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Standard Specification for Pedestrian and Light Traffic Paving Brick[1]

This standard is issued under the fixed designation C 902; 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 specification covers brick intended for use as paving material to support pedestrian and light vehicular traffic. The units are designed for use in such places as patios, walkways, floors, plazas, and driveways. The units are not intended to support heavy vehicular traffic covered by Specification C 1272 or for industrial applications covered by Specification C 410.

1.2 The property requirements of this standard apply at the time of purchase. The use of results from testing of brick extracted from masonry structures for determining conformance or nonconformance to the property requirements (Section 4) of this specification is beyond the scope of this standard.

1.3 Brick 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 requirement of this specification (see firing, fired bond and incipient fusion in Terminology C 43).

1.4 The brick are available in a variety of sizes, colors, and shapes. They are available in three classes according to exposure environment and three types according to type of traffic exposure.

1.5 The values stated in inch-pound units are to be regarded as the standard.

2. Referenced Documents

2.1 *ASTM Standards:*

C 43 Terminology of Structural Clay Products[2]

C 67 Test Methods of Sampling and Testing Brick and Structural Clay Tile[2]

C 88 Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate[3]

C 410 Specification for Industrial Floor Brick[2]

C 418 Test Method for Abrasion Resistance of Concrete by Sandblasting[3]

C 1272 Specification for Vehicular Paving Brick[2]

3. Classification

3.1 Light traffic paving brick are classified according to the severity of their use-environment. Two types of environment are considered: (*1*) weather and (*2*) traffic:

3.1.1 *Weather*:

3.1.1.1 *Class SX*—Brick intended for use where the brick may be frozen while saturated with water.

3.1.1.2 *Class MX*—Brick intended for exterior use where resistance to freezing is not a factor.

3.1.1.3 *Class NX*—Brick not intended for exterior use but which may be acceptable for interior use where protected from freezing when wet.

NOTE 1—A surface coating may be applied to any class of brick of this standard when protected from freezing while wet. The function of the coating is to prevent penetration of dirt or liquids into the pores of the brick. Coatings should be applied only after complete drying of the paving.

3.1.2 *Traffic*:

3.1.2.1 *Type I*—Brick subjected to extensive abrasion.

NOTE 2—Type I pavers would be used in such places as sidewalks and driveways in publicly occupied spaces.

3.1.2.2 *Type II*—Brick subjected to intermediate abrasion.

NOTE 3—Type II pavers would be used in such places as heavily traveled residential walkways and residential driveways.

3.1.2.3 *Type III*—Brick subjected to low abrasion.

NOTE 4—Type III pavers would be used in such places as floors or patios in single-family homes.

4. Physical Properties

4.1 *Freeze Thaw Resistance*—Use one of the following methods:

4.1.1 *Physical Property Requirements*—The brick shall conform to the physical requirements for the class specified as prescribed in Table 1.

4.1.1.1 *Absorption Alternative*—If the average water absorption is less than 6.0 % after 24-h submersion in room-temperature water, the requirement for saturation coefficient shall be waived.

4.1.2 *Freezing and Thawing Test Alternative*—The requirements for water absorption (24–h cold) and saturation coefficient specified in 4.1.1 shall be waived provided a sample of five brick, meeting all other requirements, passes the freezing and thawing test as described in the Rating section of the

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

[3] *Annual Book of ASTM Standards*, Vol 04.02.

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

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