Irish Standard
I.S. EN ISO 13934-1:2013

Textiles - Tensile properties of fabrics - Part 1: Determination of maximum force and elongation at maximum force using the strip method (ISO 13934-1:2013)

I.S. EN ISO 13934-1:2013

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Textiles - Tensile properties of fabrics - Part 1: Determination of maximum force and elongation at maximum force using the strip method (ISO 13934-1:2013)

Textiles - Propriétés des étoffes en traction - Partie 1: Détermination de la force maximale et de l'allongement à la force maximale par la méthode sur bande (ISO 13934-1:2013)

Textilien - Zugeigenschaften von textilen Flächengebilden - Teil 1: Bestimmung der Höchstzugkraft und Höchstzugkraft-Dehnung mit dem Streifen-Zugversuch (ISO 13934-1:2013)

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Contents

Page

Foreword.....3

Foreword

This document (EN ISO 13934-1:2013) has been prepared by Technical Committee ISO/TC 38 "Textiles" in collaboration with Technical Committee CEN/TC 248 “Textiles and textile products” the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2013, and conflicting national standards shall be withdrawn at the latest by October 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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I.S. EN ISO 13934-1:2013

INTERNATIONAL STANDARD

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Second edition
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Textiles — Tensile properties of fabrics —

Part 1: Determination of maximum force and elongation at maximum force using the strip method

Textiles — Propriétés des étoffes en traction —

Partie 1: Détermination de la force maximale et de l'allongement à la force maximale par la méthode sur bande

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Contents

Page

Foreword ... **iv**

Introduction ... **v**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **1**

4 Principle ... **3**

5 Sampling ... **4**

6 Apparatus ... **4**
6.1 CRE machine ... 4

7 Atmosphere for conditioning and testing ... **5**

8 Preparation of test specimen ... **5**
8.1 General ... 5
8.2 Dimensions ... 5
8.3 Preparation of test specimens ... 5
8.4 Wet test specimens ... 6

9 Procedure ... **6**
9.1 Gauge length ... 6
9.2 Rate of extension or elongation ... 6
9.3 Mounting of test specimens ... 6
9.4 Operation ... 7
9.5 Tests on wet test specimens ... 8

10 Calculation and expression of results ... **8**

11 Test report ... **8**

Annex A (informative) **Suggested procedure for sampling** ... **10**

Annex B (informative) **Locations of test specimens cut from a laboratory sample** ... **11**

Bibliography ... **12**

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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The first edition of this International Standard ISO 13934-1 was prepared by the European Committee for Standardization (CEN) in collaboration with ISO Technical Committee TC 38, Textiles, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

ISO 13934-1 was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 24, *Conditioning atmospheres and physical tests for textile fabrics*.

This second edition cancels and replaces the first edition (ISO 13934-1:1999), of which it constitutes a minor revision.

ISO 13934 consists of the following parts, under the general title *Textiles — Tensile properties of fabrics*:

— *Part 1: Determination of maximum force and elongation at maximum force using the strip method*

— *Part 2: Determination of maximum force using the grab method*

Introduction

This part of ISO 13934 has been prepared in the context of several test methods for determination of certain mechanical properties of textiles using mainly tensile testing machines, e.g. tensile properties, seam tensile properties, tear properties, seam slippage. The procedure for these standards agrees where appropriate. The results obtained by one of the methods should not be compared with those obtained by the other methods.

Textiles — Tensile properties of fabrics —

Part 1: Determination of maximum force and elongation at maximum force using the strip method

1 Scope

This part of ISO 13934 specifies a procedure to determine the maximum force and elongation at maximum force of textile fabrics using a strip method.

NOTE ISO 13934-2 describes the method known as the grab method. For informative references, see Bibliography.

The method is mainly applicable to woven textile fabrics, including fabrics which exhibit stretch characteristics imparted by the presence of an elastomeric fibre, mechanical, or chemical treatment. It can be applicable to fabrics produced by other techniques. It is not normally applicable to geotextiles, nonwovens, coated fabrics, textile-glass woven fabrics, and fabrics made from carbon fibres or polyolefin tape yarns (see Bibliography).

The method specifies the determination of the maximum force and elongation at maximum force of test specimens in equilibrium with the standard atmosphere for testing, and of test specimens in the wet state.

The method is restricted to the use of constant rate of extension (CRE) testing machines.

2 Normative references

The following referenced documents are indispensable for the application 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 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 7500-1, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system*

ISO 10012, *Measurement management systems — Requirements for measurement processes and measuring equipment*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
constant-rate-of-extension (CRE) testing machine
tensile-testing machine provided with one clamp which is stationary and another clamp which moves with a constant speed throughout the test, the entire testing system being virtually free from deflection

3.2
strip test
tensile test in which the full width of the test specimen is gripped in the jaws of the testing machine