



Standard Specification for Sewer and Manhole Brick (Made From Clay or Shale)¹

This standard is issued under the fixed designation C32; 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.

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

1. Scope*

1.1 This specification covers brick intended for use in (1) drainage structures for the conveyance of sewage, industrial wastes, and storm water, and (2) related structures such as manholes and catch basins.

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

1.3 Brick are ceramic products manufactured primarily from clay, shale, or similar naturally occurring earthy substances and subjected to a heat treatment at elevated temperatures (firing). Additives or recycled materials are permitted to be included at the option of the manufacturer. The heat treatment must develop sufficient fired bond between the particulate constituents to provide the strength and durability requirements of this specification. (See Terminology [C1232](#).)

1.4 Brick are shaped during manufacture by molding, pressing, or extrusion, and the shaping method is a way to describe the brick.

1.4.1 This specification and its individual requirements shall not be used to qualify or corroborate the performance of a masonry unit made from other materials, or made with other forming methods, or other means of binding the materials.

1.5 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 specification.

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 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

[C67/C67M Test Methods for Sampling and Testing Brick and Structural Clay Tile](#)

[C1232 Terminology for Masonry](#)

3. Terminology

3.1 *Definitions*—For definitions relating to masonry, sewer brick, and manhole brick, refer to Terminology [C1232](#).

4. Classification

4.1 *Grades*—Two grades of sewer brick are covered:

4.1.1 *Grade SS*—Brick intended for use in structures requiring low absorption and resistance to the action of sewage carrying large quantities of abrasive material at velocities exceeding 8 ft/s (2.4 m/s).

4.1.2 *Grade SM*—Brick intended for use in structures requiring resistance to the action of sewage carrying abrasive materials at velocities of no more than 8 ft/s (2.4 m/s).

4.2 *Grades*—Two grades of manhole brick are covered:

4.2.1 *Grade MS*—Brick intended for use in manholes and catch basins not requiring high degrees of abrasive resistance but where a high and uniform degree of resistance to frost action and disintegration is needed when the brick may be frozen when permeated with water.

4.2.2 *Grade MM*—Brick intended for use in manholes not requiring high degrees of abrasive resistance but where a moderate and nonuniform degree of resistance to frost action and disintegration is needed when the brick may be permeated with water.

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.

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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.

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