



Designation: C 1597M – 04

Standard Specification for Gypsum Wallboard (Hard Metric Sizes)¹

This standard is issued under the fixed designation C 1597M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers gypsum wallboard which is designed to be used for walls, ceilings, or partitions and affords a surface suitable to receive decoration.

NOTE 1—Specification C 840 contains application procedures for gypsum wallboard.

1.2 The values are stated in SI (metric) units only and are to be regarded as standard. For gypsum wallboard produced to inch-pound units see Specification C 36/C 36 M.

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

2. Referenced Documents

2.1 *ASTM Standards*:²

C 11 Terminology Relating to Gypsum and Related Building Materials and Systems

C 36/C 36M Specification for Gypsum Wallboard

C 473 Test Methods for Physical Testing of Gypsum Panel Products

C 645 Specification for Nonstructural Steel Framing Members

C 840 Specification for the Application and Finishing of Gypsum Board [Metric]

C 1264 Specification for Sampling, Inspection, Rejection, Certification, Packaging, Marking, Shipping, Handling, and Storage of Gypsum Board

E 84 Test Method for Surface Burning Characteristics of Building Materials

E 96 Test Methods for Water Vapor Transmission of Materials

E 119 Test Methods for Fire Tests of Building Construction and Materials

3. Terminology

3.1 Definitions of terms shall be in accordance with Terminology C 11.

4. Materials and Manufacture

4.1 Gypsum wallboard shall consist of a noncombustible core, essentially gypsum, surfaced with paper bonded to the core.

4.2 Foil backed gypsum wallboard shall consist of gypsum wallboard with a layer of aluminum foil laminated to the back surface.

4.3 Gypsum wallboard, type X (special fire resistant) designates gypsum wallboard complying with this specification that provides not less than 1 hour fire-resistance for boards 16 mm thick or $\frac{3}{4}$ hour fire-resistance for boards 13 mm thick, applied parallel with and on each side of load bearing 2×4 wood studs spaced 400 mm o.c. with coated nails, 50 mm long, 2.0 mm diameter shank, 6.0 mm diameter heads, spaced 200 mm o.c. with wallboard joints staggered 400 mm on each side of the partition and tested in accordance with the requirements of Test Methods E 119.

NOTE 2—Consult producers for independent test data on assembly details and fire resistance classifications for other types of construction. See fire test reports or listings from recognized fire testing laboratories for assembly particulars, materials, and classifications.

4.4 Gypsum wallboard shall have a flame spread index of not more than 25 when tested in accordance with Test Method E 84.

5. Physical Properties

5.1 Specimens shall be taken from the samples obtained in accordance with Specification C 1264.

5.2 Specimens shall be tested in accordance with Test Methods C 473.

5.2.1 *Flexural Strength*—The specimens shall be tested face up and face down. The average breaking load shall be not less than the following:

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 C11.01 on Specifications and Test Methods for Gypsum Products. Current edition approved May 1, 2004. Published May 2004.

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.