



Standard Test Method for Compressive Strength of Masonry Prisms¹

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1. Scope*

1.1 This test method covers procedures for masonry prism construction and testing, and procedures for determining the compressive strength of masonry, f_m , used to determine compliance with the specified compressive strength of masonry, f'_m . When this test method is used for research purposes, the construction and test procedures within serve as a guideline and provide control parameters.

1.2 This test method also covers procedures for determining the compressive strength of prisms obtained from field-removed masonry specimens.

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

1.4 *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

- C67 Test Methods for Sampling and Testing Brick and Structural Clay Tile
- C136 Test Method for Sieve Analysis of Fine and Coarse Aggregates
- C140 Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
- C143/C143M Test Method for Slump of Hydraulic-Cement Concrete
- C144 Specification for Aggregate for Masonry Mortar
- C270 Specification for Mortar for Unit Masonry

¹ This test method is under the jurisdiction of ASTM Committee C15 on Manufactured Masonry Units and is the direct responsibility of Subcommittee C15.04 on Research.

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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.

- C476 Specification for Grout for Masonry
- C780 Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry
- C1019 Test Method for Sampling and Testing Grout
- C1093 Practice for Accreditation of Testing Agencies for Masonry
- C1180 Terminology of Mortar and Grout for Unit Masonry
- C1232 Terminology of Masonry
- C1532 Practice for Selection, Removal, and Shipment of Manufactured Masonry Units and Masonry Specimens from Existing Construction
- C1552 Practice for Capping Concrete Masonry Units, Related Units and Masonry Prisms for Compression Testing
- C1587 Practice for Preparation of Field Removed Manufactured Masonry Units and Masonry Specimens for Testing
- E105 Practice for Probability Sampling of Materials
- E111 Test Method for Young's Modulus, Tangent Modulus, and Chord Modulus

3. Terminology

3.1 Definitions:

3.1.1 For definitions of terms used in this test method, refer to Terminologies C1180 and C1232.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *set*—a set consists of at least three prisms constructed of the same material and tested at the same age.

3.3 Notations:

3.3.1 f'_m —specified compressive strength of masonry.

3.3.2 f_m —compressive strength of masonry.

3.3.3 h_p —prism height.

3.3.4 t_p —least actual lateral dimension of prism.

4. Significance and Use

4.1 This test method provides a means of verifying that masonry materials used in construction result in masonry that meets the specified compressive strength.

4.2 This test method provides a means of evaluating compressive strength characteristics of in-place masonry construction through testing of prisms obtained from that construction when sampled in accordance with Practice C1532. Decisions made in preparing such field-removed prisms for testing,

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