



Standard Test Methods for Joint Treatment Materials for Gypsum Board Construction¹

This standard is issued under the fixed designation C 474; 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 joint compound, paper joint tape, glass-mesh joint tape, and an assembly of joint compound and paper joint tape.

1.1.1 Joint treatment materials are specified in Specification C 475/C 475M.

1.1.2 The joint treatment material described in this standard are for use with gypsum board installed in accordance with Specification C 840.

1.2 The test methods appear in the following order:

	Section
Joint Compound Tests:	
Viscosity	5
Shrinkage	6
Check Cracking	7
Putrefaction	8
Joint Tape Tests:	
Tensile Strength	9
Width	10
Thickness	11
Paper Joint Tape Tests	
Dimensional Stability	12
Assemblages of Paper Joint Tape and Joint Compound:	
Bond of Paper Joint Tape to Joint Compound	13
Cracking of Joint Compound at Tape Edges	14
Glass-Mesh Joint Tape Test	
Skewness	15

1.3 The values stated in inch-pound units are to be regarded as the standard. The SI (metric) values given in brackets are approximate and are provided for information purposes only.

1.4 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.

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:

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 C11.02 on Specifications and Test Methods for Accessories and Related Products.

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C 11 Terminology Relating to Gypsum and Related Building Materials and Systems²

C 36 Specification for Gypsum Wallboard²

C 472 Test Methods for Physical Testing of Gypsum, Gypsum Plasters, and Gypsum Concrete²

C 475/C 475M Specification for Joint Compound and Joint Tape for Finishing Gypsum Board²

C 840 Specification for Application and Finishing of Gypsum Board²

D 685 Practice for Conditioning Paper and Paper Products for Testing³

D 828 Test Method for Tensile Properties of Paper and Paperboard Using-Constant Rate-of-Elongation Apparatus³

D 3882 Test Method for Bow and Skew in Woven and Knitted Fabrics⁴

E 100 Specification for ASTM Hydrometers⁵

2.2 TAPPI Standard:

T 411 Thickness (Caliper) of Paper, Paperboard, and Combined Board⁶

3. Terminology

3.1 *Definitions*—For definitions of terms relating to gypsum, see Terminology C 11.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *bond, n—in joint systems*, the quality of adhesion between the paper joint tape and joint compound.

3.2.1.1 *Discussion*—A 0 % bond means that no paper fiber is adhering to the joint compound. A 100 % bond means that there is cohesive failure of the paper joint tape.

3.2.2 *check cracking, n—in joint systems*, short, narrow cracks randomly oriented in the surface of the dried joint compound.

3.2.3 *joint compound, powder, n*—A drying-type or setting-type cementitious material to be mixed with water.

3.2.4 *joint compound, ready-mix, n*—A drying-type cementitious material that is factory mixed in ready-to-use form.

² *Annual Book of ASTM Standards*, Vol 04.01.

³ *Annual Book of ASTM Standards*, Vol 15.09.

⁴ *Annual Book of ASTM Standards*, Vol 07.02.

⁵ *Annual Book of ASTM Standards*, Vol 14.03.

⁶ Available from Technical Association of the Pulp and Paper Industry, Technology Park, P.O. Box 105113, Atlanta, GA 30348.

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