



Designation: **C843—17** **C843—23**

Standard Specification for Application of Gypsum Veneer Plaster¹

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This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope*

1.1 This specification covers the minimum requirements for and methods of applying gypsum veneer plaster.

1.2 Where a specific degree of fire resistance is required for veneer plaster systems, applicable building code regulations shall be followed.

1.2.1 Details of construction for a specific assembly to achieve the required fire resistance shall be obtained from reports of fire-resistance tests, engineering evaluations, or listings from recognized fire testing laboratories.

1.3 Where a specific degree of sound control is required for veneer plaster assemblies and constructions, details of construction shall be in compliance with official reports of tests conducted in recognized sound testing laboratories in accordance with the applicable sound tests of Test Methods obtained from reports of acoustical tests of assemblies that ~~E90~~ have C423, met the required or ~~E492~~ specified acoustical performance.

NOTE 1—To ensure desirable results, coordinate this specification with Specification C844.

NOTE 2—General information regarding matters of a contractual nature concerning veneer plaster work is found in Appendix X1. Additional technical information related to veneer plastering is provided in Appendix X2.

1.4 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.5 The text of this specification references notes and footnotes which provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the specification.

1.6 This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.

1.7 This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

¹ This specification is under the jurisdiction of ASTM Committee C11 on Gypsum and Related Building Materials and Systems and is the direct responsibility of Subcommittee C11.03 on Specifications for the Application of Gypsum and Other Products in Assemblies.

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*A Summary of Changes section appears at the end of this standard

2. Referenced Documents

2.1 *ASTM Standards:*²

- C11 Terminology Relating to Gypsum and Related Building Materials and Systems
- ~~C423 Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method~~
- C587 Specification for Gypsum Veneer Plaster
- ~~C588/C588M Specification for Gypsum Base for Veneer Plasters (Withdrawn 2005)~~³
- C631 Specification for Bonding Compounds for Interior Gypsum Plastering
- C844 Specification for Application of Gypsum Base to Receive Gypsum Veneer Plaster
- C1047 Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base
- ~~E90C1396 Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements~~
- Specification for Gypsum Board
- ~~E492 Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine~~

3. Terminology

3.1 *Definitions:*

3.1.1 See Terminology C11.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *base coat, n*—veneer plaster trowel or machine applied as the first coat of a two-component system.

3.2.2 *finish coat, n*—veneer finish plaster trowel or machine applied as the second coat over the base coat plaster in a two-component system.

3.2.2.1 *smooth-trowel finish, n*—a finish resulting from steel troweling with a minimum of water after the plaster has become firm. A smooth finish free of trowel marks, blemishes, or other imperfections.

3.2.2.2 *texture finish, n*—a finish resulting from (1) trowel application followed by floating or texturing of the surface with any of a variety of tools using a minimum of water or (2) machine application, left as applied or followed by hand texturing.

3.2.3 *joint-reinforcing embedment, n*—the cementitious material used to embed the strip material that is compatible with the veneer plaster used.

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3.2.4 *one-component system, n*—a veneer plaster system designed for application directly over approved bases in a single plaster mix applied in a single coat or double-back operation with the same material.

3.2.5 *reinforced joint, n*—a joint between gypsum base that is reinforced with strip material embedded in a cementitious material.

3.2.6 *reinforcing, n*—joint reinforcing tape or mesh (strip material) that is applied over flat joints and interior angles.

3.2.7 *two-component system, n*—a veneer plaster system involving two separate materials mixed and applied separately for base coat and finish coat.

3.2.8 *veneer plaster system, n*—gypsum veneer plaster applied to (1) a gypsum base in accordance with 10.1 or (2) properly prepared masonry or monolithic concrete surfaces, neither side of which is exposed to moisture. The plaster shall be applied with one or more components not exceeding ¼ in. (6.4 mm) in total thickness.

4. Delivery of Materials

4.1 All manufactured materials shall be delivered in the original packages, containers, or cartons bearing the brand name and manufacturer identification.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

5. Protection of Materials

5.1 Plasters and other cementitious materials shall be kept dry until ready to be used; they shall be kept off the ground, under cover, and away from damp walls and surfaces.

6. Environmental Conditions

6.1 *Temperature*—When the ambient outside temperature at the building site is less than 55°F (13°C), 55°F (13 °C), maintain a temperature in the building of not less than 55°F (13°C) 55 °F (13 °C) or not more than 80°F (27°C) 80 °F (27 °C) for not less than 24 h prior to the application of veneer plaster and for one week after the veneer plaster has set or until the veneer plaster has dried. Distribute heat evenly in all work areas, and use deflection or protective screens to prevent concentrated or uneven heat or cold on the veneer plaster.

NOTE 3—The requirements in 6.1 will minimize the cracking of veneer plaster due to structural movements caused by thermal changes from temperature extremes; and dry-outs due to hot spots caused by concentrated heat.

6.2 *Ventilation*—Ventilation shall be provided to remove excess water given off through the drying process.

7. Materials

7.1 *Gypsum Base for Veneer Plasters* (hereinafter referred to as “gypsum base”) Specification [C588/C588M/C1396](#).

7.2 *Veneer Plasters*—Specification [C587](#).

7.3 *Reinforcing*—Noncorrosive strip providing the joint strength requirements of Specification [C587](#).

7.4 *Liquid Bonding Compounds*—Specification [C631](#) (see [X2.3](#)).

7.5 *Water*—Water shall be clean, fresh, and of potable water quality.

7.6 *Accessories*—Specification [C1047](#).

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8. Surface Preparation

8.1 *Examination*—Carefully examine all surfaces, including but not limited to, unit masonry, monolithic concrete, gypsum bases of all types, and accessories to receive veneer plaster, before the veneer plaster is applied. Notify the proper authorities promptly of all unsatisfactory conditions. The examination shall determine whether the gypsum base has been exposed to excessive sunlight. Do not apply veneer plaster until after such unsatisfactory conditions are rectified to the satisfaction of the plastering contractor.

NOTE 4—The bond of alkaline veneer plaster to gypsum base may be impaired if the base is exposed to direct light or sunlight for extended periods.

8.1.1 Do not apply veneer plaster over any surfaces of unit masonry or concrete that have been coated with any bituminous compound or other waterproofing or damproofing or form release agent.

8.2 *Conditioning of Surfaces:*

8.2.1 Immediately before the plaster is applied, wet down the masonry surfaces on which suction shall be reduced. Visible water shall not remain on the surface.

8.2.2 Carefully examine accessories, such as corner beads, control joints, casing beads, and so forth, to ensure that they are straight, curved, plumb, level, square, or true to the required angles and have been applied in a manner to ensure full coverage of flanges before the plaster is applied.

8.3 *Monolithic Concrete Surfaces*—Clean monolithic concrete surfaces of all dust, loose particles, and other foreign matter.

Completely remove all grease, oil, noncompatible curing compounds, and form releasing agents. Remove all ridges and protrusions greater than $\frac{1}{8}$ in. (3.2 mm) and fill all depressions greater than $\frac{1}{4}$ in. (6.4 mm) level with portland cement mortar and allow to set and dry. Any further preparation shall be as recommended by the veneer plaster manufacturer.

8.4 *Gypsum Base Joint Reinforcement*—Reinforce all interior angles and flat joints prior to application of the veneer plaster over the base.

8.4.1 *Interior Angles*—Position and secure reinforcement with staples (on 12-in. (305-mm)(305 mm) centers, one side only), veneer plaster, or other cementitious material compatible with the veneer plaster or by using self-adhering strip reinforcement. When stapling, staple along the ceiling edge only for wall-to-ceiling angles and along one edge for wall-to-wall angles. When securing reinforcement with veneer plaster, reinforcement shall be thoroughly embedded so that embedment material is both under and covering reinforcement.

8.4.2 *Flat Joints*—Center reinforcement over the joint line of the gypsum base and secure with staples or veneer plaster if not using self-adhering reinforcement. Keep reinforcement tight and flat against the gypsum base, and when stapling, position the staples no farther than 24 in. (610 mm) apart, staggered along each edge. Embed reinforcement and continue application of the veneer plaster over the field of the base. **(Warning—This method provides minimum reinforcement of the joints. To minimize incidence and severity of joint ridging and cracking, use one of the following methods (8.4.2.1, 8.4.2.2, or 8.4.2.3) in the absence of any specific method recommended by the veneer plaster manufacturer. Where paper tape and setting-type joint compounds are used, use 8.4.2.3.)** Warning—This method provides minimum reinforcement of the joints. To minimize incidence and severity of joint ridging and cracking, use one of the following methods (8.4.2.1, 8.4.2.2, or 8.4.2.3) in the absence of any specific method recommended by the veneer plaster manufacturer. Where paper tape and setting-type joint compounds are used, use 8.4.2.3.)

8.4.2.1 *Reinforcement over Set Veneer Plaster*—Tightly trowel veneer plaster over the joint line leaving the plaster feathered out to a width of about 6 in. (152 mm) flush with the face of the gypsum base. Allow the plaster to set; then secure reinforcement over the joint line as described in 8.4.2.

8.4.2.2 *Reinforcement Secured and Embedded with Veneer Plaster*—Apply reinforcement over the joint line as described in 8.4.2. Tightly trowel the plaster over the reinforcement along the joint line to provide thorough embedment of the reinforcement. Allow the joint embedment to set before proceeding with general plastering.

8.4.2.3 *Reinforcement Embedded (no staples)*—Tightly trowel the embedment material to a depth of about $\frac{1}{32}$ in. (0.8 mm), working the trowel in both directions along the joint line. Center the reinforcement over the joint line. Firmly and evenly press the reinforcement into the soft embedment material using a little soft material on the trowel to bury it completely, and leave the embedment material feathered out to a width of about 6 in. (152 mm) flush with the face of the gypsum base. Allow the embedment material to set before proceeding with general plastering.

9. Mixing

9.1 Do not use frozen, caked, or lumpy material. Do not retemper or use material that has partially set. Mix each batch separately. Clean mixers thoroughly after each batch so as not to accelerate the following batches. This can be done by spray hosing the mixer paddle and containers immediately after each batch. Water ratios and other techniques used for mixing shall conform to the manufacturer's recommendation for specific veneer plaster products. In the absence of explicit directions, follow the recommendations in X2.1.

9.2 *Setting Time*—Setting times are carefully controlled by the manufacturer. Do not make adjustments to the setting time on the job. If problems with setting develop under unusual job conditions, consult the manufacturer of the veneer plaster for recommendations.

9.2.1 Do not use gauging, molding, or casting plasters, lime, gypsum, Keene's cement, portland cement, and so forth to adjust the veneer plaster setting time.

9.3 Occasionally, special textures are desired that require additional sand. Approval of the veneer plaster manufacturer shall be obtained prior to any such additions.

10. Application

10.1 *General*—Veneer plasters have widely differing working properties, physical characteristics, and limitations regarding their