PRODUCT DATA SHEET

Glass Fiber Reinforced Gypsum Fabrications (GFRG) by Hyde Park Mouldings, Inc.

Glass Fiber Reinforced Gypsum fabrications for interiors, commonly referred to as **GFRG**, is the ideal material for nearly any conceivable architectural shape, including mouldings, trims, reveals, lighting coves, domes, vaults, columns, capitals, wall panels, ceiling panels, sculptural reliefs, complex ceiling shapes and more.

Benefits:

- Nearly and shape, style or texture can be achieved in GFRG.
- Will not burn – gypsum is a harmless, inert material that will not ignite.
- Stable. Unlike wood, GFRG will not swell/contract with seasonal changes in temperature/humidity; when properly installed, joints will remain invisible.
- Lightweight. May be fabricated very thin to minimize load.
- Easy Installation by carpenters, drywall contractors, etc. using industry-standard methods.
- Excellent substrate for finishes – cast gypsum provides an excellent substrate for paints and other decorative finishes.
- Time-proven. Examples of gypsum as a medium for architectural ornament can be dated back to 1500 and earlier.

Limitations:

- Non-structural. At this time, Hyde Park Mouldings does not produce GFRG fabrications intended for load-bearing or structural purposes.

All items are for decorative purposes only.

- Interior use only. The product is generally intended for use in interiors and is not rated for continuous direct exposure to liquids/moisture. In certain cases, modifications may be made to the mix to render the fabrications suitable for limited exposure to moisture (i.e. covered exterior breezeways, in suanas, etc.). Such requirements must be defined prior to pricing and fabrication.

Shop Drawings

Shop drawings for approval are created showing profiles, thicknesses, embedded supports, framing and sub-framing and anchorage details, requirements for joint treatment, clearances and attachments to supports. Shop drawings are intended to verify the design intent prior to fabrication. Attachment methods shown on shop drawings are intended as suggestions only – the installer must be responsible for observing all local building codes and for verifying field conditions. Shimming, cutting and other on-site modifications of fabricated GFRG parts to accommodate field conditions may be necessary and are a normal aspect of any installation.

Fabrication

Hyde Park GFRG is fabricated in the U.S. in accordance with industry standards using multidirectional spray lay-up procedures and with a gypsum plaster matrix specifically formulated for use with glass filament reinforcement. The gypsum slurry is sprayed and/or laid by hand into moulds. The nominal shell thickness is ~3/16".

Installation

- Comply with ASTM C1467 Standard for the Installation of Molded Glass Fiber Reinforced Gypsum Parts.
- GFRG elements shall be installed plumb and square. Concealed shimming may be used as necessary.
- Pre-drill countersink pilots and mechanically fasten GFRG parts with coated (i.e. exterior grade) self-drilling, self-tapping bugle head screws through face or back as indicated on shop drawings .
- Where components are suspended, use min. 12-gauge galvanized steel wire at suspension points indicated on the shop drawings.
- Use framing, hangers, etc., as specified for Gypsum Board.
- Butt joints are to be adhered together using "Liquid Nail" or equivalent adhesive. not burn – gypsum is a harmless, inert material that will not ignite.
- Tape, fill and sand all joints and introduce control joints as necessary (+/- 35' - 0" O.C) as required under

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Section 09250 of the Specifications and as outlined in U.S.G.'s Gypsum Construction Handbook.

- Patch all countersunk fasteners and any incidental damage to match GFRG part texture.

Finishing

Once installed, all GFRG parts should be primed and painted. This is typically the responsibility of the painting contractor. Due to porosity differences between the precast GFRG products and the joint filling material, the finished GFRG assemblies must be properly primed and sealed prior to painting in order to avoid "Ghosting" of the joints. General Contractors should ensure that the painters are aware of this requirement.

Unfinished GFRG may exhibit slight imperfections, normally hidden by textured or matte finishes. To obtain satisfactory results with glossy, metallic or other decorative surface finishes, additional preparatory filling, sanding, priming and painting may be required by the painting or finishes contractor.

Handling

GFRG items must be transported and handled carefully and in a manner that will minimize the possibility of damage. Depending on site staging requirements and the dimensional properties of the manufactured items, purpose-built crates may be recommended for secure transportation.

Delivered items displaying obvious damage must be rejected at the time of delivery.

The fabricated GFRG parts may be heavy and awkward to maneuver. Ensure sufficient labor is allocated to the lifting, moving and maneuvering of the items in order to avoid injury, and always observe OSHA-recommended lifting and handling procedures.

Remove items from their crates/palettes upon arrival at the installation site, and store flat in a dry, well ventilated, low-traffic area. Protect items from moisture and jobsite traffic.

Physical Properties

Flexural Strength (ASTM C-947-89 MOD.): 4,820 p.s.i.

Impact Strength (ASTM D-256 notched): 3.26 ft.lb/ in. of notch

Impact Strength (ASTM D-256 unnotched): 8.0 ft.lb/ in^2.

Hardness – Barcol (ASTM D-2583-93): 54

Thickness: 3/16" nominal (varies)

Weight (depending on reinforcing): ~2-3 lbs/sq.ft

Density: 103 - 112 lbs/cu.ft

Compressive Strength (ASTM C-472-90 MOD.): 13,800 p.s.i.

Modulus of Elasticity - In flexure (ASTM C-947-89 MOD.): 3.38 x 10^6 p.s.i.

Tensile Strength (ASTM D-638-94 b MOD.): 1,810 p.s.i.

Fiber Content: 5 - 6% by weight (varies)

Humidified Deflection (ASTM C-473-95): 1/32" deflection/in.

Coefficient of Expansion (ASTM D-696-91): 0.98 x 10^{-5} in./in./ □F

Fuel Contribution (ASTM E-136-98a): 0

Flame Spread (ASTM E-84-94): 0, Class A

Smoke Index (ASTM E-84-94): 0, Class A

Company Information

Hyde Park Mouldings specializes in the design, fabrication and installation of all manner of fiber reinforced gypsum mouldings. In our workshop on Long Island, New York we create architectural elements for projects across the United States and around the world.

We take a very collaborative, hands-on approach to all of our projects, always considering design intent as well as all practical matters such as, trasnportation, logistics and installability.

Please contact us any time to discuss your specific project needs.

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