSURANCE

- A. Obtain Forton MG products from a single source manufacturer that has the ability and resources to comply with the requirements and schedule of the project.
- B. The Alpha gypsum cement used to make the Forton MG parts is to be mined and processed in the USA with purity of not less than 90% in accordance to ASTM C1355.
- C. Manufacturer shall inspect each molded piece by its quality control engineers and designers to ensure that products comply with specified requirements prior to shipment.
- D. All Complicated large products such as Domes, Fountains and etc, will be assembled and disassembled at the manufacturer's site prior to shipment to ensure precision of fittings of all components.

1.07 MANUFACTURER QUALIFICATIONS

- A. Manufacturer: Provide products manufactured by a firm specializing in the manufacture and supply of Forton MG ornamentation, in the United States with a minimum of ten (10) years experience.
- B. Provide a list of projects comparable in size, scope, and complexity as indicated, upon request.
- C. Provide verification that architectural fiberglass meets or exceeds products specified.
- D. Source Limitations: Obtain Forton MG products from single source from single manufacturer

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

Zoho Stone Architectural Composites LLC
39340 US Highway 19 N, Tarpon Springs FL 34689
(727)230-6956
Sales@ZohoStone.com

2.02 MATERIAL

- A. Forton MG Matrix: Neutral PH hemi hydrate gypsum-based cements designed for glass fiber comparability (49% by weight), Liquid Acrylic Forton VF-812 Polymer (34.2%), Melamine Resin (4.9%), Hardener (0.2%)
- B. Reinforcement: Standard (not alkaline resistant) type “E” chopped or continuous strand glass fiber (11.7%).
- C. Galvanized steel, stainless steel, and/or wood elements can be molded in for structural or fastening Requirements, refer to the drawings or as directed by the manufacturer for structural integrity.
- D. Fire Performance Properties: Forton MG systems to meet ASTM E-84 and have a Class A (1) flame rating for building material.

2.03 AVERAGE FORTON MG MECHANICAL PROPERTIES

PROPERTY	VALUE
Tensile strength	3,500-5,100 PSI
Flexural strength	3,500-9,400 PSI
Flexural modulus	0.9 x 10 ⁶ PSI
Compressive strength	6,000-9,000 PSI
Impact strength	170 in lb/in ²
Thermal expansion	11 x 10 ⁻⁶ (F)
Density	94 pcf

2.04 TOLERANCES

- A. Part Thickness: + or – 3/8 inch.
- B. Control Thickness: Not less than 3/8 inch
- C. Straightness: Molded part shall not vary from straight 1/8 inch in 8 linear ft
- D. Dimension within the overall width: 1/8 inch
- E. Overall length: 1/8 inch

2.05 CURING AND CLEANING

Cure and clean components prior to shipment and remove material which may be:

- 1. Toxic to plant or animal life.
- 2. Incompatible with adjacent building material.

2.06 ANCHORS AND FASTENERS

Contractor to provide anchors and fasteners and other accessories for proper installation of Forton MG fabrications as recommended and approved by the manufacturer.

PART 3 – EXECUTION

3.01 PRE-INSTALLATION EXAMINATION

- A. Carefully observe and verify field conditions that substrates are ready for installation of Forton MG material. Contractor shall verify on site dimensions with shop drawings and assume full responsibility for fitting the components to the structure.
- B. Verify that bearing surfaces are true and level.
- C. Verify that support framing has been constructed to allow accurate placement, alignment and connection of architectural fiberglass fabrications to structure.
- D. Report discrepancies between design dimensions and field dimensions, which could adversely affect installation, to the Architect and / or Owner's Representative.
- E. Do not proceed with installation until discrepancies are corrected, or until installation requirements are modified and approved by the Architect and / or Owner's Representative

3.02 PREPARATION FOR INSTALLATION

- A. Preparation: Schedule delivery to allow time for application and drying of prime coat of paint or Sealer if required.
- B. Delivery: All products will be safely wrapped, packed, labeled, palletized and delivered to the job site by manufacturer.

- C. Storage: Store pallets in a flat and dry location off the ground (flat, smooth and level surface), and in such a manner to prevent damage or intrusion of foreign matters. Although all our products are proven to withstand all weather conditions, it is the packaging that requires protections from the elements. Therefore, all unopened packaging must be stored under a roof from time of delivery to site until time of installation. Store units upright and not stacked unless permitted by the manufacturer.
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3.03 INSTALLATION AND TOLERANCES OF INSTALLED PARTS

- A. Install all cast material straight, true, level, plumb, and securely anchored in place. Scribe and closely fit to adjacent work. Conceal all fastenings. Install sealant between cast material and other surfaces.
- B. Installed parts shall not be out of line more than 1/8 inch in any direction.
- C. The planar surface of any part shall not vary by more than 1/8 inch from planar surface of any adjacent part.
- D. Final paint finishes/ sealers shall be only breathable type finishes such as 100% acrylic coatings.
- E. Special Caution: Site cutting or grinding of Forton MG produces dust which may irritate skin, eyes, or respiratory system. Use protective equipment when cutting the products.

3.04 CLEAN UP

- A. During progress of work, do not allow the accumulation of debris or scrap resulting from this work. Immediately clean and repair damage caused by this work to work of other trades.
- B. Upon completion remove all resulting tools, surplus materials and rubbish, and leave entire installation in clean condition.

3.05 PROTECTION OF INSTALLED FABRICATIONS

Comply with manufacturer's recommendations and instructions for protecting installed fabrications during construction activities

END OF SECTION