



INSTALLATION OF PREDECORATED GYPSUM BOARD

(GA-224-08)

1. SCOPE

1.1 This specification describes the minimum requirements for the installation of predecorated gypsum board. Other materials shall be permitted to be used provided that their physical characteristics and durability under conditions of usage are at least equal in performance to those described.

1.2 Where fire resistance or sound control is required for predecorated gypsum board systems, the applicable building code regulations shall be followed. System details for fire and sound rated systems are described in the Gypsum Association's *Fire Resistance Design Manual* (GA-600).

2. APPLICABLE DOCUMENTS

2.1 ASTM STANDARDS

- C 557 *Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing*
- C 645 *Specification for Nonstructural Steel Framing Members*
- C 754 *Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products*
- C 1002 *Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs*
- C 1396 *Specification for Gypsum Board*
- E 84 *Test for Surface Burning Characteristics of Building Materials*

2.2 OTHER STANDARDS

- DOC Voluntary Product Standard PS 20, *American Softwood Lumber Standard*

3. DEFINITIONS

3.1 Predecorated Gypsum Board – gypsum board with a decorative surface covering or coating applied in-plant rather than on site.

3.2 Decorative sheet or film – a plastic film or paper sheet, either backed or unbacked; or a combination thereof that has been printed with or otherwise bears a decorative pattern.

3.3 Decorative coating – a paint or other liquid material, with or without aggregate, that has been applied to the paper surface of the gypsum board by spraying, rolling, or other mechanical methods.

3.4 Face – the side of the predecorated gypsum board that is called the finish side.

3.5 Color pin nails – specially prepared brads or nails that color match predecorated finish.

4. DELIVERY, IDENTIFICATION, HANDLING AND STORAGE

4.1 All materials shall be delivered in original packages or bundles bearing the brand name, if any; applicable standard designation; and the name of the manufacturer or the supplier for whom the product is manufactured.

4.1.1 The plastic packaging used to wrap predecorated gypsum board for rail and/or truck shipment is intended to provide temporary protection from moisture exposure during transit only and is not intended to provide protection during storage after delivery. Such plastic packaging shall be removed immediately upon receipt of the shipment.

NOTE 1: Failure to remove protective plastic shipping covers can result in condensation which can lead to damage, including mold.

4.2 All materials shall be kept dry. Predecorated gypsum board shall be neatly stacked flat with

care being taken to prevent sagging or damage to edges, ends, and surfaces.

4.2.1 Predecorated gypsum board and accessories shall be properly supported on risers on a level platform, and fully protected from weather, direct sunlight exposure, and condensation.

4.3 Predecorated gypsum board shall be stacked flat rather than on edge or end. Predecorated gypsum board stacked on edge or end can be unstable and present a serious hazard in the work place should they accidentally topple.

4.4 Refer to *Handling and Storage of Gypsum Panel Products*, GA-801, for proper storage and handling requirements.

5. ENVIRONMENTAL CONDITIONS

5.1 The room temperature shall be maintained at not less than 50°F (10°C) for adhesive application of predecorated gypsum board unless otherwise specified by the manufacturer.

6. MATERIALS

6.1 Predecorated Gypsum Board – ASTM Specification C 1396, Type X and regular.

6.2 Nails – Shall be as specified by the predecorated gypsum board manufacturer.

6.3 Staples – Shall be as specified by the predecorated gypsum board manufacturer.

6.4 Screws – ASTM Specification C1002, type W or type S.

6.5 Adhesives – Shall be either as specified by the predecorated gypsum board manufacturer, adhesive manufacturer, or ASTM Specification C 557 for application of gypsum board to wood framing.

6.6 Framing Members

6.6.1 Wood Framing Members – DOC Voluntary Product Standard PS 20, *American Softwood Lumber Standard*, published by the U.S. Department of Commerce.

6.6.2 Steel Studs, Runners, Framing or Furring Members – ASTM Specification C 645.

6.7 Corner, Edge and Other Trims – Shall be made from protective coated steel, wood, aluminum, or plastic designed for its intended use.

7. APPLICATION

7.1 General – Patterns or colors on same kind of predecorated gypsum board vary slightly from lot

to lot. When predecorated gypsum board from two or more lots is to be mixed in the same room, the joint between two different lots shall be located at a corner.

NOTE 2: All board used in a room should be from the same lot whenever possible.

7.2 Substrate, Surface Preparation

7.2.1 Framing members shall be spaced not to exceed 24 in. (610 mm) on center in such a manner to allow a balanced layout of predecorated gypsum board joints. Where predecorated gypsum boards are less than ½ in. (12.7 mm) thick, or are for ceiling application, framing shall not exceed 16 in. (406 mm) on center.

NOTE 3: Contact predecorated gypsum board manufacturer for alternate (systems) application methods.

7.2.2 Solid substrates shall be free from all protrusions and any chemicals that prevent proper adhesive bond.

7.2.3 All metal framing members shall be free from oils that prevent proper adhesive bond.

7.3 Cutting

7.3.1 Edges and ends to be covered with trim (molding or battens) shall be cut with a saw or with a sharp knife through the face and into the core, snapping the board away from the cut and then snapping the board in the reverse direction.

7.3.2 When cut edge joints of sheet or film covered board are to be left exposed, the face material shall be cut not less than 1 in. (25 mm) wider than the gypsum core to form a flap not less than 1 in. (25 mm) wide. The core shall be scored and snapped from the back side to the predecorated gypsum board and removed from the flap — not the sheet or film from the core.

7.3.2.1 The core shall be trimmed straight and beveled on the face side edge under the flap, as necessary to match factory edges.

7.3.2.2 The paper left adhered to the flap shall be removed and the flap shall be pulled around the edges and fastened to the back of the board with either adhesive or staples and adhesive.

7.4 Nailing

NOTE 4: For fire-rated or sound-rated assemblies, application shall conform to construction tested.

7.4.1 Nails used at edges or ends of the boards shall be located not more than 1 in. (25 mm) and not less than ¾ in. (10 mm) from those edges and

ends. While driving nails, the board shall be held in firm contact with the underlying support. Application of nails shall proceed from the center, or field, of the board to the ends and edges. Heads shall not be dimpled or set below surface of predecorated gypsum board.

7.4.1.1 Color pin nails shall be driven 8 in. (200 mm) on center at edges and intermediate studs and shall penetrate framing not less than $\frac{7}{8}$ in. (22 mm). Color pin nails shall be driven using a plastic or padded hammer to prevent chipping the paint from the nail head.

7.5 Adhesive/Mechanical Attachment

7.5.1 Predecorated gypsum board shall be permitted to be pre-bowed lengthwise (concave face) to aid in assuring continued contact with the framing/backing while adhesive bond strength develops.

7.5.2 A bead of adhesive $\frac{3}{8}$ in. (10 mm) in diameter shall be applied to the face of all wood framing members, except plates, that support the gypsum board. With the application of the gypsum board, the adhesive shall spread to an average width of $\frac{3}{4}$ in. (19 mm) approximately $\frac{1}{16}$ in. (1.5 mm) thick.

7.5.3 Where a joint occurs, two parallel beads of adhesive $\frac{3}{8}$ in. (10 mm) in diameter shall be applied, one near each edge of the framing members.

7.5.4 Fastener Spacing:

7.5.4.1 For walls, if adhesive properties are such as to assure bridging between predecorated gypsum board and framing, permanent fasteners 16 in. (400 mm) on center maximum are required only at the top and bottom. If adhesive properties are such that there is no positive bridging between board and framing, temporary bracing shall be required to ensure contact between board, adhesive, and stud face until adhesive bond strength develops. Nails shall provide not less than $\frac{7}{8}$ in. (22 mm) penetration into wood framing. Screws shall provide not less than $\frac{5}{8}$ in. (16 mm) penetration into wood framing and $\frac{3}{8}$ in. (10 mm) penetration into steel framing.

7.5.5 Staples shall be driven with crowns parallel to the framing member and only where they will not be left exposed. Staples shall be spaced not to exceed 8 in. (200 mm) on center and penetrate the framing not less than $\frac{5}{8}$ in. (16 mm).

7.6 Lamination to Solid Backing

7.6.1 Over a gypsum board or smooth plaster surface, $\frac{3}{8}$ in. (10 mm) diameter beads of adhesive shall be applied not less than 16 in. (400 mm) on center to the predecorated gypsum board or substrate with continuous beads approximately 1 in. (25 mm) from edges.

7.6.2 Over interior masonry or concrete, adhesive shall be applied either as specified in 7.6.1, with beads spaced 12 in. (300 mm) on center throughout, or in daubs not less than 2 in. (50 mm) in diameter, $\frac{1}{2}$ in. (13 mm) thick, spaced 12 in. (300 mm) to 16 in. (400 mm) each way with a row located 1 in. (25 mm) from each edge of all vertical joint locations.

7.6.3 Predecorated gypsum board shall be positioned not less than $\frac{1}{4}$ in. (6 mm) from the floor and shall provide a tight fit at abutting edges. Predecorated gypsum board shall not be slid into place. Either pre-bowed board shall be used, or mechanical fasteners or temporary bracing shall be used as required to support the predecorated gypsum board until the adhesive sets.

ANNEXES

A.1 GENERAL INFORMATION

A.1.1 When applying trim over joints, use only enough pressure to assure firm contact and a neat appearance.

A.1.2 Scraps of the predecorated gypsum board shall be saved for future use for patching damaged areas.

A.1.3 Most predecorated gypsum boards provide a surface suitable to receive paint if desired. Contact the predecorated gypsum board manufacturer for specifications for suitable paints and proper procedures.

A.2 TECHNICAL INFORMATION

A.2.1 Limitations – Predecorated gypsum boards are not intended for use in sustained high humidity conditions or extreme temperatures, over vapor retarders, or over wet or damp exterior walls.

A.2.2 Only adhesives formulated to be compatible with predecorated gypsum board shall be permitted. Some solvent base adhesives cause delamination and blistering of the finished surface. Consult adhesive manufacturer for specifications.

A.2.3 Application by adhesive only shall not be permitted for direct attachment to exterior masonry or concrete walls.

A.3 MAINTENANCE

A.3.1 In general, most normal stains are removable by light scrubbing with mild soap or detergent and wiping dry with a clean cloth. Gypsum board manufacturer shall be consulted

regarding the cleaning of specific finishes. If the suitability of any cleaning agent is unknown, check its effect in a hidden area.

A.4 REPAIR

A.4.1 Manufacturer shall be consulted for specifications for repairing damage surfaces of specific finishes.

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AMERICAN GYPSUM	LAFARGE NORTH AMERICA INC.
CERTAINTED GYPSUM, INC.	NATIONAL GYPSUM COMPANY
CERTAINTED GYPSUM CANADA, INC.	PABCO GYPSUM
CGC INC.	<i>a division of PABCO building products, LLC</i>
FEDERAL GYPSUM COMPANY	TEMPLE-INLAND FOREST PRODUCTS CORP.
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