

Irish Standard I.S. EN ISO 20932-2:2020

Textiles - Determination of the elasticity of fabrics - Part 2: Multiaxial tests (ISO 20932-2:2018)

 $\ensuremath{\mathbb C}$ CEN 2020 $\hfill No copying without NSAI permission except as permitted by copyright law.$

I.S. EN ISO 20932-2:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on: EN ISO 20932-2:2020 *Published:* 2020-02-26

This document was published under the authority of the NSAI and comes into effect on:

2020-03-15

ICS number:

59.080.30

NOTE: If blank see CEN/CENELEC cover page

| NSAI | T +353 1 807 3800 | Sales: |
|-------------------|---------------------|-------------------|
| 1 Swift Square, | F +353 1 807 3838 | T +353 1 857 6730 |
| Northwood, Santry | E standards@nsai.ie | F +353 1 857 6729 |
| Dublin 9 | W NSAI.ie | W standards.ie |

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN ISO 20932-2:2020 is the adopted Irish version of the European Document EN ISO 20932-2:2020, Textiles - Determination of the elasticity of fabrics - Part 2: Multiaxial tests (ISO 20932-2:2018)

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This is a free page sample. Access the full version online.

This page is intentionally left blank

EUROPEAN STANDARD NORME EUROPÉENNE

EN ISO 20932-2

EUROPÄISCHE NORM

February 2020

ICS 59.080.30

Supersedes EN 14704-2:2007

English Version

Textiles - Determination of the elasticity of fabrics - Part 2: Multiaxial tests (ISO 20932-2:2018)

Textiles - Détermination de l'élasticité des étoffes -Partie 2: Essais multiaxiaux (ISO 20932-2:2018) Textilien - Bestimmung der Elastizität von textilen Flächengebilden - Teil 2: Multiaxiale Prüfungen (ISO 20932-2:2018)

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

This is a free page sample. Access the full version online. $I.S.\ EN\ ISO\ 20932-2:2020$

EN ISO 20932-2:2020 (E)

| Contents | Page |
|-------------------|------|
| European foreword | |

European foreword

The text of ISO 20932-2:2018 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 20932-2:2020 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 14704-2:2007.

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 20932-2:2018 has been approved by CEN as EN ISO 20932-2:2020 without any modification.

This is a free page sample. Access the full version online.

This page is intentionally left blank

INTERNATIONAL STANDARD

ISO 20932-2

First edition 2018-11

Textiles — Determination of the elasticity of fabrics —

Part 2: Multiaxial tests

Textiles — Détermination de l'élasticité des étoffes — Partie 2: Essais multiaxiaux



Reference number ISO 20932-2:2018(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Fax: +41 22 749 09 47 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

Page

Contents

| Fore | eword | | iv |
|------|----------------------|----------------------------------------------------------------------------------------------------|----------|
| Intr | oductio | on | v |
| 1 | Scon |)e | |
| 2 | Normative references | | |
| 3 | | ns and definitions | |
| | | | |
| 4 | Principle | | |
| 5 | Sampling | | |
| 6 | Atm | osphere for conditioning and testing | 2 |
| 7 | Prep | paration of test specimens | |
| 8 | Meth | hod A — Dynamic test | |
| | 8.1 | Apparatus | |
| | 8.2 | Test specimen preparation | |
| | 8.3 | Procedure for loading test specimen in clamping ring | |
| | 8.4 | Recording | |
| | 8.5 | Expressions and calculations of test results | |
| | 8.6 | Test report | 5 |
| 9 | Metł | hod B — Static test | |
| | 9.1 | Preliminary test | |
| | | 9.1.1 Apparatus | |
| | | 9.1.2 Preparation of test specimens | |
| | | 9.1.3 Procedure | |
| | 9.2 | Actual static test | |
| | | 9.2.1 Apparatus | 6 |
| | | 9.2.2 Selection of testing parameters | |
| | | 9.2.3 Preparation of test specimens | 6 |
| | | 9.2.4 Procedure | |
| | | 9.2.5 Setting of the hemispherical shape | |
| | | 9.2.6 Measurement of the residual deformation | |
| | | 9.2.7 Recording | |
| | | 9.2.8 Expressions and calculations of test results | |
| | | 9.2.9 Test report | 7 |
| Ann | ex A (in | nformative) Example of a typical cycling graph | 9 |
| Ann | ex B (in | nformative) Procedure for sampling | |
| Ann | | nformative) Example of a pattern for cutting test specimens from a laboratory ple | |
| Ann | - | nformative) Method A — Dynamic test equipment | |
| | - | iformative) Method B — Static test equipment | |
| Bibl | iograpł | hy | |

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 <u>www.iso.org/members.html</u>.

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 14704-2^[1].

This is a free page sample. Access the full version online. I.S. EN ISO 20932-2:2020

Textiles — Determination of the elasticity of fabrics —

Part 2: Multiaxial tests

1 Scope

This document specifies the test methods which can be used to measure elasticity and related properties of fabrics when they undergo a deformation of their surface. Two methods are specified: a dynamic method (method A) and a static method (method B). This document does not apply to narrow fabrics.

The results obtained cannot be compared. The choice of test method are agreed between parties and indicated in the test report.

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 7500-1, Metallic materials — Calibration and 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

ISO 20932-1, Textiles — Determination of the elasticity of fabrics — Part 1: Strip tests

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 <u>https://www.iso.org/obp</u>

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

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

[SOURCE: ISO 20932-1:2018, 3.1]

3.2

elasticity

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

[SOURCE: ISO 20932-1:2018, 3.2]



This is a free preview. Purchase the entire publication at the link below:

Product Page

S Looking for additional Standards? Visit Intertek Inform Infostore

> Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation