



Designation: C34 – 23

Standard Specification for Structural Clay Loadbearing Wall Tile¹

This standard is issued under the fixed designation C34; 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 U.S. Department of Defense.

1. Scope*

1.1 This specification covers structural clay loadbearing wall tile.

1.2 The property requirements of this specification apply at the time of purchase. The use of results from testing of tile extracted from masonry structures for determining conformance or non-conformance to the property requirements (Section 5) of this standard is beyond the scope of this specification.

1.3 Tile covered by this specification are manufactured from clay, shale, or similar naturally occurring earthy substances and subjected to a heat treatment at elevated temperatures (firing). The heat treatment must develop sufficient fired bond between the particulate constituents to provide the strength and durability requirements of this specification. (See *firing* and *fired bond* in Terminology C1232.)

1.4 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.

1.5 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.

1.6 *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.*

¹ This specification is under the jurisdiction of ASTM Committee C15 on Manufactured Masonry Units and is the direct responsibility of Subcommittee C15.02 on Brick and Structural Clay Tile.

Current edition approved June 1, 2023. Published June 2023. Originally approved in 1921. Last previous edition approved in 2017 as C34 – 17. DOI: 10.1520/C0034-23.

2. Referenced Documents

2.1 *ASTM Standards*:²

C67/C67M Test Methods for Sampling and Testing Brick and Structural Clay Tile
C216 Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale)
C1232 Terminology for Masonry

3. Terminology

3.1 *Definitions*—For definitions relating to structural clay loadbearing wall tile, refer to Terminology C1232.

4. Classification

4.1 Two grades of tile are covered, as follows:

4.1.1 *Grade LBX*—Suitable for general use in masonry construction and adapted for use in masonry exposed to weathering, provided they meet the durability requirements for Grade SW of Specification C216.

4.1.2 *Grade LB*—Suitable for general use in masonry where not exposed to frost action, or for use in exposed masonry where protected with a facing of 3 in. (76.2 mm) or more of stone, brick, terra cotta, or other masonry.

NOTE 1—Color of tile varies with the type of clay used and degree of firing; hence, it cannot be taken as indicative of classification until after it has been related to absorption and strength by actual tests.

5. Physical Properties

5.1 Tile, when test in accordance with Test Methods C67/C67M, shall conform to the physical properties for the grade specified as prescribed in Table 1.

5.2 Tile of Grade LBX shall be accepted under all conditions instead of Grade LB.

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.

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