



Designation: C627 – 10^{ε1}

Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester¹

This standard is issued under the fixed designation C627; 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.

^{ε1} NOTE—Revised 5.4 editorially in July 2017.

1. Scope

1.1 This test method covers the evaluation of ceramic floor tile installation systems, using the Robinson²-type floor tester.

1.2 This test method is intended solely for evaluating complete ceramic floor tile installation systems for failure under loads and not for evaluating particular characteristics of ceramic tile, such as abrasion resistance. This test method does not claim to provide meaningful results for other than evaluating complete ceramic floor tile installation systems.

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

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

1.5 *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:*³

C144 Specification for Aggregate for Masonry Mortar

C150 Specification for Portland Cement

¹ This test method is under the jurisdiction of ASTM Committee C21 on Ceramic Whitewares and Related Products and is the direct responsibility of Subcommittee C21.06 on Ceramic Tile.

Current edition approved Sept. 1, 2010. Published September 2010. Originally approved in 1970. Last previous edition approved in 2007 as C627 – 93 (2007). DOI: 10.1520/C0627-10E01.

² Developed at the Research Center of the Tile Council of America, Inc. Detailed working drawings of the apparatus are available at a nominal cost from ASTM Headquarters. Order Adjunct No. ADJC062701.

³ 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.

2.2 *ASTM Adjuncts:*

Robinson-type Floor Tester²

Deflection Gage⁴

3. Summary of Test Method

3.1 This test method consists of preparing installation slabs that duplicate the type of installation under consideration, subjecting them to one or more tests on the Robinson floor tester, and evaluating the results in a prescribed manner. Description of the installation method must specifically include all variables, for example, the type of materials and mixture proportions of substratum, setting material, and tile grout; type of tile, installation technique, and cure.

4. Significance and Use

4.1 This test method provides a standardized procedure for evaluating performance of ceramic floor tile installations under conditions similar to actual specific usages. It can be used to make comparisons between customary basic installation methods, to establish the influence of minor changes in a particular installation method, and to judge the merit of proposed novel methods.

5. Apparatus

5.1 *Foundation for Tester*—The foundation for the tester shall consist of a nominally 4-ft (1220-mm) square and 1-ft (300-mm) thick cement slab with two 15- by 15-in. (380- by 380-mm) bearing plates with four 12½-in. (318-mm) high tie rods cast into the center of the foundation and with an 8-in. (203-mm) square and 1-ft (300-mm) deep opening in the exact center. The top surface of this slab shall be smooth, level, and flat with the maximum deviation from a true plane not to exceed 1/32 in. (0.8 mm). An extension at the bottom of one side of the foundation shall be approximately 4 in. (102 mm) thick and 14 in (356 mm) wide to hold the motor, speed reducer, and drive. A 4-in. high and 8-in. wide tunnel, running from the top of the cement extension and level with it to the center of the

⁴ Detailed working drawings for construction of the deflection gage are available at nominal cost from ASTM Headquarters. Order Adjunct No. ADJC062702.