



Designation: C1713 – 17

Standard Specification for Mortars for the Repair of Historic Masonry¹

This standard is issued under the fixed designation C1713; 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 specification covers mortar for the repair of masonry that was constructed with methods and materials that pre-date the origination of current standards of construction that are compatible with it. The mortar may be used for non-structural purposes such as repointing of the masonry, or for structural purposes such as, but not restricted to, reconstruction or repair of mortar joints that contribute to the structural integrity of the masonry.

1.2 Masonry includes the following units laid in mortar: (1) cast stone, (2) clay masonry units/brick and clay tile, (3) concrete masonry units, (4) natural stone, and (5) terra cotta.

1.3 This specification may be used to pre-qualify mortar for a project.

1.4 Mortars tested using this specification are laboratory-prepared mortars and do not represent in-place, site mortars.

1.5 Use of this specification should be based on a thorough understanding of the function, maintenance, and repair requirements for the preservation and continued performance of the masonry in the context of the building structure and long-term performance. The user of this specification is responsible for examining all criteria and selecting the appropriate mortar formulation and properties required.

1.6 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.

1.7 *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.*

1.8 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the*

Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

2. Referenced Documents

2.1 ASTM Standards:²

C5 Specification for Quicklime for Structural Purposes

C10 Specification for Natural Cement

C61 Specification for Gypsum Keene's Cement

C91 Specification for Masonry Cement

C109/C109M Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)

C110 Test Methods for Physical Testing of Quicklime, Hydrated Lime, and Limestone

C136 Test Method for Sieve Analysis of Fine and Coarse Aggregates

C141 Specification for Hydraulic Hydrated Lime for Structural Purposes

C144 Specification for Aggregate for Masonry Mortar

C150 Specification for Portland Cement

C207 Specification for Hydrated Lime for Masonry Purposes

C216 Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale)

C270 Specification for Mortar for Unit Masonry

C305 Practice for Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency

C511 Specification for Mixing Rooms, Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the Testing of Hydraulic Cements and Concretes

C595 Specification for Blended Hydraulic Cements

C780 Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry

C948 Test Method for Dry and Wet Bulk Density, Water Absorption, and Apparent Porosity of Thin Sections of Glass-Fiber Reinforced Concrete

C979 Specification for Pigments for Integrally Colored Concrete

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 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.