

BS ISO 20251:2016



BSI Standards Publication

Textile floor coverings — Water impermeability test

National foreword

This British Standard is the UK implementation of ISO 20251:2016.

BSI, as a member of CEN, is obliged to publish EN 20251 as a British Standard. However, attention is drawn to the fact that during the development of this European Standard, the UK committee voted against its approval.

Despite the original test being developed in the UK and a previous agreement to change the test liquid to Lissamine Red, the standard has been published using Methylene Blue. The UK committee trialed both test liquids and found that Methylene Blue gives anomalous results; passing material that is potentially permeable. Lissamine Red does not have this problem.

The UK committee also disagree with the scope allowing for the testing of carpet tiles, as they are not going to be impermeable where they join.

The UK participation in its preparation was entrusted to Technical Committee PRI/3, Textile floor coverings.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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**Textile floor coverings — Water
impermeability test**

Revêtements de sol textiles — Essai d'imperméabilité à l'eau



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 219, *Floor coverings*.

Textile floor coverings — Water impermeability test

1 Scope

This document specifies a laboratory test method for determining the water impermeability of textile floor coverings.

This method cannot be used to characterize a wall-to-wall installation of textile floor covering tiles.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 1957, *Machine made textile floor coverings — Selection and cutting of specimens for physical tests*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 2424 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Principle

A specified amount of coloured liquid is poured onto a textile floor covering, where it is contained in a concentrated area for 24 h. The floor covering is then evaluated for liquid penetration through the product.

5 Materials

5.1 Methylene blue solution (1 g/l) (CAS number 61-73-4).

5.2 Open-ended cylinder, 110 mm diameter and 110 mm high, non-water permeable, lightweight material, e.g. PVC.

5.3 White tissue paper.

6 Sampling and selection of specimen

Select three specimens from the sample in accordance with ISO 1957, each specimen measuring a minimum of 350 mm × 350 mm.

7 Conditioning and testing

The specimens shall be conditioned and the test conducted in the standard atmosphere for testing textiles of (65 ± 4) % relative humidity and (20 ± 2) °C, as specified in ISO 139.

8 Procedure

- a) Each specimen, use surface uppermost, is laid on top of a clean white tissue on a horizontal surface.
- b) Place the cylinder (5.2) in the middle of the textile floor covering specimen and pour 100 ml of the coloured liquid (5.1) into the centre of the cylinder. Remove the cylinder as soon as the liquid solution has soaked into the textile floor covering.
- c) The specimens are left to stand for 24 h in the standard atmosphere before evaluation.

9 Assessment of the results

Assess the white tissue beneath each specimen for evidence of water penetration through the backing.

10 Expression of the results

Record for each specimen whether or not the sample showed water penetration.

Record the conclusion of water impermeability if none of the specimens showed water penetration.

11 Test report

The test report shall contain the following information:

- a) a statement that the tests were performed in accordance with this document, i.e. ISO 20251;
- b) the date of the test;
- c) the complete identification of the product tested, including type, source, colour, and manufacturer's reference numbers;
- d) the previous history of the sample;
- e) the water permeability or impermeability of the examined textile floor covering;
- f) any deviation from this document, which may have affected the results.

Bibliography

- [1] ISO 2424, *Textile floor coverings — Vocabulary*

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