



Standard Specification for Concrete Roof Tile¹

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1. Scope

1.1 This specification covers concrete tiles intended for the use as roof covering where durability and appearance are required to provide a weather-resistant surface of specified design.

1.2 Tiles are manufactured from portland cement, water, and mineral aggregates with or without the inclusion of other materials.

1.3 Tiles are shaped during manufacturing by molding, pressing, or extrusion. The shaping method can be used to describe the tile.

1.4 Other constituents, such as chemical and mineral admixtures established as suitable for use in concrete, shall conform to ASTM standard specifications where applicable, or shall be shown by tests or experience not to be detrimental to the durability of concrete.

1.5 Tiles are generally planar or undulating rectangular shapes available in a variety of cross-sectional areas profiles, shapes, sizes, surface textures, and colors.

NOTE 1—Concrete roof tiles covered by this specification are made from lightweight or normal weight aggregates, or both.

NOTE 2—When particular features are desired, such as color, surface texture for appearance, or other special features, such properties should be specified by the purchaser. However, the local sellers should be consulted as to the availability of concrete roof tile having a desired feature.

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

2. Referenced Documents

2.1 ASTM Standards:

C 33 Specification for Concrete Aggregates²

C 67 Test Methods for Sampling and Testing Brick and Structural Clay Tile³

C 90 Specification for Loadbearing Concrete Masonry Units³

C 140 Test Methods for Sampling and Testing Concrete Masonry Units and Related Units³

C 150 Specification for Portland Cement⁴

C 260 Specification for Air-Entraining Admixtures for Concrete²

C 331 Specification for Lightweight Aggregates for Concrete Masonry Units²

C 494/C 494M Specification for Chemical Admixtures for Concrete²

C 595 Specification for Blended Hydraulic Cements⁴

C 618 Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete²

C 979 Specification for Pigments for Integrally Colored Concrete²

C 989 Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars²

C 1157 Performance Specification for Hydraulic Cement⁴

3. Terminology

3.1 *Definitions*—The following terms are used in connection with concrete roof tiles:

3.2 *batten lugs*—protrusions on the underside of the tile designed to engage over the upper edge of tiling battens.

3.3 *head lap*—distance of overlap measured from the uppermost course to the point that it laps over the undermost course.

3.4 *high profile tile*—tile with a rise to width ratio greater than 1:5.

3.5 *interlocking tile*—tiles with a system of ribs or grooves enabling the lateral joining of adjacent tiles in the same horizontal row, with the overlapping lock covering the underlapping lock.

3.6 *length*—maximum overall dimension of the tile measured parallel to the water course.

3.7 *low profile tile*—tile with a rise equal to or less than ½ in.

3.8 *medium profile tile*—tile with a rise greater than ½ in. and a rise-to-width ratio of less than or equal to 1:5.

3.9 *nail hole*—small opening passing partially or totally through the tile to allow the penetration of a nail or screw for the purpose of fastening the tile to a support.

3.10 *non-interlocking tile*—tiles that butt at the sides without lapping adjacent tiles.

¹ This specification is under the jurisdiction of ASTM Committee C15 on Manufactured Masonry Units and is the direct responsibility of Subcommittee C15.06 on Roofing Tile.

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² *Annual Book of ASTM Standards*, Vol 04.02.

³ *Annual Book of ASTM Standards*, Vol 04.05.

⁴ *Annual Book of ASTM Standards*, Vol 04.01.