

Finishing and Decorating Interior Glass-Mat Gypsum Panels

SHEETROCK® Glass-Mat Panels MOLD TOUGH® FIRECODE® X are high-performance interior wall panels suitable for use in pre dry-in applications of gypsum panels and similar applications before the building envelope is fully enclosed. They can be exposed to the elements for up to 12 months and are water and mould resistant. The fiberglass facing and back shed water and the panels score 10 out of 10 on the ASTM D3273 test for mould¹. Though glass-mat panels can be substituted for and installed similar to regular drywall, the fiberglass facing of the panels is distinctly different than paper facing and needs to be finished differently than paper-faced gypsum panels when receiving decoration. The texture of the panel and absorption of paint is dissimilar to paper-faced gypsum panels and requires an additional skim coat of joint compound in most applications.

There are currently no consensus industry recommendations or standards for finishing glass-mat gypsum panels. CGC is working with several industry associations to update the *GA-214 Recommended Levels of Gypsum Board Finish* publication to include new finishing recommendations for glass-mat gypsum panels. This revision is expected in 2013. The following guidelines can help improve success at the job site.

Job Standard Specification (Mock-Up)

In addition to written project documents, a full scale project standard(s) of the approved wall and/or ceiling configuration(s) should be erected on the job site by the contracted workforce so as to provide a visual benchmark. It should be finished and decorated in accordance with applicable project specifications set by the design and specifying / approving entities. Job site constructed standards should be evaluated for appearance, and agreed to by all stakeholders prior to conducting any widespread finishing work and/or production painting.

Determining the appropriate level of finish is dependent on a number of factors. Primary architectural considerations include the location within the structure, critical lighting conditions present, wall smoothness desired, and the color, type, and sheen/gloss of the decorative finish specified. Once all of the factors have been evaluated, project documents can be written in specific terms and job site visual standards created, enabling contractors to be better prepared to present their most competitive bid.

Panel Installation

Install panels as outlined in *ASTM C840 Standard Specification for Application and Finishing of Gypsum Board* and/or *GA-216 Application and Finishing of Gypsum Panel Products*. For fire rated applications, conform to assemblies published in UL and ULC Fire Resistance Directories. After installation, make sure that all panel surfaces are completely dry and free of dirt, grease and dust. Panels should not be finished until building is completely enclosed.

Joint Taping

Joints between SHEETROCK® Glass-Mat Panels MOLD TOUGH® FIRECODE® X may be finished with either CGC/SYNKO® Paper Joint Tape embedded in CGC/SYNKO® All Purpose Ready-Mix Joint Compound or CGC Mould Resistant Fiberglass Drywall Tape embedded in CGC/SYNKO® Setting-Type Joint Compound. Tape all joints and interior angles. After embedding tape, immediately wipe joints and interior angles with a joint knife, leaving a thin coating of joint compound.

Proper Concealment

For proper concealment, use CGC/SYNKO® All Purpose Joint Compound. For smooth wall applications, apply two separate coats over all flat joints; one separate coat over interior angles; and three separate coats to cover fasteners and accessories.

Using fill and finish coats of joint compound to properly conceal panel joints, fasteners and trim accessories makes it impossible to achieve a flat plane on a finished surface. However, a properly finished panel wall can minimize the appearance of joints, fasteners and trims. Finishing and properly concealing joints and fasteners relies on two techniques: (1) using graduated arcs to prevent recesses or ridges and (2) not applying joint compound flush or flat to the panel surface. Recesses or ridges can result in distinct shadows in critical light or other adverse visual conditions. Applying joint compound flush or flat to the surface does not properly conceal the panel and increases the likelihood of joints and fasteners showing through the decorated finish. For more information, refer to CGC Technical Literature *mk_ifp_Finishing and Decorating Gypsum Panels E_05_11*.

Sanding

To minimize sanding, apply joint compound over joints, fasteners and accessories as smoothly or without defects as possible. Once the joint treatment phase is complete and the joint compound is thoroughly dry, some sanding of the joint compound may be required. To minimize texture variations, avoid sanding the panel face. **NOTE:** DO NOT sand compound flush to panel surface; this will expose areas previously concealed. Avoid using excessively coarse or larger-sized abrasive media (or grit) that may leave visible scratches in the joint compound after painting. Remove all sanding dust prior to applying any surface treatments (primer or primer-surfacer).

Wet Sanding: Wet sanding with a damp sponge is preferred whenever possible, especially when minimal sanding is required. **NOTE:** Wet sanding methods are not intended to remove large amounts of joint compound or compensate for poorly finished joints. Wet sanding produces no dust and requires minimal clean-up; it is less likely to scuff or damage the panel face surface. Wet sanded areas may be more easily concealed with paint finishes than dry sanded areas.

Dry Sanding: Either manual or power equipment can be used for dry sanding, which uses abrasive-faced material to remove joint compound from gypsum panel joints, fasteners and trims. Sanding materials with abrasive media or grit, sized as fine as possible are preferred. There are three major types of sanding materials: sandpaper, mesh and film; all offer a variety of grades. Good results can be achieved by using: 150-grit sandpaper or finer; 220-grit abrasive-mesh.

Surface Treatment

Glass-Mat panels differ from paper-faced gypsum panels in the treatment of the panel surface in the following conditions:

Level 3 Finish: Recommended in areas where one or more of the following conditions exist:

- 1) Areas to receive heavy-or medium-texture (spray or hand applied) finishes before painting
- 2) Heavy-grade wallcoverings are to be applied as a final decoration
- 3) Wallcoverings to be applied

NOTE: This level of finish is not recommended where smooth painted surfaces or light to medium wallcoverings are specified.

When Glass-Mat panels transition to a dissimilar substrate material(s) and a textured wall pattern is specified that leaves a portion of said wall surfaced exposed (without texture) prior to painting: apply a skim coat² of all purpose joint compound at a trowel-applied consistency to entire surface and let dry. The skim coated surface must be smooth and free of tool marks and ridges (a light sanding of the skim coating may be necessary to remove tool marks). Remove sanding dust from surface, then apply one full coverage coat (5-10 mils WFT [Wet Film Thickness]) of SHEETROCK® First Coat primer or SYNKO® Pre-Coat Drywall Surface Equalizer or equivalent to cover surface. Allow surface to dry prior to decorating.

Level 4 Finish: Recommended in areas where one or more of the following conditions exist:

- 1) Flat paints and smooth wall applications
- 2) Light textures to be applied
- 3) Wall coverings to be applied

NOTE: In critical lighting areas, flat paints applied over light textures tend to reduce joint photographing. Paints with sheen levels other than flat and enamel paints are not recommended over this level of finish.

Apply a skim coat² of all purpose joint compound at a trowel-applied consistency to entire surface and let dry. The skim coated surface must be smooth and free of tool marks and ridges (a light sanding of the skim coating may be necessary to remove tool marks). Remove sanding dust from surface, then apply one full coverage coat (5-10 mils WFT) of SHEETROCK® First Coat primer or SYNKO® Pre-Coat Drywall Surface Equalizer or equivalent to cover surface. Allow surface to dry prior to decorating.

Level 5 Finish: Recommended in areas where one or more of the following conditions exist:

- 1) Exposure to critical/severe lighting
- 2) Paints with sheen levels other than flat are specified
- 3) High value spaces exist where the highest quality finish is expected

Apply a skim coat² of all purpose joint compound at a trowel-applied consistency to entire surface and let dry.

The jobsite standard(s) shall dictate if additional skim coat(s) are required. The skim coated surface must be smooth and free of tool marks and ridges (a light sanding of the skim coating may be necessary to

remove tool marks). Remove sanding dust from surface, then apply one full coverage coat (5-10 mils WFT) of SHEETROCK® First Coat primer or SYNKO® Pre-Coat Drywall Surface Equalizer or equivalent to cover surface. Allow surface to dry prior to decorating.

NOTE: SHEETROCK® Primer-Surfacer TUFF-HIDE™ may be used in lieu of a second skim coat of CGC/SYNKO® All Purpose joint compound and the application of SHEETROCK® First Coat primer or SYNKO® Pre-Coat Drywall Surface Equalizer. Refer to CGC Technical Literature EJC-OJ56/3-07 for more information regarding Tuff-Hide primer-surfacer benefits and application.

Inspection

The treated surface should be inspected for acceptance prior to installing the final decorative finish or topcoat paints. For inspection methods, refer to the Drywall Finishing Council document, *Method for Inspecting Interior Joint Treated Gypsum Panel Surfaces* (dwfc.org).

¹ This ASTM test may not accurately represent the mould performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mould. To manage the growth of mould, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

² When applying a skim coat, use only CGC/SYNKO® All Purpose Joint Compound. CGC All Purpose, All Purpose-Lite, Machine Mud and Dust Control as well as SYNKO® Lite-Line All Purpose, Classic All Purpose, Dust Control and All Purpose UltraLight are all approved as skim coat materials.