BS 4051 : 1987
ISO 1765-1986
UDC 645.13–037:677.017.224

British Standard Method for

Determination of thickness of textile floor coverings

[ISO title : Machine-made textile floor coverings — Determination of thickness]

Méthode de détermination de l'épaisseur des revêtements de sol textiles

Verfahren zur Bestimmung der Dicke textiler Bodenbeläge

National foreword

This British Standard has been prepared under the direction of the Textiles and Clothing Standards Committee. It is identical with ISO 1765-1986 'Machine-made textile floor coverings — Determination of thickness', published by the International Organization for Standardization (ISO). It is the third revision of BS 4051 first published in 1966 and it supersedes BS 4051 : 1981, which is withdrawn.

In this revision the description of the term 'pile' is more specific and the atmospheres for conditioning of specimens are redefined.

Terminology and conventions. The text of the international standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

The comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Wherever the words 'International Standard' appear, referring to this standard, they should be read as 'British Standard'.

Cross-references

International standard	Corresponding British Standard
ISO 139-1973	BS 1051 : 1981 Glossary of terms relating to the conditioning, testing and mass determination of textiles (Technically equivalent)
ISO 1957-1986	BS 4664 : 1985 Methods for sampling and cutting specimens of textile floor coverings for physical tests (Technically equivalent)

NOTE. *Textual error.* In clause **11**, line 1, 'incude' should be read as 'include'.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

BSi British Standards

1 Scope and field of application

This International Standard specifies 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.

The method is applicable to all machine-made textile floor coverings.

2 References

ISO 139, *Textiles — Standard atmospheres for conditioning and testing.*

ISO 1957, *Machine-made textile floor coverings — Sampling and cutting specimens for physical tests.*

3 Definition

For the purposes of this International Standard, 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 2,0 kPa* applied to a circle of area between 300 and 1 000 mm^2 within a larger area.

4 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 yarn or flocked pile are tested using a guard ring.

5 Apparatus

5.1 Instrument for measuring the thickness, having a circular plane presser foot of area between 300 and 1 000 mm^2. It shall be capable of exerting a pressure normal to the plane of the specimen of 2,0 ± 0,2 kPa and shall have a means of measuring thickness with an accuracy of 0,1 mm over a range of 25 mm. The movement of the presser foot shall be normal to the plane of the textile floor covering. The reference plate on which the specimen rests shall be plane, at least 125 mm × 125 mm in size, and parallel to the presser foot to within 1 part in 500.

5.2 Circular guard ring, mass 1 000 g, external diameter not greater than 125 mm and internal diameter of d + 40 mm, d being the diameter of the circular presser foot, such that a pressure of at least 1 kPa is exerted. A throat of 40 mm width may be cut from the guard ring.

5.3 Straightedge, for example a ruler, for brushing the surface of the specimen.

6 Atmosphere for conditioning and testing

The specimens shall be conditioned and the test conducted in one of the standard atmospheres for conditioning and testing of textiles specified in ISO 139.

7 Test specimens

7.1 Sampling

Select the specimens according to the directions in ISO 1957.

7.2 Number of specimens, dimensions and location of test

7.2.1 Textile floor coverings with yarn pile or flocked pile

Prepare sufficient specimens to allow at least five tests to be made. Test specimens shall be at least 75 mm × 75 mm, but they may be of any larger dimensions as required by other

* 1 kPa = 10^3 N/m^2