Designation: C 1552 – 02

Standard Practice for Capping Concrete Masonry Units, Related Units and Masonry Prisms for Compression Testing[1]

This standard is issued under the fixed designation C 1552; 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 practice covers apparatus, materials, and procedures for capping concrete masonry units, related units, including coupons or other specimens obtained from such units, and masonry prisms for compression testing.

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

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:*

C 140 Methods for Sampling and Testing Concrete Masonry Units and Related Units[2]

C 472 Methods for Physical Testing of Gypsum, Gypsum Plasters and Gypsum Concrete[2]

C 617 Practice for Capping Cylindrical Concrete Specimens[2]

C 1093 Practice for Accreditation of Testing Agencies for Unit Masonry[2]

C 1209 Terminology of Concrete Masonry Units and Related Units[2]

C 1232 Terminology of Masonry[2]

C 1314 Method for Compressive Strength of Masonry Prisms[2]

3. Terminology

3.1 Terminology defined in Terminology C 1209 and C 1232 shall apply for this practice.

4. Significance and Use

4.1 This practice describes procedures for providing plane surfaces on the two bearing surfaces of units and prisms. The purpose of this standard is to provide consistent and standardized procedures for capping units and prisms for compression testing. The procedures are based on those contained (or previously contained) in Methods C 140, C 617, and C 1314.

NOTE 2—Specimens capped using this practice will vary significantly in size and weight. Appropriate care and handling may differ based on specimen size and weight. Provide care and handling as needed to provide for proper capping based on the physical characteristics of the specimen being capped.

5. Apparatus

5.1 *Capping Plate*—If used, the capping plate shall be of steel and have a thickness of not less than 1 in. (25.4 mm). The capping surface shall be plane within 0.003 in. in 16 in. (0.075 mm in 400 mm) and shall be free of gouges, grooves, and indentations greater than 0.010 in. (0.25 mm) deep or greater than 0.05 in.^{2} (32 mm^2) in surface area. At the time of capping, the capping surface shall be level within 1⁄16 in. (1.6 mm) over the length of the plate.

NOTE 3—When using gypsum cement capping materials, the placement of a single glass plate directly on top of the capping plate has been found to reduce the potential of damage to the capping plate. The glass plate is typically more resistant to scratches and can be replaced at less cost than that required to resurface the capping plate. The requirements for the casting plate in 5.2 have demonstrated to be sufficient for this purpose.

5.2 *Casting Plate*—If used, the casting plate shall be of transparent glass with a thickness of not less than ½ in. (13 mm). The casting plate shall be plane within 0.003 in. in 16 in. (0.075 mm in 400 mm).

6. Materials

6.1 *Capping Materials*:

6.1.1 *High-Strength Gypsum Cement Capping Materials*:

6.1.1.1 In addition to the compressive strength testing required in 6.2, qualification tests shall be made to determine the effects of water-cement ratio and age on compressive strength.

[1] This practice is under the jurisdiction of ASTM Committee C15 on Manufactured Masonry Units and is the direct responsibility of Subcommittee C15.04 on Research.

Current edition approved December 10, 2002. Published March 2003.

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