BS 5920 : 1980

UDC 677.07 : 645.12 : 677.017.22 : 620.115.8

British Standard Method for

Determination of dimensions of textile floor covering test specimens

Méthode pour la détermination des dimensions des échantillons de revêtements de sol textiles

Methode zur Bestimmung der Abmessungen von Textil-Fussbodenbelägeproben

Foreword

This British Standard has been prepared under the direction of the Fibres, Yarns and Fabrics Standards Committee. The test method has been developed to fulfil the need for an accurate means of determining the dimensions of textile floor coverings using apparatus that is appropriate for use with test specimens or tiles. The dimensions of the principal items of apparatus are not, therefore, provided in view of the diversity of specimen sizes.

1. Scope

This British Standard specifies a method for the determination of dimensions of textile floor covering test specimens for use in the dimensional stability test methods described in BS 4682. It is applicable to textile floor coverings of all types, with maximum thickness 15 mm.

NOTE. Thickness dimensions may be determined by the method described in BS 4051.

2. References

The titles of the standards publications referred to in this standard are listed on page 3.

3. Principle

Dimensions along and across test specimens are measured using micrometer gauges.

4. Apparatus

NOTE. This apparatus is suitable also for use in the methods for determination of dimensions of tiles described in BS 5921.

The following apparatus is required.

4.1 *A rigid, durable, smooth and waterproof baseboard,* e.g. of metal or marine plywood coated with a plastics laminate, of a size suitable to accommodate the test specimen. Two stop bars, approximately 25 mm wide and 15 mm high, are fitted at right angles along two adjacent sides with a gap of approximately 1 mm at the corner. On each of the two opposite sides, two cut-outs or slots are made approximately 20 mm wide and at least 20 mm long, to accommodate the presser feet of the dial gauge micrometers. The slots are positioned at $^1/_3$ and $^2/_3$ the nominal specimen size (length of side) from the stop bars, and are required to allow the presser feet to move ± 10 mm from the nominal size of the specimen (see figure 1).

4.2 *Four dial gauge micrometers,* with presser feet 20 mm diameter, traverse ⩾ 20 mm, capable of measuring to 0.1 mm and operating with a force of between 0.5 N and 1 N approximately. The gauges are mounted centrally within the cut-outs or slots with their axes in a horizontal plane and so that their centres are 5 mm above the level of the base. A means of holding the dial gauge presser foot shafts in their maximum position is required.

A suitable apparatus is shown in figures 1 and 2.

NOTE 1. It may be possible to accommodate more than one nominal specimen size on one apparatus by repositioning the dial gauges and/or by additional stop bars.

NOTE 2. Other means of recording the dimensions may be used provided they meet the accuracy requirements of 4.2.

4.3 *Metal squares or T-squares* of known dimensions equivalent to the nominal specimen dimensions and accurate to 0.25 mm (for calibration of the gauge position).

4.4 *Square flat plates,* 10 mm smaller than the nominal specimen size, of mass approximately 5 kg/m^2 (for covering specimens during the test).

5. Atmosphere for conditioning and testing

The conditioning and testing atmosphere shall be the standard atmosphere for testing textiles defined in BS 1051, i.e. an atmosphere of relative humidity 65 ± 2 % and a temperature of 20 ± 2 °C.

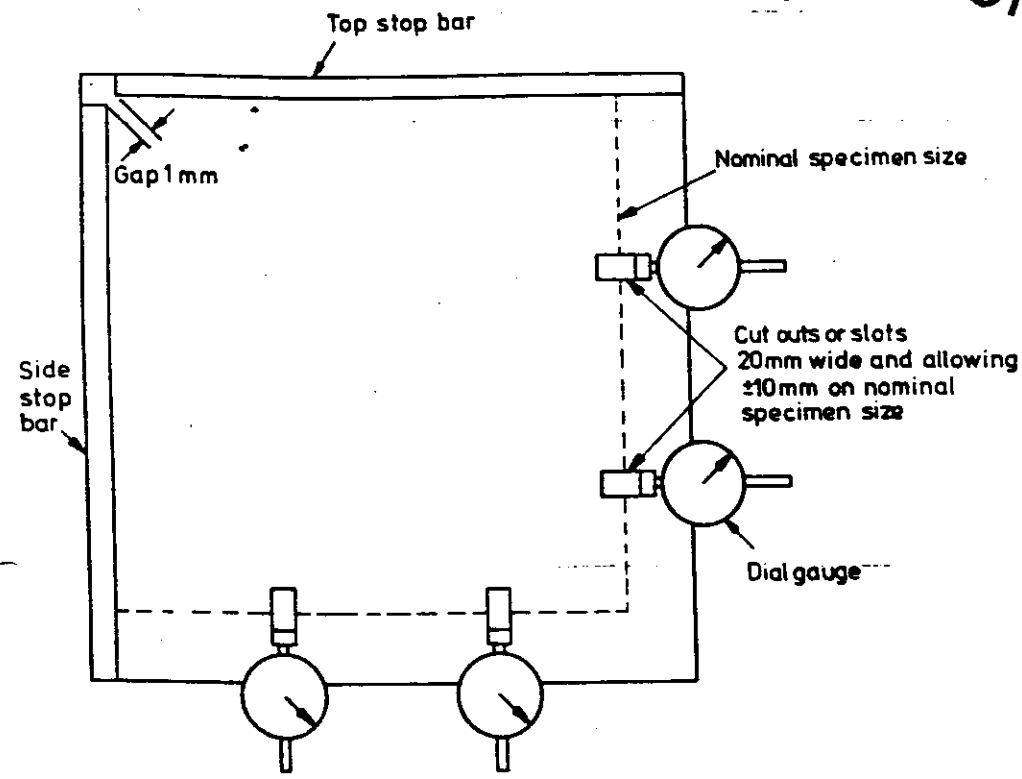

Figure 1. Apparatus, top view, shown without top plate

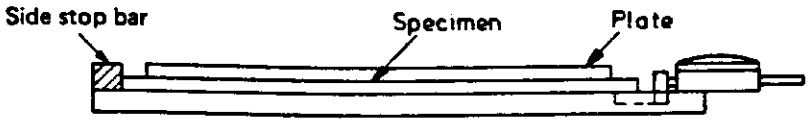

Figure 2. Apparatus, side view, shown with top plate in position

6. Test specimens

6.1 **Sampling, number, dimensions and conditioning.** The sampling, number, dimensions and conditioning of test specimens shall be in accordance with the standard test method being used.

NOTE. Selection should generally be as described in BS 4664.

6.2 **Marking.** Wherever possible, the direction of manufacture shall be identified. All measurements shall be made with reference to this, and the sides shall be marked A, B, C, D as shown in figure 3. If the direction of manufacture cannot be identified, an arbitrary identification of direction and related sides shall be made.

7. Procedure

7.1 With the dial gauge presser foot shafts in their maximum positions, place the appropriate calibration square or T-square on the baseboard and ensure that it is in contact with the stop bars. Release the dial gauge shafts and obtain a zero reading for each micrometer. Re-lock the dial gauge shafts in their maximum positions and remove the calibration square.

7.2 Place the specimen, reverse side uppermost, on the apparatus, with side A firmly against the top stop bar and at least part of side D in contact with the side stop bar, taking particular care where direction of pile might cause springing back. Place the appropriately sized flat plate centrally on top of the specimen, ensuring that the specimen remains flat and in position, allow the feet of the dial gauges situated opposite side A to rest against the edge of the specimen, and record the readings on both gauges to the nearest 0.1 mm. By reference to the calibration, and by the appropriate addition or subtraction of the zero reading, calculate the two values for dimensions in the direction of manufacture.

7.3 Remove the flat plate and re-position the specimen so that side D is firmly against the side stop bar and at least part of side A is in contact with the top stop bar. (No re-positioning will be required if sides A and D are precisely at right angles to each other.) Replace the flat plate and carry out the measurements as described in 7.2, but this time using the two dial gauges situated opposite side D. Again calculate the two values for dimensions at right angles to the direction of manufacture.

8. Test report

The report shall include the following information:

(a) that the test was performed in accordance with this British Standard:

(b) the individual values, for each specimen, of the dimensions in the direction of manufacture and in the direction at right angles to the direction of manufacture to the nearest 0.1 mm;

(c) details of any deviations from the standard test procedure.

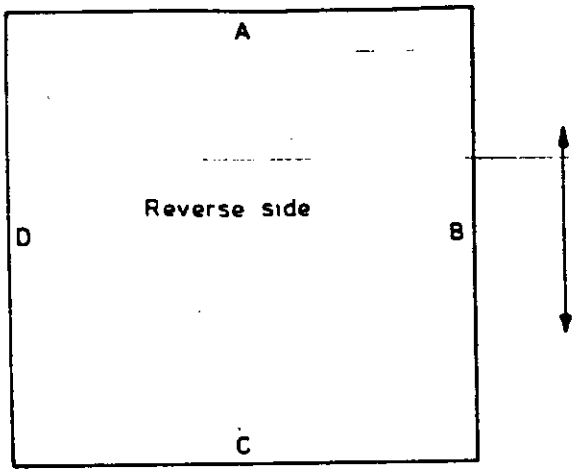

Figure 3. Marking of specimens

Standards publications referred to

BS 1051	Glossary of terms relating to the conditioning and testing of textiles
BS 4051	Method for determination of thickness of textile floor coverings
BS 4664	Methods of sampling and cutting specimens for physical tests on textile floor coverings
BS 4682	Methods of test for the dimensional stability of textile floor coverings
BS 5921	Methods for determination of size, squareness and straightness of edge of textile floor covering tiles