



# Standard Specification for Treated Core and Nontreated Core Gypsum Sheathing Board<sup>1</sup>

This standard is issued under the fixed designation C 79/C 79M; 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.

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

## 1. Scope \*

1.1 This specification covers treated core and nontreated core gypsum sheathing, which is designed to be used as a sheathing on buildings.

NOTE 1—Specification C 1280 contains application procedures for gypsum sheathing board.

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

## 2. Referenced Documents

### 2.1 ASTM Standards:

- C 11 Terminology Relating to Gypsum and Related Building Materials and Systems<sup>2</sup>
- C 473 Test Methods for Physical Testing of Gypsum Panel Products<sup>2</sup>
- C 645 Specification for Nonstructural Steel Framing Members<sup>2</sup>
- C 1264 Specification for Sampling, Inspection, Rejection, Certification, Packaging, Marking, Shipping, Handling, and Storage of Gypsum Board<sup>2</sup>
- C 1280 Specification for Application of Gypsum Sheathing<sup>2</sup>
- E 119 Test Methods for Fire Tests of Building Construction and Materials<sup>3</sup>

## 3. Terminology

3.1 Definitions used in this specification shall be in accordance with Terminology C 11.

## 4. Materials and Manufacture

4.1 Gypsum sheathing shall consist of a noncombustible core, essentially gypsum, surfaced on both the face and the back with water-repellent paper bonded to the core.

4.1.1 Treated core gypsum sheathing shall have a water-resistant material incorporated into the core.

4.1.2 Nontreated core gypsum sheathing shall not be required to have a water-resistant material incorporated in the core.

4.2 *Gypsum Sheathing, Type X (Special Fire-Resistant)*, designates gypsum sheathing 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 by 4 wood studs spaced 16 in. [406 mm] on centers with 6d coated nails, 1 7/8 in. [48 mm] long, 0.0915-in. [2.3-mm] diameter shank, 1/4-in. [6.4-mm] diameter heads, spaced 7 in. [178 mm] on center with gypsum sheathing joints staggered 16 in. [406 mm] on each side of the partition and tested in accordance with 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.

## 5. Physical Properties

5.1 Specimens shall be taken from the samples obtained in accordance with 8.1.

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

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

Thickness in. [mm]	Method A	Method A	Method B	Method B
	Bearing Edges Perp to Panel Length lbf [N]	Bearing Edges Par to Panel Length lbf [N]	Bearing Edges Perp to Panel Length lbf [N]	Bearing Edges Par to Panel Length lbf [N]
3/8 [9.5]	80 [356]	30 [133]	77 [343]	26 [116]
1/2 [12.7]	110 [489]	40 [178]	107 [476]	36 [160]
5/8 [15.9]	150 [667]	50 [222]	147 [654]	46 [205]

5.1.3 *Humidified Deflection*—The specimens shall have an average deflection of not more than the following:

Thickness in. [mm]	Deflection eighths of an inch [mm]
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<sup>1</sup> 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.

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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 04.01.

<sup>3</sup> *Annual Book of ASTM Standards*, Vol 04.07.

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