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Textiles — Test method for assessing the matting appearance of napped fabrics after cleansing

Textiles — Méthode d'essai pour l'évaluation de l'aspect du moutonnement des étoffes grattées après nettoyage

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Foreword

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This document was prepared by Technical Committee ISO/TC 38, *Textiles,* Subcommittee SC 2, *Cleansing, finishing and water resistance tests.*

Introduction

With use, the surface of napped fabrics changes significantly. This change in appearance, known as matting, is more or less severe and is related to the fibre, fabric or finishing characteristics.

Based on the structure of other ISO standards dealing with the change in appearance after cleansing, this document has been elaborated to solve this situation.

Textiles — Test method for assessing the matting appearance of napped fabrics after cleansing

1 Scope

This document specifies a method for assessing the matting appearance of the napped fabrics (fleece fabrics) tested, after one or several cleansing treatments.

This method has been developed for use primarily with Type B domestic washing machines, as defined in ISO 6330, in the cleansing process. However, it is possible to use it with Type A machines, as defined in ISO 6330. This test method can be used for judging matting appearance after other cleansing processes.

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 105-A03, *Textiles — Tests for colour fastness — Part A03: Grey scale for assessing staining*

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

ISO 3175 (all parts), *Textiles — Professional care, drycleaning and wetcleaning of fabrics and garments*

ISO 6330, *Textiles — Domestic washing and drying procedures for textile testing*

ISO 15797, *Textiles — Industrial washing and finishing procedures for testing of workwear*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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/ui/

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

3.1
matting
disorientation of the raised fibres of a napped fabric, which produces a visible surface change

Note 1 to entry: See Figure 1.

Figure 1 — Example of matting appearance of napped fabric

4 Principle

Fabric specimens are subjected to procedures simulating cleansing practices. One of the domestic washing and drying procedures specified in ISO 6330, one of the professional procedures specified in the series of ISO 3175 or one of the industrial procedures as specified in ISO 15797 is used, as agreed between the interested parties. If the interested parties decide that other cleansing processes are to be used, this fact shall be reported.

5 Apparatus

5.1 Washing and drying apparatus, as specified in ISO 6330, professional care apparatus, as specified in ISO 3175 or industrial laundering apparatus as specified in ISO 15797.

5.2 Lighting.

The evaluation area shall be a darkened room, using the overhead lighting arrangement shown in Figure 2 and comprising the following items. Lamp dimensions should be chosen to extend beyond the overall surface of a test specimen and replicas, when used for the assessment.

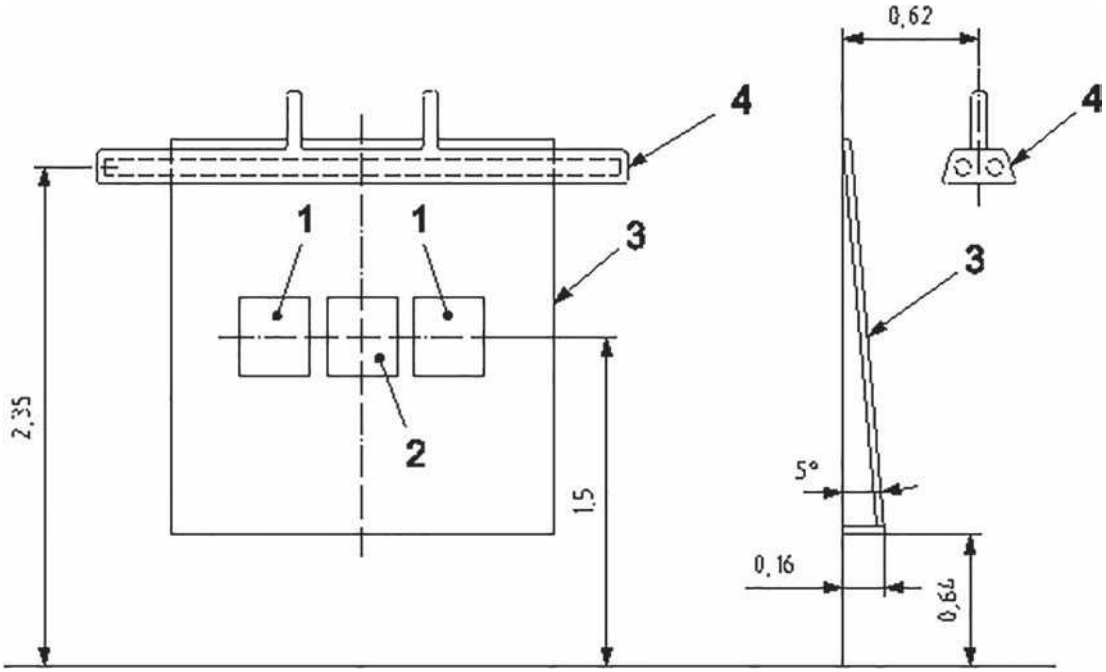
5.2.1 Two CW (cool white) fluorescent lamps, placed side by side, without baffle or glass, a minimum of 2 m in length each.

5.2.2 One white enamel reflector, without baffle or glass.

5.2.3 One specimen holder.

5.2.4 One thick plywood viewing board, painted grey to match the grade 2 on the grey scale for assessing staining specified in ISO 105-A03.

Dimensions in metres



Key

1 replica
2 test specimen
3 board for viewing
4 example of fluorescent lamp placement

Figure 2 — Lighting equipment for viewing test specimens

6 Test specimens

Prepare three test specimens, each measuring 38 cm x 38 cm, cut parallel to the length direction, pinked to prevent fraying and marked to indicate the length direction.

If the matting appearance shall be assessed on both faces, mark the front face.

7 Procedure

7.1 Treat each specimen according to one of the cleansing procedures specified in ISO 6330, ISO 3175 or ISO 15797, as agreed between the interested parties.

7.2 If required, repeat the selected treatment four times, to give a total of five cycles (one cycle consists of one washing and one drying).

7.3 Condition the test specimens in the standard atmosphere according to ISO 139 for a minimum of 4 h by hanging each specimen unfolded with the length direction vertical to avoid distortion.

7.4 For the evaluation, carry out steps 7.5 to 7.11.

7.5 Three observers shall rate each treated test specimen independently.

7.6 Mount the test specimen on the viewing board (5.2.4) as illustrated in Figure 2, with the length direction vertical. If the matting appearance shall be assessed on both faces, proceed to 7.6 to 7.11 with the marked front faces, and then repeat 7.6 to 7.11 with the other faces.

7.7 The overhead fluorescent light (5.2.1) shall be the only light source for the viewing board, and all other lights in the room shall be turned off. It has been the experience of many observers that the light reflected from the side walls near the viewing board can interfere with the rating results. It is recommended that the side walls be painted black or that blackout curtains be mounted on either side of the viewing board to eliminate the reflective interference.

7.8 The observer shall stand directly in front of the specimen, 1,2 m away from the board. It has been found that normal variations in the height of the observer above and below the arbitrary 1,5 m eye level have no significant effect on the rating given.

7.9 Assign the number of the grade which most nearly matches the appearance of the test specimen, or assign ratings midway between those whole-number standards which have no half-number standards separating them if the appearance of the specimens warrants it (see Table 1).

7.10 A 5 rating represents the best retention of original appearance, while a 1 rating represents the poorest retention of original appearance.

7.11 Similarly, the observer shall independently rate each of the other two test specimens. The other two observers shall proceed in the same manner, assigning ratings independently.

Table 1 — Matting grading scheme

Grade	Description
5	No change
4	Slight surface matting
3	Moderate surface matting
2	Distinct surface matting
1	Dense surface matting

8 Expression of results

Calculate the median of the nine observations made by the three observers on the set of three test specimens for the concerned face. Report the median to the nearest half rating.

9 Test report

The test report shall include the following information:

a) a reference to this International Standard (ISO 16847:2016);

b) details of the sample evaluated;

c) details of the cleansing procedures used;

d) the number of cleansing cycles used;

e) for each concerned face, the fabric matting rating as calculated according to Clause 8 associated to the description as stated in Table 1;

f) details of any deviation from the specified procedure.

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