

**G.R.G. (GLASSFIBRE REINFORCED GYPSUM)
(For Interior Systems)**

1. GENERAL:

1. Specify in Division 9, Section 09255 Gypsum Fabrications
2. InterSource GRG conforms to ASTM C 1355 / C 1355M - 96; C 1381 - 97; C 1467/C 1467M - 00
3. Copies of ASTM specifications are only available through ASTM.

1.1. Scope:

Furnish all materials, labour, equipment and related services necessary to supply and erect G.R.G. units as indicated in the contract documents and in compliance with local codes.

1.2. Work Included:

1. Supply of G.R.G. units
2. Erection
3. Joint treatment
4. Supply and installation of back-up supports, etc.

1.3. Related Work Excluded:

1. Gypsum drywall
2. Finishes (see notes 3.3-5, 3.5 & enclosed ASTM.C.840-79 specification)

1.4. Intent:

This specification is intended to generally outline the requirements. It is not intended to amend or change the manufacturer's specifications.

1.5. Responsibility:

The gypsum drywall contractor shall install and tape the work under this section and he will be responsible for coordinating the installation with gypsum drywall work and other trades.

1.6. Manufacturers:

InterSource Specialties Co
N5619 Luey Ln
Plymouth, WI 53073
T: 920-892-8822 F: 920-892-8855
www.intersourceco.com sales@intersourceco.com

1.7. Samples and Submittals:

1. Submit a minimum of 3 - 203mm x 203mm (8" x 8") G.R.G. flat samples to the finishing contractor for paint selection.
2. Submit shop drawings for approval showing plans, sections, details, joint-treatment, reinforcing, fastening devices and the relation of the G.R.G to the surrounding construction.
3. Prior to production, erect one prototype unit on-site or at the plant for inspection by the architect.

1.8. Substitutions:

Companies desiring to submit proposals other than manufacturer shall, at least 10 working days in advance of the bid date, submit to the architect all information of the system. These companies must have a minimum of 5 years experience and provide photographs and shop drawings of 3 projects similar in scope with names of the architects and contractors. Independent test data showing compliance with the specified system and 3 physical samples must also be submitted.

2. PRODUCTS:
2.1. Materials:

1. (G.R.G.) units shall be prefabricated with high density gypsum, completely free of both asbestos and resin, reinforced with continuous filament random glass-fibre mat. Chopped strand fibre reinforcing is not permitted.
2. Units to be suitably reinforced with steel or wood.
3. Product shall be ready to receive primer and paint as specified elsewhere.
4. No additives are allowed under any circumstances. These include: polymers, retarders, accelerators, etc. The architect or his representative shall have access to the manufacturing facilities, either prior to contract award or thereafter, to inspect or verify compliance with these specifications.

2.2. Tolerances (Fabrication):

Dimensional all directions	+/- 1/8"	+/- 3.2mm
Thickness skin	+/- 1/16" / - 0"	+/- 1.6mm
Thickness - total unit	+/- 1/8"	+/- 3.2mm
Warpage or bowing	+/- 1/6" per foot	+/- 1.6mm per 304.8mm

2.3. Physical Properties:

Shell Thickness	1/8" to 3/16"	3.2mm to 4.8mm
Weight (depending on reinforcing)	1 - 2 lbs/sq.ft	4.9 to 9.8kg/m ²
Density	110 lbs/ft ³	1750 kg/m ³
Ultimate Tensile Strength	1200 - 1400 p.s.i.	8275.9 - 9655 kPa

Mod. of Elasticity in Tension	2.7 - .8 x 106 p.s.i.	26200 Mpa
Mod. of Elasticity in Flexure	2.1 - 2.2 x 105 p.s.i	1516.8 Mpa
Impact Strength	8.0 - 8.8 ft.lbs./in.2	55.2 to 60.7 kPa
Hardness - Rockwell	M72 M72	
Impact Strength	8.0 - 8.8 ft.lbs./in.2	55.2 to 60.7 kPa
Instron Failure Test (built in hanger)	288 lbs. (min.)	131 kg. (min.)
Max. length of mouldings	4'-0"	1220 mm
Flame Spread, Smoke Index & Fuel Contribution (A.S.T.M. E84-80)	- 0	

2.4 The following tests were performed by the U.S. Testing Co. Inc.:

1. Flexural
2. Fastener
3. Uniform Loading
4. Racking
5. Compression

The conclusion was: G.R.G. is as strong as gypsum board and it's durability should be equal or greater than gypsum board.

3. EXECUTION:

3.1. Delivery, Storage and Handling:

1. Transport and handle units in a manner that avoids excessive stresses or damage. Store the unit's level on a clean and dry surface in an area protected from weather and damage, preferably in an upright position. Do not stack or lean units.

3.2. Pre-Installation Responsibility:

1. Prior to manufacturing, dimensions and conditions not shown on the design drawings will be checked by the installer for inclusion by the manufacturer's shop drawings.
2. Prior to installation, the installer shall check field dimensions. Discrepancies between design and field dimensions shall be brought to the attention of the General Contractor and the architect. Work shall not proceed until discrepancies are corrected.

3.3 Erection:

1. Units shall be lifted carefully with suitable devices and installed plumb and level.
2. Fasten units with screws (through the face or from the back), bolting or welding as shown on the shop drawings. Where units are suspended, use as a minimum, the suspension points indicated on the shop drawings.
3. Framing, hangers, etc. as specified for gypsum drywall.
4. Butt joints are to be cemented together using "Liquid Nail" or equivalent.
5. Under certain lighting conditions (in atriums, at reflectors, vaults, etc.) reinforcing, fastener and joint taping "read-through" may occur. A field applied plaster skim coat may therefore be required.

6. Note: Additional bracing, fastening points, etc., not shown on the shop drawings may be required to ensure a proper installation.

3.4. Taping, Patching and Control Joints:

1. Tape, float and sand all joints and provide control joints (where required) as specified under the gypsum drywall section of the specifications and as described in C.G.C. or U.S.G. Gypsum Construction Handbook - Second Edition.
2. Countersunk fasteners and damage is to be patched to match units' texture.

3.5. Finishing:

1. See painting/texturing section of the specifications. The painting contractor shall comply with the enclosed A.S.T.M.C.840-79 specifications. G.R.G. shall only be painted under final lighting conditions since imperfections may not be apparent during temporary lighting.

4.0 WARRANTY:

The Manufacturer warrants that for one (1) year from the date of acceptance, the G.R.G. is to remain free from cracks, chips, spills and marks caused by defective material or workmanship.

NOTE 1: (G.R.G.) is a gypsum based material and is meant to be used as an interior product only.

NOTE 2: Unfinished (G.R.G.) may exhibit slight imperfections, normally hidden by textured finishes. To obtain satisfactory results with smooth finishes, filling and sanding will be required, to hide imperfections inherent in G.R.G.

NOTE 3: Improper sealing, more than crowning, can cause tape joint read-through after painting. This is due to the porosity differential between joint compounds and G.R.G. Ensure therefore, that the painting contractor seals all surfaces properly prior to finishing.

ATTENTION: DRYWALL CONTRACTORS: ASTM C-840-79

READ THE INFORMATION BELOW

This is what the industry requires and recommends for painting over your gypsum wallboard installations.

You should be familiar with these requirements and should make this known to your general contractors and builders, as well as the painting contractors with whom you work.

APPENDIXES

These Appendixes give general information and also suggestions for inclusions to be made elsewhere by the specifier.
They are not a part of this specification.

X3. Job Applied Decoration

X3.1 Prolonged exposure of gypsum board to sunlight may cause problems in decoration.

X3.2 With the joints and fastener head depressions treated as specified in Section 10, interior walls of gypsum board may be decorated in any of the popular variety of finishes, such as texture or stipple, flat paint or flat enamel paint, wallpaper or vinyl wall coverings.

X3.3 Because the porosity and texture of the gypsum board differs from that of the joint treatment, the surface shall be primed and sealed as may be required for the subsequent finish coats.

X3.4 In rooms where high humidity may be encountered, such as the kitchen, bath or utility room a flat or semi-gloss enamel finish is recommended.

X3.5 Care should be exercised in the selection of primer and sealer paints to make sure they will perform satisfactorily and fulfill the following functions:

X3.5.1 Equalize variations of suction over the entire surface.

X3.5.2 Provide a bonding surface or "tooth" for the paint to be applied.

X3.5.3 Avoid nap raising.

X3.6. Before applying the primer or sealer, remove all loose dirt and dust by brushing with a soft brush or by rubbing with a dry cloth. Be sure the joint treatment is thoroughly dry before any application of sealer or paint.

X3.7 In applying primers or sealers, apply sufficient quantity to assure that the surface is completely covered. Follow the manufacturer's printed directions and do not over thin. It is good practice to tint the sealer to approximately the shade of the finish coat. This will lead to better results in the finished job.

X3.8 In all cases where deep tones are to be used in the finish paint, best results will be achieved if the surface is first sealed. More than one coat of sealer may be necessary. Each coat must be thoroughly dry before applying another.

X3.9 Under normal atmospheric conditions, a waiting period of 12 to 18 h after application of primer-sealer should be observed before decoration is applied. In rainy, humid and cold weather, a longer waiting period, sometimes as long as 36 - 48 h, may be necessary to make certain the sealer coat is absolutely dry.

X3.10 Exposed surfaces of gypsum board, as specified in Section 10 shall be painted with not less than two coats of exterior paint.

THIS PAGE IS AN EXCERPT FROM ASTM C-840-79.