

Textile floor coverings — Determination of resistance to damage at cut edges using the modified Vettermann drum test

Revêtements de sol textiles — Détermination de la résistance des joints par l'essai au tambour Vettermann modifié

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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 document 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 of the voluntary nature of standards, 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 219, *Floor coverings*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 134, *Resilient, textile, laminate and modular mechanical locked floor coverings*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 10833:2017), which has been technically revised.

The main changes are as follows:

- ~~—~~ addition of the definition for filamentation (see 3.63.6);
- ~~—~~ inclusion of information on planks and how to cut them (see 6.1.36.1.3);
- ~~—~~ revision of the evaluation of assessment and addition of criterium for filamentation (see 99).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Textile floor coverings — Determination of resistance to damage at cut edges using the modified Vettermann drum test

1 Scope

This document specifies a method to determine the susceptibility of textile floor coverings to mechanical damage at cut edges.

It is applicable to textile floor coverings both as broadloom materials and as tiles and planks.

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 2424, *Textile floor coverings — Vocabulary*

ISO 9405, *Textile floor coverings — Assessment of changes in appearance*

ISO 10361:2015, *Textile floor coverings — Production of changes in appearance by means of Vettermann drum and hexapod tumbler tester*

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 terminology databases for use in standardization at the following addresses:

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

3.1 ~~3.1~~ delamination

separation of the use-surface and primary substrate (or other foundation) of a textile floor covering from the secondary backing

3.2 ~~3.2~~ fraying

damage or loss of pile or substrate material of a textile floor covering from a cut edge

3.3 ~~3.3~~ tuft out

loss of tufts from the use-surface of a textile floor covering

3.4 ~~3.4~~ sprouting

release and appearance during use of extra-long tuft legs, which were accidentally trapped within the pile of a textile floor covering during manufacture

3.5 ~~3.5~~

laddering

shooting

loss of consecutive loops of the same column from the use-surface of a textile floor covering

3.6 ~~3.6~~

filamentation

hairiness

protrusion of fibres above the normal level of the use-surface of a textile floor covering and not removable by brushing or suction

4 Principle

A steel ball with six rubber studs rolls freely inside a rotating drum, which is lined with the textile floor covering specimens.

On broadloom materials, a cut is made along the length of the specimens in a groove such that the cut edges are stressed in the test.

Tiles and planks are put together so that the original edges of the tiles and planks form the joint which is stressed in the test.

After the test the appearance of the fatigued cut edges is assessed.

5 Apparatus

5.1 General

The information in [subclauses 5.2](#) ~~subclauses 5.1.4 to 5.8~~ ~~5.1.7~~ is given for the convenience of users of this document. Equivalent products may be used if they can be shown to lead to the same results

5.1.2 Vettermann-drum tester

~~Conforming~~ ~~The Vettermann-drum tester shall conform~~ to ISO 10361:2015, ~~including, and include~~ a vacuum cleaner integrated in the machine (without a brushing device) ~~and the~~. The nozzle ~~shall~~ not physically ~~touching~~ ~~touch~~ the surface of the sample with an air change rate at the nozzle of minimum 25 l/s, as described in [Figure 1](#) ~~Figure 1~~.