

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 1765

MACHINE-MADE TEXTILE FLOOR COVERINGS

DETERMINATION OF THICKNESS

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 1765, *Machine-made textile floor coverings – Determination of thickness*, was drawn up by Technical Committee ISO/TC 38, *Textiles*, the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question led to the adoption of Draft ISO Recommendation No. 1765, which was circulated to all the ISO Member Bodies for enquiry in February 1969. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	Iran	South Africa, Rep. of
Austria	Israel	Spain
Belgium	Italy	Sweden
Brazil	Japan	Switzerland
Canada	Netherlands	Turkey
Denmark	New Zealand	U.A.R.
France	Norway	United Kingdom
Germany	Peru	U.S.A.
Greece	Poland	U.S.S.R.
Hungary	Portugal	
India	Romania	

No Member Body opposed the approval of the Draft.

This Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided to accept it as an ISO RECOMMENDATION.

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MACHINE-MADE TEXTILE FLOOR COVERINGS

DETERMINATION OF THICKNESS

1. SCOPE

This ISO Recommendation describes a basic method for the determination of the thickness of machine-made textile floor coverings. Where areas of different thickness or construction exist, these should be tested separately if possible.

This method forms an integral part of other methods of test for textile floor coverings and the result of this test by itself cannot be used as an indication of the quality of the product.

2. DEFINITION

For the purposes of this ISO Recommendation the following definition applies :

Thickness (of machine-made textile floor coverings). The distance between a reference plate on which the specimen rests and a parallel presser-foot applying a given pressure to the specimen. Ordinarily the thickness of a machine-made textile floor covering without compression is measured at the standard pressure of 1.96×10^{-3} N/mm²* applied to a circle of area between 300 and 1000 mm² within a larger area.

3. PRINCIPLE

The thickness of a specimen of machine-made textile floor covering is measured as the distance between the reference plate on which the specimen rests and a parallel circular presser-foot exerting a specified pressure on an area of defined size within a larger area of the machine-made textile floor covering. Textile floor coverings without pile, made of consolidated materials****, are tested using a guard ring.

4. APPARATUS

- 4.1 *Instrument for measuring the thickness*, having a circular plane presser-foot of area between 300 and 1000 mm². It should be capable of exerting a pressure normal to the plane of the specimen of $(1.96 \pm 0.03) \times 10^{-3}$ N/mm²** and should have a means of measuring thickness with an accuracy of 0.01 mm over a range of 25 mm. The movement of the presser-foot should be normal to the plane of the textile floor covering. The reference plate on which the specimen rests should be plane, at least 125 mm × 125 mm in size, and parallel to the presser-foot to within one part in 500.
- 4.2 *Circular guard ring*, mass 1000 g, external diameter not greater than 125 mm and internal diameter of $d + 40$ mm, d being the diameter of the presser-foot, such that a pressure of 0.98×10^{-3} N/mm²*** is exerted. A throat of 40 mm width may be cut from the guard ring.

NOTE. — This is required only for testing products without pile, made from consolidated materials.

* Equivalent to 0.2 gf/mm².

** Equivalent to 0.2 ± 0.003 gf/mm².

*** Equivalent to 0.1 gf/mm².

**** Term defined in ISO Recommendation R 2424, *Textile floor coverings — Classification and terminology* (at present at the stage of Draft ISO Recommendation).

5. ATMOSPHERE FOR CONDITIONING AND TESTING

The specimens should be conditioned and the test conducted in one of the standard atmospheres for testing specified in ISO Recommendation R 139, *Standard atmospheres for conditioning and testing textiles*.

6. TEST SPECIMENS

6.1 Sampling

Select the specimens according to the procedure given in ISO Recommendation R 1957, *Machine-made textile floor coverings – Sampling and cutting specimens for physical tests*.

6.2 Number of specimens, dimensions and location of test

6.2.1 *Textile floor coverings without pile, made of consolidated materials.* Prepare sufficient specimens to allow at least ten tests to be made. Test specimens should be at least 125 mm × 125 mm square, but they may be of any larger dimensions as required by other tests, or several measurements may be made on one larger sample provided that the centres of the areas in contact with the presser-foot are not less than 75 mm apart. Ensure that the area tested has not been previously compressed by a guard ring, and that it is well away from distorted parts of the sample.

6.2.2 *Textile floor coverings other than those covered by clause 6.2.1.* Prepare sufficient specimens to allow at least five tests to be made. Test specimens should be at least 75 mm × 75 mm square, but they may be of any larger dimensions as required by other tests, or several measurements may be made on one larger sample provided that the centres of the areas in contact with the presser-foot are not less than 75 mm apart. Select these specimens well away from distorted parts of the sample.

7. PREPARATION OF TEST SPECIMENS

Lay out the specimens flat, singly, and with the use-surface uppermost, in the chosen standard atmosphere for conditioning and testing textiles for a period of at least 24 hours.

8. PROCEDURE

- 8.1 Check that the presser-foot shaft moves freely. With the presser-foot and base plate in contact, set the gauge to read zero, or alternatively obtain the zero reading for the base plate.
- 8.2 Place the specimen, use-surface uppermost, on the base plate so that no part of the presser-foot will be within 20 mm of the edge of the specimen and so that the specimen cannot move. When testing textile floor coverings without pile, made of consolidated materials, use a guard ring as specified in clause 4.2. (When a textile floor covering of more than one thickness level or pile construction is being tested, no part of the presser-foot should be within 20 mm of a change of construction.)
- 8.3 Lower the presser-foot gently onto the specimen and note the gauge reading after 30 seconds.
- 8.4 Test in this way at least ten specimens of textile floor coverings without pile, made of consolidated materials, and at least five specimens of other types of textile floor coverings.