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Designation: C 270 – 03

Standard Specification for Mortar for Unit Masonry[1]

This standard is issued under the fixed designation C 270; 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.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope*

1.1 This specification covers mortars for use in the construction of non-reinforced and reinforced unit masonry structures. Four types of mortar are covered in each of two alternative specifications: (*1*) proportion specifications and (*2*) property specifications.

1.2 The proportion or property specifications shall govern as specified.

1.3 When neither proportion or property specifications are specified, the proportion specifications shall govern, unless data are presented to and accepted by the specifier to show that mortar meets the requirements of the property specifications.

1.4 The text of this standard references notes and footnotes which provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the standard.

1.5 The following safety hazards caveat pertains only to the test methods section of this specification: *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:*

C 5 Specification for Quicklime for Structural Purposes[2]
C 91 Specification for Masonry Cement[2]
C 109 Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)[2]
C 110 Test Methods for Physical Testing of Quicklime, Hydrated Lime, and Limestone[2]
C 128 Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregates[3]
C 144 Specification for Aggregate for Masonry Mortar[4]
C 150 Specification for Portland Cement[2]
C 188 Test Method for Density of Hydraulic Cement[2]
C 207 Specification for Hydrated Lime for Masonry Purposes[2]
C 305 Practice for Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency[2]
C 511 Specification for Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the Testing of Hydraulic Cements and Concretes[2]
C 595 Specification for Blended Hydraulic Cements[2]
C 780 Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry[4]
C 979 Specification for Pigments for Integrally Colored Concrete[3]
C 1157 Performance Specification for Hydraulic Cement[2]
C 1324 Test Method for Examination and Analysis of Hardened Masonry Mortar[4]
C 1329 Specification for Mortar Cement[2]
E 514 Test Method for Water Penetration and Leakage Through Masonry[4]
E 518 Test Methods for Flexural Bond Strength of Masonry[4]

2.2 *Masonry Industry Council:*[5]

Hot and Cold Weather Masonry Construction Manual, January 1999

3. Specification Limitations

3.1 Specification C 270 is *not* a specification to determine mortar strengths through field testing.

3.2 Laboratory testing of mortar to ensure compliance with the property specification requirements of this specification shall be performed in accordance with 5.3. The property specification of this standard applies to mortar mixed to a specific flow in the laboratory.

3.3 The compressive strength values resulting from field tested mortars do not represent the compressive strength of mortar as tested in the laboratory nor that of the mortar in the

[1] This specification is under the jurisdiction of ASTM Committee C12 on Mortars and Grouts for Unit Masonry and is the direct responsibility of Subcommittee C12.03 on Specifications for Mortars.

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

[3] *Annual Book of ASTM Standards*, Vol 04.02.

[4] *Annual Book of ASTM Standards*, Vol 04.05.

[5] Available from the Mason Contractors Association of America, 1910 South Highland Avenue, Suite 101, Lombard, IL 60148.

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

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