Designation: C 1314 – 03b

Standard Test Method for Compressive Strength of Masonry Prisms[1]

This standard is issued under the fixed designation C 1314; 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 test method covers procedures for masonry prism construction and testing, and procedures for determining the compressive strength of masonry, f_{mt}, 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 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

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]

C 67 Test Methods for Sampling and Testing Brick and Structural Clay Tile

C 136 Test Method for Sieve Analysis of Fine and Coarse Aggregates

C 140 Test Methods for Sampling and Testing Concrete Masonry Units and Related Units

C 143 Test Method for Slump of Hydraulic Cement Concrete

C 144 Specification for Aggregate for Masonry Mortar

C 270 Specification for Mortar for Unit Masonry

C 476 Specification for Grout for Masonry

C 780 Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry

C 1019 Test Method for Sampling and Testing Grout

C 1093 Practice for Accreditation of Testing Agencies for Unit Masonry

C 1552 Practice for Capping Concrete Masonry Units, Related Units, and Masonry Prisms for Compression Testing

E 105 Practice for Probability Sampling of Materials

E 111 Test Method for Young's Modulus, Tangent Modulus, and Chord Modulus

3. Terminology

3.1 *Definitions:*

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

3.2 *Notations:*

3.2.1 f'_m—specified compressive strength of masonry.

3.2.2 f_{mt}—compressive strength of masonry.

3.2.3 h_p—prism height.

3.2.4 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 If this test method is used as a guideline for performing research to determine the effects of various prism construction or test parameters on the compressive strength of masonry, deviations from this test method shall be reported. Such research prisms shall not be used to verify compliance with a specified compressive strength of masonry.

NOTE 1—The testing laboratory performing this test method should be evaluated in accordance with Practice C 1093.

4.2.1 Appendix X2 includes guidance information for the researcher on aspects of materials, construction, and analysis.

5. Masonry Prism Construction

5.1 Construct prisms of units representative of those used in the construction. If units have flutes or ribs that project ½ in. (12.5 mm) or more from the surface of the unit, remove those flutes or ribs by saw cutting flush with the surface of the unit at the base of the flute or rib.

[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.

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

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