



Standard Test Methods for Physical Testing of Gypsum Panel Products¹

This standard is issued under the fixed designation C473; 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 These test methods cover the physical testing of gypsum panel products.

1.2 The test methods appear in the following order:

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Flexural Strength (Method A)	7
Core, End and Edge Hardness (Method A)	8
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Flexural Strength (Method B)	11
Core, End and Edge Hardness (Method B)	12
Nail Pull Resistance (Method B)	13
Humidified Deflection	14
End Squareness	15
Nominal Thickness	16
Recessed- or Tapered Edge Depth	17
Width	18
Length	19
Water Resistance of Core-Treated Water-Repellent Gypsum Panel Products	20
Surface Water Resistance of Gypsum Panel Products with Water-Repellent Surfaces	21

1.3 The values stated in inch-pound units are to be regarded as standard with the exception of weight of samples in SI gram units. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4 The text of these test methods 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 these test methods.

1.5 *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

E4 Practices for Force Verification of Testing Machines

E177 Practice for Use of the Terms Precision and Bias in ASTM Test Methods

E691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method

2.2 *Other Standards:*³

TAPPI T441 Water Absorptiveness of Sized (Non-Bibulous) Paper, Paperboard, and Corrugated Fiberboard (Cobb Test)

3. Terminology

3.1 Definitions used in these test methods are in accordance with Terminology **C11**.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *edge, n*—the paper-bound edge, or long edge, as manufactured.

3.2.2 *ends, n*—the end perpendicular to the paper-bound edge or long edge.

3.2.3 *Test Uncertainty Ratio (TUR), n*—(tolerance of measure) / (precision of the standard measuring instrument)

4. Sampling

4.1 For use in these test methods, a sample shall consist of not less than 0.25 % of the number of gypsum panel products in a shipment, but not less than three gypsum panel products. Test specimens shall be taken from the sample lot as indicated in each method.

¹ These test methods are under the jurisdiction of ASTM Committee **C11** on Gypsum and Related Building Materials and Systems and are the direct responsibility of Subcommittee **C11.01** on Specifications and Test Methods for Gypsum Products.

Current edition approved Nov. 1, 2016. Published December 2016. Originally approved in 1961. Last previous edition approved in 2015 as C473 – 15. DOI: 10.1520/C0473-16.

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 Available from Technical Association of the Pulp and Paper Industry (TAPPI), 15 Technology Parkway South, Norcross, GA 30092, <http://www.tappi.org>.