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Standard Specification for Gypsum Wallboard¹

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

^{ε1} NOTE—The introduction to the Appendix was editorially updated in April 2000.

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.

1.2 The values stated in either inch-pound or SI (metric) units are to be regarded separately as standard. Within the text, the SI units are shown in brackets. The values stated in each system shall be used independent of the other. Values from the two systems shall not be combined.

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:

- C 11 Terminology Relating to Gypsum and Related Building Materials and Systems²
- C 473 Test Methods for Physical Testing of Gypsum Panel Products²
- C 645 Specification for Nonstructural Steel Framing Members²
- C 1264 Specification for Sampling, Inspection, Rejection, Certification, Packaging, Marking, Shipping, Handling, and Storage of Gypsum Board²
- E 84 Test Method for Surface Burning Characteristics of Building Materials³
- E 96 Test Methods for Water Vapor Transmission of Materials⁴
- E 119 Test Methods for Fire Tests of Building Construction and Materials³

¹ This specification is under the jurisdiction of ASTM Committee C-11 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.

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² Annual Book of ASTM Standards, Vol 04.01.

³ Annual Book of ASTM Standards, Vol 04.07.

⁴ Annual Book of ASTM Standards, Vol 04.06.

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 h fire-resistance for boards 5/8 in. [15.9 mm] thick or 3/4 h fire-resistance for boards 1/2 in. [12.7 mm] thick, applied parallel with and on each side of load bearing 2 × 4 wood studs spaced 16 in. [406 mm] o.c. with 6d coated nails, 1 7/8 in. [48 mm] long, 0.0915 in. [2.32 mm] diameter shank, 1/4 in. [6.4 mm] diameter heads, spaced 7 in. [178 mm] o.c. with wallboard joints staggered 16 in. [406 mm] on each side of the partition and tested in accordance with the requirements of Test Method E 119.

NOTE 1—Consult producers for independent test data on assembly details and fire resistance classifications for other types of construction. See official fire test reports 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:

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