



Designation: C1766 – 13

Standard Specification for Factory-Laminated Gypsum Panel Products¹

This standard is issued under the fixed designation C1766; 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 the factory-laminated gypsum panel products designed either for use on walls, ceilings, or partitions as part of a sound control system; or for use as a gypsum stud or gypsum coreboard.

1.2 The values stated in either SI units or inch-pound units are to be regarded separately as standard. Within the text, the SI units are shown in brackets. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.3 *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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

- C11 Terminology Relating to Gypsum and Related Building Materials and Systems
- C473 Test Methods for Physical Testing of Gypsum Panel Products
- C1264 Specification for Sampling, Inspection, Rejection, Certification, Packaging, Marking, Shipping, Handling, and Storage of Gypsum Panel Products
- C1278 Specification for Fiber-Reinforced Gypsum Panel
- C1396 Specification for Gypsum Board
- C1658 Specification for Glass Mat Gypsum Panels
- E84 Test Method for Surface Burning Characteristics of Building Materials

¹ This test method 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 June 15, 2013. Published August 2013. DOI: 10.1520/C1766-13.

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.

3. Terminology

3.1 Definitions used in this specification shall be in accordance with Terminology C11.

4. Materials and Manufacture

4.1 Factory-laminated gypsum panel products shall be composed of two or more gypsum panel products factory-laminated into a composite panel.

4.1.1 The individual gypsum panel products shall comply with Specification C1278, Specification C1396, or Specification C1658.

4.2 Laminating adhesive shall be applied to either one or both of the surfaces being laminated.

4.3 Factory-laminated gypsum panel products shall have a flame spread index of not more than 25 when tested in accordance with Test Method E84.

5. Physical Properties

5.1 Specimens of factory-laminated gypsum panel products shall be taken from the samples obtained in accordance with Specification C1264.

5.2 Specimens shall be tested in accordance with Test Methods C473.

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:

Thickness, in. [mm]	Method A	Method A	Method B	Method B
	Bearing Edges Perpendicular to Panel Length, lbf [N]	Bearing Edges Parallel to Panel Length, lbf [N]	Bearing Edges Perpendicular to Panel Length, lbf [N]	Bearing Edges Parallel to Panel Length, lbf [N]
1/2 [12.7]	110 [489]	40 [178]	107 [476]	36 [160]
5/8 [15.9]	140 [622]	50 [222]	137 [609]	46 [205]
3/4 [19.0]	170 [756]	60 [267]	167 [743]	56 [249]
1 [25.4]	230 [1023]	80 [356]	228 [1014]	77 [343]

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

Thickness, in. [mm]	Deflection, in. [mm]
1/2 [12.7]	1-1/4 [32]
5/8 [15.9]	5/8 [16]
3/4 [19.0]	not required
1 [25.4]	not required