



Designation: C1660 – 09

Standard Specification for Thin-bed Mortar for Autoclaved Aerated Concrete (AAC) Masonry¹

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1. Scope

1.1 This specification applies to thin-bed mortar for autoclaved aerated concrete (AAC) masonry.

1.2 The testing laboratory performing these test methods shall be evaluated in accordance with Practice C1093.

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 may involve hazardous materials, operations, and equipment. *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

- C91 Specification for Masonry Cement
- C144 Specification for Aggregate for Masonry Mortar
- C150 Specification for Portland Cement
- C207 Specification for Hydrated Lime for Masonry Purposes
- C595 Specification for Blended Hydraulic Cements
- C1006 Test Method for Splitting Tensile Strength of Masonry Units
- C1093 Practice for Accreditation of Testing Agencies for Masonry
- C1157 Performance Specification for Hydraulic Cement
- C1180 Terminology of Mortar and Grout for Unit Masonry
- C1232 Terminology of Masonry
- C1329 Specification for Mortar Cement

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.

- C1384 Specification for Admixtures for Masonry Mortars
- C1386 Specification for Precast Autoclaved Aerated Concrete (AAC) Wall Construction Units
- C1452 Specification for Reinforced Autoclaved Aerated Concrete Elements
- C1555 Practice for Autoclaved Aerated Concrete Masonry
- C1600/C1600M Specification for Rapid Hardening Hydraulic Cement

3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification, refer to Terminologies C1180 and C1232, and Specification C1386.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *thin-bed mortar*—preblended mortar for use in construction of AAC unit masonry whose joints are approximately $\frac{1}{16}$ to $\frac{1}{8}$ -in. (2 to 3-mm) thick.

4. Significance and Use

4.1 This specification applies to the thin-bed mortar materials used in the construction of AAC masonry. It references directly the AAC materials standards under the jurisdiction of ASTM Committees C15 and C27, including Specifications C1386, C1452, and C1555.

5. Materials

5.1 Materials used in the preparation of thin-bed mortar for AAC masonry shall conform to the requirements specified.

5.1.1 Masonry cement shall conform to Specification C91.

5.1.2 Fine aggregates shall conform to Specification C144 with the exception of the gradation requirements, which shall not apply. The maximum aggregate size shall be that passing a #6 standard sieve.

5.1.3 Portland cement shall conform to Specification C150.

5.1.4 Hydrated lime shall conform to Specification C207. Type N lime is permitted if shown by test or performance record not to be detrimental to soundness of mortar.

5.1.5 Blended hydraulic cement shall conform to Specification C595.

5.1.6 Hydraulic cement shall conform to Specification C1157.