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Textiles — Determination of the recovery from creasing of a folded specimen of fabric by measuring the angle of recovery —

Part 2: Method of the vertically folded specimen

Textiles — Détermination de l'auto-défroissabilité d'une éprouvette d'étoffe pliée, par mesurage de l'angle rémanent après pliage —

Partie 2: Méthode de l'éprouvette pliée verticalement

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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This document was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 24, *Conditioning atmospheres and physical tests for textile fabrics*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 248, *Textiles and textile products,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

A list of all parts in the ISO 2313 series can be found on the ISO website.

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.

Introduction

Creases in textile fabrics diminish at varying rates on the removal of the creasing forces. The magnitude of the crease recovery angle is an indication of the ability of a fabric to recover from accidental creasing.

The suitable method can be chosen according to the type or end-use of textile fabrics. The test results obtained by different methods are not comparable.

Textiles — Determination of the recovery from creasing of a folded specimen of fabric by measuring the angle of recovery —

Part 2: Method of the vertically folded specimen

1 Scope

This document specifies a method for determining crease recovery angle of fabric specimen while placing it in such a way that the folded line is vertical to horizontal plane for a specified time after removal of creasing load.

This document is applicable for all kinds of textile fabrics.

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*

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

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

3.1
crease recovery angle
angle formed between the two limbs of fabric specimen previously folded under prescribed conditions, at a specified time after removal of the creasing load

Note 1 to entry: In this method, rapid crease recovery angle is obtained at 15 s after removal of the creasing load.

Note 2 to entry: In this method, delay crease recovery angle is obtained at 5 min after removal of the creasing load.

4 Principle

The folded specimen is maintained under a specified load for a specified time. After removal of creasing load, the specimen is placed in such a way that the folded line is vertical to horizontal plane for a specified time, and then the crease recovery angle is measured.

Attention is drawn to the fact that for some types of fabrics, the limpness, thickness and tendency to curl of the specimen can give rise to very ill-defined crease recovery angles, and therefore an unacceptable lack of precision in making measurements.

5 Apparatus

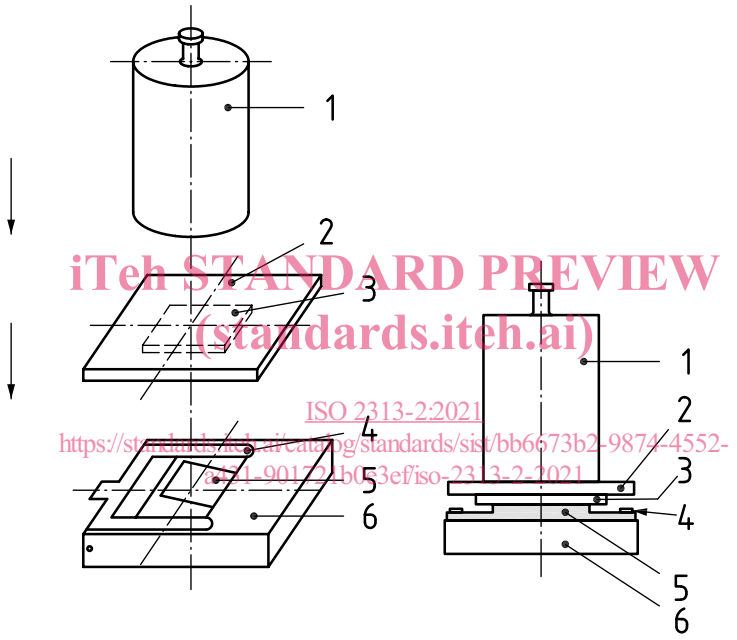
Use the test devices specified in 5.1 to 5.4, or the automatic tester. An example of an automatic tester is given in Annex A.

5.1 Loading device, conforming with the following requirements (see Figure 1):

a) **Weight-piece,** applying a total load of 10,0 N ± 0,5 N[1)] on an area of 15 mm × 18 mm of the folded specimen. It shall be possible to complete the removal of the load within a period of less than 1 s.

b) **Specimen holder board,** fixing the two sides of specimen on the flat board by the clips; and folded line of specimen shall align with folded line mark of the board.

c) **Pressure board,** made of light and transparent flat board; a boss on lower surface directly presses on folded specimen, with the dimension of which shall comply with the requirement of the load applying on the folded specimen.



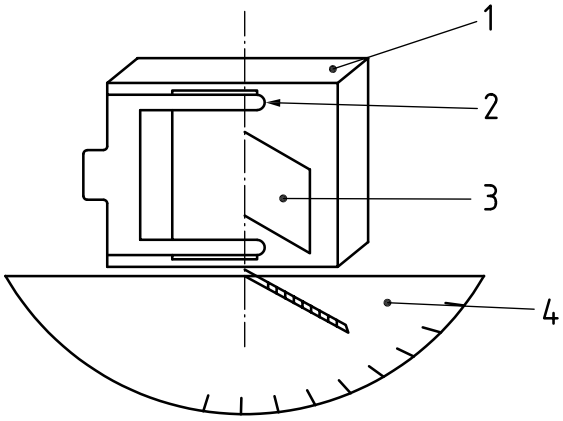
Key

1 weight-piece
2 pressure board
3 boss
4 clip
5 specimen
6 specimen holder board

Figure 1 — Diagram of loading device

1) Weight of a body of mass 1,019 kg is approximately equal to a force of 10 N.

5.2 Instrument of measuring crease recovery angle, with a resolution of 0,5°, for example the protractor shown in Figure 2 or the tester for measuring crease recovery angle described in Annex A.



Key

1 specimen holder board
2 clip
3 specimen
4 protractor

Figure 2 — Diagram of the protractor

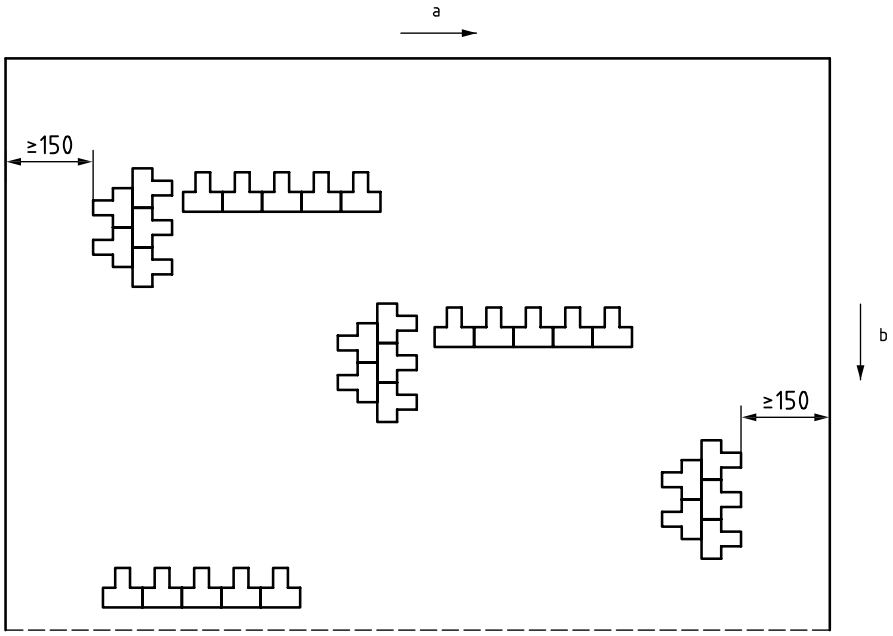
5.3 Timer.

5.4 Holder with smooth edge, or rubber glove.

6 Sampling and preparation of specimens

6.1 Take representative specimens not less than 150 mm from the selvedge avoiding defective, creased, wrinkled or deformed parts. An example of sampling method is shown as Figure 3.

Dimensions in millimetres



a Transverse direction of sample.

b Length direction of sample.

Figure 3 — Example of sampling method

6.2 Unless otherwise agreed by the interested parties, prepare not fewer than 20 specimens for each test, half of them taken with their short sides parallel to the warp (woven fabric) or wales (knitted fabric) or the direction marked "length" (non-woven fabric) and the other half with their short sides parallel to the weft (woven fabric) or courses (knitted fabric) or at right angles to the length direction (non-woven fabric).

6.3 Cut the specimen as shown in Figure 4. Fold the specimen along the folded line (face to face or back to back).