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Textile floor coverings — Blade test — Flocked textile floor covering

Revêtements de sol textiles — Essai de résistance à la lame — Revêtement de sol textile à velours floqué

Reference number
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Foreword

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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).

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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 — Blade test — Flocked textile floor covering

1 Scope

This document specifies a laboratory test method to determine the abrasion resistance and fibre bind of flocked textile floor coverings.

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*

ISO 105-A01, *Textiles — Tests for colour fastness — Part A01: General principles of testing*

3 Terms and definitions

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

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

— IEC Electropedia: available at http://www.electropedia.org/

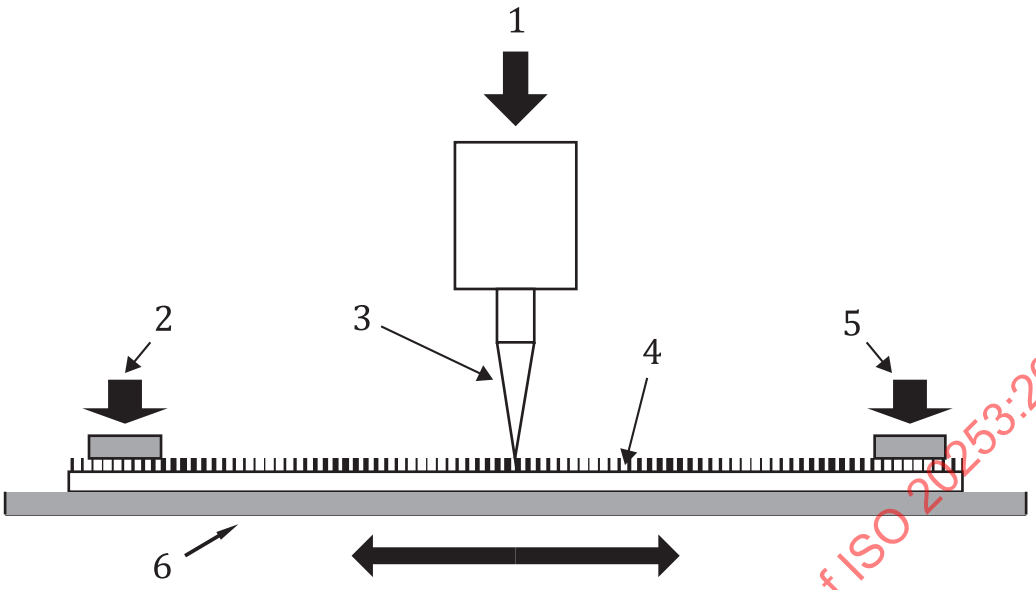
— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
cycle
one full forward and backward movement of the base plate of the blade test apparatus

4 Principle

A specimen of the flocked textile floor covering to be tested is placed on the test apparatus pile face up. A blade is then lowered onto the pile surface which rubs against the pile surface for a determined number of cycles, after which, a visual assessment is made.

5 Apparatus



Key

1 mass = 2,0 kg
2 specimen clamp
3 blade
4 test specimen
5 specimen clamp
6 reciprocating base plate

Figure 1 — Typical blade test apparatus

5.1 Blade test apparatus, flock abrasion testing machine, having a reciprocating base plate onto which the specimen can be clamped. The blade and weight assembly is capable of being lowered onto the specimen.

5.1.1 Blade

Material = tool steel

Width = (20 ± 0,1) mm

Thickness = (5 ± 0,1) mm

Tip radius = (0,3 ± 0,05) mm

Inscribed angle = (15 ± 1)°

Weight = 2 kg ± 0,05 kg (weight assembly and blade)

5.1.2 Drive mechanism

The drive to the specimen plate is interlocked and fitted with a reciprocating mechanism. The reciprocating base plate operates at 60 cycles per minute over a distance of (100 ± 5) mm. A cycle is defined as one full forward and backward movement of the base plate.

5.1.3 Cycle counter, for setting the numbers of cycles of the base plate.

5.2 Brush, to remove any loose fibres from the specimen after testing. The brush should be soft enough not to remove bonded fibres.

5.3 Viewing cabinet, capable of simulating the viewing conditions as specified in ISO 105-A01. The surfaces of the viewing stand shall be uniformly grey. The surface on which the specimens are presented shall have an inclination of 45° ± 5°; the light source shall be a D65 light source. The light intensity shall be 600 lx or more at the surface on which the specimens are presented

The intensity of the light shall be checked prior to each assessment series by the use of a lux meter. The lifetime of the light source, as given by the manufacturer, shall not be exceeded.

6 Sampling and selection of specimen

The sampling and selection of specimen shall be done in accordance with ISO 1957.

For sheet material, cut a sample across the width of the sheet of minimum 400 mm wide and cut three specimen of size 40 mm × 300 mm at equal distances from the sample (pile direction is not important), the distance between the outer edge of the sample and the nearest edge of the test piece being at least 100 mm.

For tile material, select randomly three tiles from a box and cut a specimen of size 40 mm × 300 mm each from the individual tiles.

7 Conditioning

Condition the test specimen in the standard atmosphere for testing as defined in ISO 139 for a minimum of 24 h.

8 Procedure

8.1 General

The tests shall be performed in the standard atmosphere as described in ISO 139.

8.2 Mounting of the specimen

With raised blade, place the test specimen, pile uppermost, under the clamps on the blade test apparatus (5.1).

Lower and tighten the clamps at each end while making sure that the test specimen is held taut (during the test, the sample shall remain flat without significant lifting in front of the blade).

8.3 Test procedure

Carefully lower the blade onto the specimen with the weight on the spindle above the blade, ensuring the right pressure on the pile.

Set the counter to the required number of cycles and switch on the apparatus. After the pre-set number of cycles has been completed, the apparatus will stop automatically.

Remove the specimen from the apparatus and brush it lightly to remove any loose fibres.

9 Assessment

Examine the specimen for wear, using the viewing cabinet, from an eye distance of approximately 800 mm at an angle between 80° and 100° (see Figure 2). The pass criterion is that the pile shall not be removed such that 50% backing becomes clearly visible.

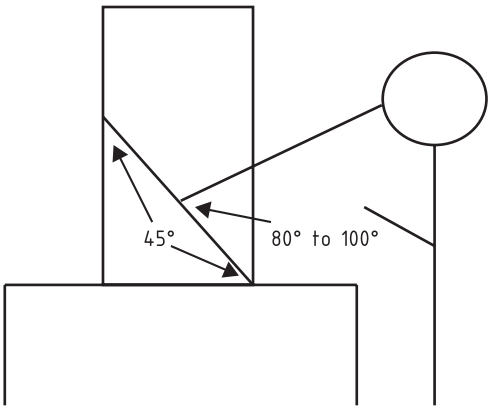


Figure 2 — Viewing cabinet

10 Expression of results

Record pass if all specimen pass the assessment in Clause 9 or fail if any of the specimen fail the assessment in Clause 9.

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 20253;

b) the date of the test;

c) a complete identification of the product tested, including type, source, colour, and manufacturer's reference numbers;

d) the previous history of the sample;

e) the result of the test: pass or fail;

f) any deviation from this standard, which may have affected the results.