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Textile floor coverings — Determination of mass loss, fibre bind and stair nosing appearance change using the Lisson Tretrad machine

Revêtements de sol textiles — Détermination de la perte de masse, de la sensibilité au défibrage et du changement d'aspect au nez de marche à l'aide la machine Lisson Tretrad

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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 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 and laminate floor coverings*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 12951:2015), which has been technically revised.

The main changes compared to the previous edition are as follows:

— two different methods are described for calibrating the apparatus;

— a better description of how to assess test C is provided;

— examples of failure are given in Annex A.

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.

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Textile floor coverings — Determination of mass loss, fibre bind and stair nosing appearance change using the Lisson Tretrad machine

1 Scope

This document specifies four methods of test for textile floor coverings (with or without an underlay, see Clause 9) using the Lisson Tretrad machine.

— test A: determination of mass loss of textile floor coverings, also used to assess fibre bind of synthetic pile carpets;

— test B: determination of stair nosing appearance change of textile floor coverings;

— test C: determination of fibre bind on synthetic loop pile carpets;

— test D: determination of fibre bind (hairiness) on needled floor coverings and floor coverings without pile.

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 1765, *Machine-made textile floor coverings — Determination of thickness*

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

ISO 2424, *Textile floor coverings — Vocabulary*

ISO 8543, *Textile floor coverings — Methods for determination of mass*

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

EN 1307:2014+A3:2018, *Textile floor coverings — Classification*

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:

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

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

3.1
mass loss per unit area
m_V
difference between the sample mass before and after the wear test, related to the tested area

Note 1 to entry: See 10.1.

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3.2
relative mass loss
m_{rv}
<pile carpet> ratio of the *mass loss per unit area* (3.1), as a percentage of the mass of pile per unit area above the substrate

Note 1 to entry: The mass of pile per unit area above the substrate is determined in accordance with ISO 8543.

4 Principle

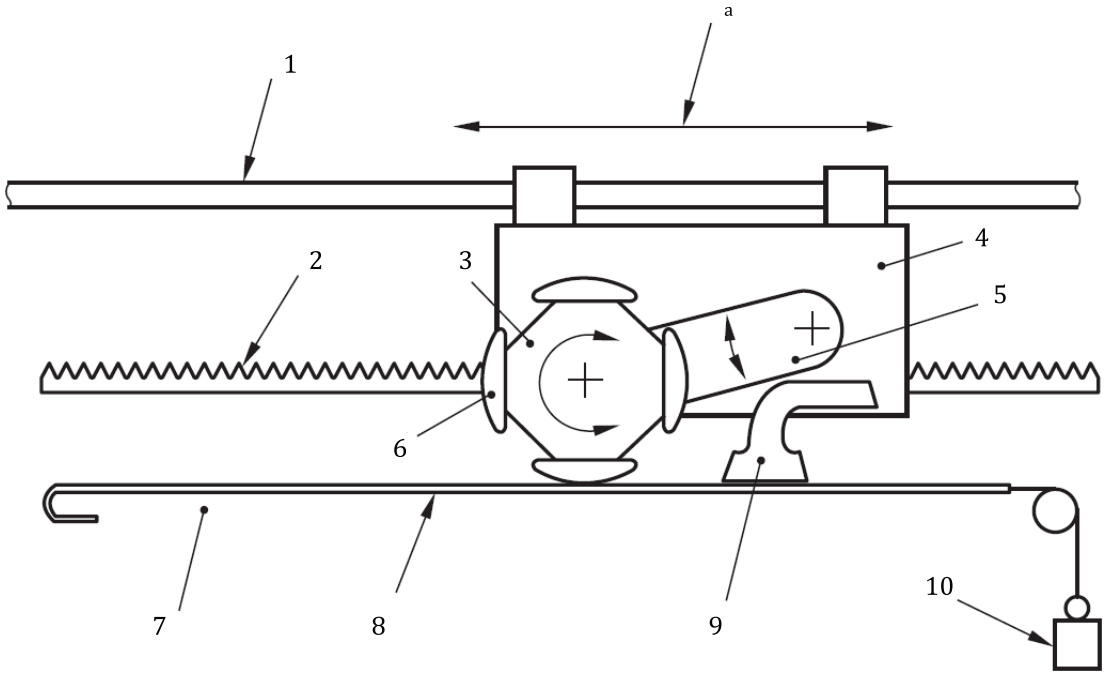
The specimens of a textile floor covering are exposed, at constant load and slippage and for a prescribed number of double passages, to the action of a four-footed wheel (Tretrad), the feet of which are fitted with interchangeable sole coverings.

5 Apparatus

5.1 Lisson Tretrad machine

5.1.1 General

A Lisson Tretrad machine comprises a bed plate, a vacuum cleaning system, and two Tretrad assemblies (see Figure 1).



Key

1	support	7	bed plate
2	cog bar	8	specimen
3	Tretrad wheel	9	vacuum suction nozzle
4	frame	10	tension weight
5	drive	a	Movement of the Tretrad.
6	foot		

Figure 1 — Lisson Tretrad machine

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