



Designation: F386 – 11

Standard Test Method for Thickness of Resilient Flooring Materials Having Flat Surfaces¹

This standard is issued under the fixed designation F386; 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 Department of Defense.

1. Scope

1.1 This test method covers the determination of thickness of resilient nontextile floor coverings including tile and sheet having flat surfaces. This test method should not be used on materials having a foamed layer.

1.2 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.

1.3 *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 *ASTM Standards:*²

E691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method

E177 Practice for Use of the Terms Precision and Bias in ASTM Test Methods

3. Significance and Use

3.1 Measurement of the thickness of the product may be required for quality control purposes or to ensure compliance with applicable specifications.

4. Apparatus

4.1 The apparatus shall consist of a comparator stand having a flat anvil base at least 6 in. (15 cm) square, equipped with a thickness gage graduated to 0.001 in. (0.02 mm). The gage

shall be equipped with a flat presser foot 0.250 ± 0.01 in. (6.35 ± 0.5 mm) in diameter. The foot shall exert a force of 16 ± 0.1 ozf (4.45 ± 0.03 N) maximum.

4.1.1 The contact surfaces of the anvil and the thickness gage presser foot shall be parallel within 0.0001 in. (0.003 mm).

4.1.2 Before placing the micrometer into operation, the surfaces shall be cleaned so the gage zeros properly.

5. Test Specimens

5.1 The test specimen shall be a minimum of one tile or a 12 by 12-in. (305 by 300-mm) piece of sheet flooring.

6. Calibration

6.1 Calibrate the gage by means of gage blocks or shim stock of known thickness appropriate to the thickness of the material being measured.

7. Conditioning

7.1 Condition the test specimen at least 24 h at $73 \pm 3^\circ\text{F}$ ($23 \pm 2^\circ\text{C}$) and $50 \pm 5\%$ relative humidity and test in the same environment.

8. Procedure

8.1 Place the specimen with the wearing surface upward on the comparator stand anvil, taking care that the specimen is flat against the anvil.

8.2 Lower the presser foot gently until it contacts the surface of the specimen.

8.3 Upon contact with the surface, take a reading to the nearest 0.001 in. (0.02 mm) from the gage. Take all measurements at least 0.75 in. (19 mm) from any edge of the specimen.

8.4 Take a total of five measurements on each specimen, at randomly selected locations unless otherwise specified.

9. Calculation

9.1 Calculate the average thickness of each specimen.

10. Report

10.1 Report the average thickness of each specimen to the nearest 0.001 in. (0.02 mm).

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.

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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.