



Designation: C 55 – 06

Standard Specification for Concrete Building Brick¹

This standard is issued under the fixed designation C 55; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

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

1. Scope*

1.1 This specification covers solid, dry-cast, concrete building brick intended for interior and exterior use in constructing structural masonry, and are made from portland cement, water, and suitable mineral aggregates with or without the inclusion of other materials.

NOTE 1—Specification C 1634 addresses concrete facing brick used in facing applications and other exposures (previously referred to in earlier editions of this standard as Grade N—for use as architectural veneer and facing units in exterior walls and for use where high-strength and resistance to moisture penetration and severe frost action are desired). This specification differs from C 1634 in that it addresses properties for concrete building brick used in non-facing, utilitarian applications (previously referred to in earlier editions of this specification as Grade S—for general use where moderate strength and resistance to frost action and moisture penetration are required).

1.2 The text of this specification 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.

1.3 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

NOTE 2—Concrete building brick covered by this specification are made from lightweight or normal weight aggregates, or both.

NOTE 3—When particular features are desired, such as density classification, high compressive strength, surface textures for appearance or bond, finish, color, fire resistance, insulation, acoustical properties, or other special features, such properties should be specified separately by the purchaser. Suppliers should be consulted as to the availability of concrete building brick having the desired features.

2. Referenced Documents

2.1 ASTM Standards:²

C 33 Specification for Concrete Aggregates

¹ This specification is under the jurisdiction of ASTM Committee C15 on Manufactured Masonry Units and is the direct responsibility of Subcommittee C15.03 on Concrete Masonry Units and Related Units.

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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.

- C 140 Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
- C 150 Specification for Portland Cement
- C 331 Specification for Lightweight Aggregates for Concrete Masonry Units
- C 426 Test Method for Linear Drying Shrinkage of Concrete Masonry Units
- C 595 Specification for Blended Hydraulic Cements
- C 618 Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
- C 989 Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars
- C 1157 Performance Specification for Hydraulic Cement
- C 1209 Terminology of Concrete Masonry Units and Related Units
- C 1232 Terminology of Masonry
- C 1634 Specification for Concrete Facing Brick

3. Terminology

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

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *concrete building brick, n*—a concrete masonry unit, with a maximum width of four (4) inches and of a weight that will typically permit it to be lifted and placed with one hand, that is manufactured for general use in non-facing, utilitarian applications.

3.2.2 *concrete facing brick, n*—a concrete masonry unit, with a maximum width of four (4) inches and of a weight that will typically permit it to be lifted and placed with one hand, that is manufactured to be typically used in an application where one or more faces of the unit is intended to be exposed.

4. Materials and Manufacture

4.1 *Cementitious Materials*—Materials shall conform to the following applicable specifications:

4.1.1 *Portland Cement*—Specification C 150.

4.1.2 *Modified Portland Cement*—Portland cement conforming to Specification C 150, modified as follows:

4.1.2.1 *Limestone*—Calcium carbonate, with a minimum 85 % CaCO₃ content, is permitted to be added to the cement, provided these requirements of Specification C 150 as modified are met:

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