



## **"GRG" – GENERAL INSTALLATION INSTRUCTIONS**

### RELATED REFERENCE MATERIALS:

- **"Glass Reinforced Gypsum, a Guide"** published by CISCA and endorsed by AWCI for similar information on laminated type products' tolerance checks, etc...
- **"Levels of Gypsum Board Finish"** cosponsored by AWCI, Painting & Decorating Contractors of America, Gypsum Association and CISCA for generic terms and issues relating to "floated" tape and bed joint qualities.
- Consult the specified Paint, Sealant and Joint Compound Manufacturer's Specifications and application instructions for proper procedures.

**GENERAL** - "GRG" is a strong, thin shell composite suitable for **interior installations only**. GRG Technologies manufactures "GRG" using only two raw materials: high density "alpha" gypsum cement plaster (with water) and continuous strand mat fiberglass. These are hand laminated in alternating layers into a mold which is the "negative" of the shape required. Various embedments are incorporated, typically at edges, for reinforcement, to prevent fastener pull-through and to allow controlled thicknesses at attachment framing. Although the material can be cut to fit, it is usually preferable to use parts as factory made to size. This leaves the thicker connection flanges intact, instead of the thinner shell area, to install, hang or abut adjacent materials as designed. For example, prefabricated corners are usually provided for light coves, etc. precluding the need to field miter.

"GRG" weight varies with the application and profile (ceilings, cornices, columns, etc.) but is typically 1.5 to 2 lbs. per square foot of surface area. For example: A 24" diameter x 10'-0" high, half column cover will weigh about 65 lbs.

**HANDLING / STORAGE** - Although "GRG" is strong, it is a gypsum based product and is subject to damage from improper handling and storage. Store pieces upright in a controlled environment, weather protected, and/or on a level surface similar to conditions as are required for drywall. **DO NOT LEAN AT AN ANGLE, LAY FLAT OR STACK PARTS ON TOP OF EACH OTHER.** Parts that are improperly stored may warp and/or twist. This can usually be corrected by wetting out the back of the pieces and installing before drying. Consult the manufacturer before attempting or if there is any question as to how to store.

**CUTTING / DRILLING** - Use of blades and drill bits designed for metal produce good results. The number of teeth on the blade determines the finished quality of the cut. Slow but steady progress reduces edge chipping. Pre-drill and countersink all fastener heads, usually in the tape/bed recess to both sides of seams. Cutting and drilling of "GRG" will produce gypsum dust mixed with glass fibers. Wear correctly fitting, NIOSH approved masks to minimize inhalation.

**ASSEMBLY / INSTALLATION** - Review of shop drawings and familiarization with all dimensions is a must before starting. Verify the piece dimensions match the shop drawings. Large profiles (ceiling panels, etc.) will be somewhat flexible, allowing for some adjustment and also some difficulty in measuring. Use clamps or other methods to fix to correct shape if necessary. Any discrepancies or confusion must be brought to the manufacturer's attention before installing the product.

Basic methods and criteria are the same as those required to install drywall.

**ASSEMBLY / INSTALLATION cont'd.** - Due to its use in many different shapes/applications, specific installation instructions are most appropriately developed from the shop drawings of the parts supplied. The following information is a general "how to" guideline for "GRG" that may or may not apply to your

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project. Structural framing and attachment spacing is subject to applicable local code approval and may supersede those shown in the shop drawings. Control and expansion joint locations are the same as required for drywall.

**METAL FRAMING / SUPPORTS** - Minimum 20 gauge metal studs, angles, 12 gauge hanger wires, threaded rods, clips, etc., plumbed / aligned with inside or back of attachment flanges and securely anchored to adjacent structures. Additional supports, not shown in shop drawings, may be required.

**FASTENERS** - As required for framing being used, but typically standard drywall screws of lengths as required. Pre-drill and countersink into the surface at thickened flange locations, inside tape/bed recesses if provided for field finishing to a "seamless" appearance. Do not "overdrive" but instead, shim out from framing to the back of "GRG" flanges. "GRG" will flex somewhat to allow minor adjustment. For "returned" flanges it is possible to "toe screw" across seams to secure parts until adhesive set or if necessary for alignment.

**ADHESIVE** - Good quality, construction adhesive (not a "flexible, panel" type mastic) suitable for plaster/drywall applications. Apply liberally at piece to piece connections and/or adjacent construction. Liquid Nails, PL400, PL-Premium, etc. or equal.

**FIBERGLASS MESH TAPE** - 2" wide, suitable for plaster applications. Paper tape is not recommended.

**PATCHING / JOINT FINISHING / PAINTING** - Clean the "GRG" surface to remove any dusts, oils, etc. with a non-oil based solvent such as acetone or isopropyl alcohol and/or plain water (no soap). "GRG" is "hydroscopic" and will tend to "pull" water from the joint compound as it is being spread across the surface. Pre-moisten the surface to be patched and/or filled prior to applying the compound with a damp sponge and allow excess to be absorbed.

Embed standard 2" mesh into the seam recess with joint compound. Multiple coats are required as with drywall, "floating" away from the seams to create a monolithic surface. Sand patches and compounds with 120 grit production paper, back to the original profile, following the curvature of the piece if applicable. Take care to prevent "crowning" of patch at seams as this will read through after priming.

Proper priming of "GRG" and joint compound surfaces is extremely important to minimize the differences in porosity between the two materials and eliminate chances of seam "read through". Use both a good quality primer and final coating designed specifically for interior drywall and/or plaster. Two primer coats, rolled on, may be needed. Re-sand surfaces between coats as needed.

Finish quality levels and the methods to achieve them are also as required for drywall per the references listed above, especially for critical lighting applications and for coatings with any gloss appearance. High-Gloss paints are specifically not recommended. These will almost surely exhibit seam "read through" even if properly specified and all parties are aware of the extra field measures necessary for their use. "GRG" is not inherently "perfect". Smooth, non-textured finishes may require additional floating, primer coats and sanding to obtain an acceptable finish. In some cases an applied skim coat may be necessary for the entire surface. Consult the manufacturer for further instructions in these situations.