



BSI Standards Publication

Textiles — Determination of the elasticity of fabrics

Part 1: Strip tests

National foreword

This British Standard is the UK implementation of EN ISO 20932-1:2020+A1:2021. It is identical to ISO 20932-1:2018, incorporating amendment 1:2021. It supersedes [BS EN ISO 20932-1:2020](#), which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to ISO text carry the number of the ISO amendment. For example, text altered by ISO amendment 1 is indicated by **A1** **A1**.

The UK participation in its preparation was entrusted to Technical Committee TCI/24, Physical testing of textiles.

A list of organizations represented on this committee can be obtained on request to its committee manager.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

© The British Standards Institution 2021
Published by BSI Standards Limited 2021

ISBN 978 0 539 14648 6

ICS 59.080.30

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2020.

Amendments/corrigenda issued since publication

Date	Text affected
31 December 2021	Implementation of ISO amendment 1:2021 with CEN endorsement A1:2021

English Version

Textiles - Determination of the elasticity of fabrics - Part
1: Strip tests (ISO 20932-1:2018)

Textiles - Détermination de l'élasticité des étoffes
- Partie 1: Essais sur bande (ISO 20932-1:2018)

Textilien - Bestimmung der Elastizität
von textilen Flächengebilden - Teil 1:
Streifenprüfungen (ISO 20932-1:2018)

This European Standard was approved by CEN on 11 November 2019.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of ISO 20932-1:2018 has been prepared by Technical Committee ISO/TC 38 "Textiles" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 20932-1:2020 by 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 August 2020, and conflicting national standards shall be withdrawn at the latest by August 2020.

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

This document supersedes [EN 14704-1:2005](#).

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 20932-1:2018 has been approved by CEN as EN ISO 20932-1:2020 without any modification.

European foreword to amendment A1

This document (EN ISO 20932-1:2020/A1:2021) 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 May 2022, and conflicting national standards shall be withdrawn at the latest by May 2022.

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

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 20932-1:2018/Amd 1:2021 has been approved by CEN as EN ISO 20932-1:2020/A1:2021 without any modification.

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	3
5 Sampling	3
6 Apparatus	4
6.1 CRE testing machine.	4
6.2 Line clamps (for method A).	4
6.3 Loop bar assembly (for method B).	4
7 Atmosphere for conditioning and testing	5
8 Preparation of test specimens	5
8.1 General	5
8.2 Test specimen preparation	5
8.2.1 Woven fabrics	5
8.2.2 Knitted fabrics	6
8.2.3 Nonwoven fabrics	7
9 Procedure	8
9.1 Woven and nonwoven fabrics (other than knitted)	8
9.1.1 Method A — Strip test specimens	8
9.1.2 Method B — Loop test specimens	8
9.2 Knitted fabrics	8
9.2.1 Method A — Strip test specimens	8
9.2.2 Method B — Loop test specimens	9
9.3 Operation	9
10 Recording	10
11 Expressions and calculations of test results	10
12 Test report	12
Annex A (informative) Example of a typical cycling graph	13
Annex B (informative) Procedure for sampling	14
Annex C (informative) Clamping and holding devices	15
Annex D (informative) Example of a pattern for cutting test specimens from a laboratory sample	17
Bibliography	18

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

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

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.

A list of all parts in the ISO 20932 series can be found on the ISO website.

Introduction

This document was developed as a result of technical advancements in yarn and fabric structures and properties, which increase product range and developments.

This document is based on [EN 14704-1](#)^[1].

This page deliberately left blank

Textiles — Determination of the elasticity of fabrics —

Part 1: Strip tests

1 Scope

This document describes the methods of test using strips of fabric in straight strip form or as loops, which can be used to measure elasticity and related properties of fabrics, excluding narrow 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*

[ISO 4915](#), *Textiles — Stitch types — Classification and terminology*

[ISO 7500-1](#), *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification 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.

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

narrow fabric

woven or knitted construction intended for use as a trim, binding, edging, strapping or harness, and designed to be used in its full width

3.2

elasticity

<material> ability to recover original size and shape immediately after the removal of the force causing deformation

3.3

constant-rate-of-extension testing machine

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