



Standard Specification for Mortar for Unit Masonry¹

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 terms used in this standard are identified in Standard C 1180.

1.6 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:²

- C 5 Specification for Quicklime for Structural Purposes
- C 91 Specification for Masonry Cement
- C 109 Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)

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.

Current edition approved December 1, 2003. Published January 2004. Originally approved in 1951. Last previous edition approved in 2003 as C 270–03a.

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.

- C 110 Test Methods for Physical Testing of Quicklime, Hydrated Lime, and Limestone
 - C 128 Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregates
 - C 144 Specification for Aggregate for Masonry Mortar
 - C 150 Specification for Portland Cement
 - C 188 Test Method for Density of Hydraulic Cement
 - C 207 Specification for Hydrated Lime for Masonry Purposes
 - C 305 Practice for Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency
 - C 511 Specification for Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the Testing of Hydraulic Cements and Concretes
 - C 595 Specification for Blended Hydraulic Cements
 - C 780 Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry
 - C 952 Test Method for Bond Strength of Mortar to Masonry Units
 - C 1072 Test Method for Measurement of Masonry Flexural Bond Strength
 - C 979 Specification for Pigments for Integrally Colored Concrete
 - C 1157 Performance Specification for Hydraulic Cement
 - C 1180 Terminology of Mortar and Grout for Unit Masonry
 - C 1324 Test Method for Examination and Analysis of Hardened Masonry Mortar
 - C 1329 Specification for Mortar Cement
 - C 1357 Test Methods for Evaluating Masonry Bond Strength
 - E 72 Test Methods of Conducting Strength Tests of Panels for Building Construction
 - E 514 Test Method for Water Penetration and Leakage Through Masonry
 - E 518 Test Methods for Flexural Bond Strength of Masonry
- 2.2 *Masonry Industry Council*:³
Hot and Cold Weather Masonry Construction Manual, January 1999

³ 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.