Designation: F511 – 04

Standard Test Method for Quality of Cut (Joint Tightness) of Resilient Floor Tile[1]

This standard is issued under the fixed designation F511; 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 test method covers a means of measuring and evaluating the quality of cut (joint tightness) of square or rectangular resilient floor tile. Characteristics that detract from a monolithic (seamless) appearance, such as burred, chipped, nicked, or beveled edges, or bow cut or rounded corners, are measured or observed, or both.

1.2 *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.*

2. Referenced Documents

2.1 *ANSI Standard:*[2]

ANSI/ASQC Z1.4-93 Sampling Procedures and Tables for Inspection by Attributes

3. Significance and Use

3.1 Installations of resilient floor tile require tight joints if satisfactory appearance is to result. The quality of cut of resilient tile is determined by this test method.

4. Apparatus

4.1 *Shadow Box*, consisting of a backlighted poly(methyl methacrylate) (PMMA) plate measuring 28 by 28 by ⅜ in. (710 by 710 by 9.5 mm). One metal strip, 28 in. long by ¾ in. (19 mm) wide by ⅛ in. (3.2 mm) thick, and one metal strip, 27¼ in. (692 mm) long by ¾ in. wide by ⅛ in. thick, are permanently attached to the PMMA plate to form an included 90° ± 10-sec angle at the lower left-hand corner of the PMMA plate. This is suitable for tiles up to 12 by 12 in. (305 by 305 mm). For larger tiles, longer metal strips will have to be used, such that the length of each strip is greater than twice the longest dimension of the tiles to be measured.

4.2 *Optical Comparator*[3]—Power illuminated magnifier, equipped to measure to the nearest 0.001 in. (0.02 mm).

4.3 *Feeler Gages*—As an alternative to the optical comparator described in 4.2, a set of feeler gages with a range from 0.0015 to 0.035 in. (0.038 to 0.89 mm) for measuring to the nearest 0.001 in. (0.02 mm) may be used.

4.4 *Wire Gages*, sized in increments of 0.005 in. (0.13 mm) from 0.005 to 0.050 in. (0.13 to 1.3 mm).

5. Sampling

5.1 Sample in accordance with ANSI/ASQC Z1.4-93..

6. Test Specimen and Sample

6.1 The specimen (test unit) shall consist of four nominally square or rectangular tiles taken from a sample secured in accordance with ANSI/ASQC Z1.4-93.

6.2 The required number of specimens for each test shall be indicated in the individual material specification. If no number is given, four units (the specimen) shall be taken from the sampled material and one determination made on each.

7. Conditioning

7.1 Condition the test tiles in an atmosphere maintained at 73.4 ± 3.6°F (23 ± 1°C) and 50 ± 5 % relative humidity for not less than 2 h prior to testing.

7.2 Conduct tests in an atmosphere maintained at 73.4± 3.6°F (23± 1°C) and 50 ± 5 % relative humidity.

8. Procedure

8.1 After conditioning, place a tile from the four-tile test unit into the 90° angle formed by the two metal strips (4.1). Place the other three tiles of the test unit so as to form a four-tile square with tiles in firm contact. Do not force the tiles against each other. Normally, place each adjacent tile so that alternative tiles are at 90° to each other as regards manufacturing direction (a checkerboard design). If the tile being tested has arrows on the back and instructions call for all tile to be

[1] This test method is under the jurisdiction of ASTM Committee F06 on Resilient Floor Coverings, and is the direct responsibility of Subcommittee F06.20 on Test Methods—Products Construction/Materials.

Current edition approved Nov. 1, 2004. Published December 2004. Originally approved in 1977. Last previous edition approved in 1998 as F511 – 98. DOI: 10.1520/F0511-04.

[2] Available from the American National Standards Institute, 25 W. 43rd St., 4th Floor, New York, NY 10036.

[3] The sole source of supply of the apparatus known to the committee at this time is Titan Tool Supply Co., Inc., 68 Comet Ave., Buffalo, N.Y. 14216. If you are aware of alternative suppliers, please provide this information to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend.