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Textile floor coverings — Assessment of changes in appearance

Revêtements de sol textiles — Évaluation des changements d'aspect

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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).

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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 WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword — Supplementary information.

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

This second edition cancels and replaces the first edition (ISO 9405:2001), which has been technically revised.

Textile floor coverings — Assessment of changes in appearance

1 Scope

This International Standard describes the procedures for assessing the overall change in appearance of textile floor coverings caused by Vettermann drum and hexapod tumbler testers according to ISO 10361 and ISO 4918.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 105-A02, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*

ISO 2424, *Textile floor coverings — Vocabulary*

ISO 4918, *Resilient, textile and laminate floor coverings — Castor chair test*

ISO 10361, *Textile Floor coverings — Production of changes in appearance by means of Vettermann drum and hexapod tumbler testers*

3 Terms and definitions

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

3.1
change in surface appearance
difference between a fatigued and an unfatigued specimen

Note 1 to entry: The degree of change is expressed by reference to standard digital image reference scales and by reference to large grey scales, grade 5 representing no change and grade 1 an extreme change.

Note 2 to entry: Changes in structure, roughness, colour, and/or pattern of a textile floor covering may contribute to change in appearance. It is not always possible to distinguish clearly between the factors since each can have an interaction with others.

3.2
change in structure
textural change
visible change in configuration of loops and tufts and/or fibres at the use-surface of a textile floor covering

3.3
loss of tuft definition
decrease of the pile definition caused by the bursting, opening, and untwisting of the pile yarn and/or decrimping of the fibres in the use-surface of a textile floor covering

3.4
crushing
flattening
loss of thickness of a textile floor covering under the action of a static or dynamic load

3.5
felting
matting
loss of pile definition of a textile floor covering due to entanglement and compression of pile fibres

3.6
hairiness
filamentation
protrusion of fibres above the normal level of the use-surface of a textile floor covering and not removable by brushing or suction

3.7
cobwebbing
extreme form of *hairiness* (3.6) in which the fibres are entangled to form an interlaced web attached to the use-surface

3.8
pilling
extreme form of *hairiness* (3.6) in which the fibres are entangled to form small aggregates, attached to the use-surface, which can or cannot include fibres from other sources

3.9
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

3.10
change of pattern definition
change in the colour appearance of patterned textile floor coverings due to mechanical action

Note 1 to entry: A change of pattern definition can be caused by a change in the clarity of the contour lines.

3.11
change in colour
change or apparent change in colour, assessed by a large grey scale, resulting from a change in orientation of the pile (shading), whitening (chalking), fading, glossing, colour bleeding, staining, soiling, or a combination of these

Note 1 to entry: It is not always possible to distinguish clearly between the above factors since each has an interaction with others.

4 Principle

The change in appearance of a specimen after a process of fatiguing is assessed by visual comparison with standard digital image scales. The degree of change is expressed by a single grade. The dominant factors (change in surface appearance, colour, and/or pattern) of the change are observed and recorded.

5 General apparatus

5.1 Viewing cabinet

A viewing cabinet (minimum width 130 cm, minimum height 90 cm, and minimum depth 50 cm) as described in ISO 105-A01 is used. 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) degrees. The light source shall be a D65 light source and the light intensity shall be between (700 ± 100) lux at the surface on which the specimens are presented.