

STN	Vláknové laná Zisťovanie určitých fyzikálnych a mechanických vlastností (ISO 2307: 2019)	STN EN ISO 2307 80 8603
------------	---	---

Fibre ropes - Determination of certain physical and mechanical properties (ISO 2307:2019)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/19

Obsahuje: EN ISO 2307:2019, ISO 2307:2019

Oznámením tejto normy sa ruší
STN EN ISO 2307 (80 8603) z decembra 2010

EUROPEAN STANDARD

EN ISO 2307

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2019

ICS 59.080.50

Supersedes EN ISO 2307:2010

English Version

Fibre ropes - Determination of certain physical and mechanical properties (ISO 2307:2019)

Cordages en fibres - Détermination de certaines caractéristiques physiques et mécaniques (ISO 2307:2019)

Faserseile - Bestimmung einiger physikalischer und mechanischer Eigenschaften (ISO 2307:2019)

This European Standard was approved by CEN on 1 July 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

EN ISO 2307:2019 (E)

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO 2307:2019) 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 March 2020, and conflicting national standards shall be withdrawn at the latest by March 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 ISO 2307:2010.

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 2307:2019 has been approved by CEN as EN ISO 2307:2019 without any modification.

INTERNATIONAL STANDARD

ISO
2307

Fifth edition
2019-07

Fibre ropes — Determination of certain physical and mechanical properties

*Cordages en fibres — Détermination de certaines caractéristiques
physiques et mécaniques*



Reference number
ISO 2307:2019(E)

© ISO 2019

ISO 2307:2019(E)**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2019

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

Contents

Page

Foreword	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	2
4.1 Calculation of the linear density	2
4.2 Measurement of the diameter, lay length and braid pitch	2
4.3 Measurement of the elongation of the rope	2
4.4 Measurement of the breaking force	2
5 Apparatus	2
6 Sampling	3
6.1 Composition of the batch to be sampled	3
6.2 Sample size	3
6.3 Selection of samples	3
7 Test pieces for tensile testing and force-elongation measurements	3
7.1 Length	3
7.2 Number of test pieces	3
7.3 Taking the test pieces	3
8 Conditioning	4
9 Procedure	4
9.1 General	4
9.2 Initial measurements	4
9.3 Mounting the test piece on the testing machine	4
9.4 Measurement of diameter, lay length or braid pitch and gauge length	6
9.5 Bedding-in of the test piece	7
9.6 Measurement of the elongation of the rope	8
9.7 Measurement of the breaking force	8
10 Linear density	8
11 Expression of results	9
11.1 General	9
11.2 Linear density, ρ_1	9
11.3 Diameter, lay length or braid pitch	9
11.4 Elongation	9
11.5 Actual breaking force	10
12 Determination of water repellency	10
12.1 General	10
12.2 Principle	10
12.3 Test pieces	10
12.3.1 General	10
12.3.2 Whipping	10
12.3.3 Cutting the samples	10
12.3.4 Sealing	10
12.4 Procedure	11
12.4.1 First weighing	11
12.4.2 Second weighing	11
12.4.3 Third weighing	11
12.4.4 Drying the specimens	11
12.4.5 Fourth, fifth and sixth weighing	11
12.5 Results of tests	11

ISO 2307:2019(E)

13	Determination of lubrication and finish content	11
13.1	General	11
13.2	Reagents	11
13.3	Preparation of samples	12
13.4	Determination of water content	12
13.5	Determination of lubrication and finish content	12
13.6	Calculation of lubrication and finish content	12
14	Test report	12
Annex A	(normative) Reference tension	13
Annex B	(informative) Alternative procedures for ropes with high breaking forces	14
Annex C	(normative) Determination of the force-elongation coordinates on a separate test piece	20
Annex D	(informative) Test report — Fibre ropes	21
Bibliography		22

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 of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 38, *Textiles*.

This fifth edition cancels and replaces the fourth edition (ISO 2307:2010), which has been technically revised. The main changes compared to the previous edition are as follows:

- inclusion of diameter in the scope, and describe methods to measure it;
- changes in test length;
- changes in test speed;
- inclusion of another method for determination of realization factor in [Annex B](#);
- addition of a sample of a test report ([Annex D](#)).

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.

Fibre ropes — Determination of certain physical and mechanical properties

1 Scope

This document specifies, for ropes of different kinds, a method of determining each of the following characteristics:

- linear density;
- diameter;
- lay length;
- braid pitch;
- elongation;
- breaking force.

This document also provides a method for measuring water repellence, lubrication and finish content, when requested by the customer.

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 1968, *Fibre ropes and cordage — Vocabulary*

ISO 9554, *Fibre ropes — General specifications*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN