



BSI Standards Publication

Steel wire ropes — Safety

Part 5: Stranded ropes for lifts

This is a preview of BS EN 12385-5:2021+A1:2025. [Click here to purchase the full version from the ANSI store.](#)

National foreword

This British Standard is the UK implementation of EN 12385-5:2021+A1:2025, incorporating corrigendum November 2021. It supersedes BS EN 12385-5:2021, which is withdrawn.

The start and finish of text introduced or altered by corrigendum is indicated in the text by tags. Text altered by CEN corrigendum November 2021 is indicated in the text by AC AC.

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

The UK participation in its preparation was entrusted to Technical Committee MHE/1, Chains and fittings.

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 2025
Published by BSI Standards Limited 2025

ISBN 978 0 539 36833 8

ICS 77.140.65

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 30 April 2021.

Amendments/corrigenda issued since publication

Date	Text affected
31 December 2021	Implementation of CEN corrigendum November 2021
31 May 2025	Implementation of CEN amendment A1:2025

This is a preview of BS EN 12385-5:2021+A1:2025. [Click here to purchase the full version from the ANSI store.](#)

EUROPÄISCHE NORM

April 2025

ICS 77.140.65

Supersedes EN 12385-5:2021

English Version

Steel wire ropes - Safety - Part 5: Stranded ropes for lifts

Câbles en acier - Sécurité - Partie 5 : Câbles à torons
pour ascenseurs

Drahtseile aus Stahldraht - Sicherheit - Teil 5:
Litzenseile für Aufzüge

This European Standard was approved by CEN on 15 February 2021 and includes Corrigendum 1 issued by CEN on 10 November 2021 and Amendment 1 approved by CEN on 28 October 2024.

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, Türkiye 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

Contents	Page
European foreword	3
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 List of hazards	6
5 Safety requirements and/or measures	7
5.1 General	7
5.2 Materials	7
5.2.1 Wire	7
5.2.2 Core	8
5.2.3 Lubricant	8
5.3 Rope manufacture	8
5.3.1 Lubrication	8
5.3.2 Construction	8
5.3.3 Rope grade	8
5.4 Diameter	9
5.4.1 Tolerances	9
5.4.2 Differences between diameter measurements	10
5.5 Breaking force	10
5.6 Designation and classification	10
6 Verification of safety requirements and /or measures	10
6.1 General	10
6.2 Lubricant	10
6.3 Lubrication	10
6.4 Construction	10
6.5 Rope grade	11
7 Information for use	11
Annex A (normative) Calculation of minimum breaking force for those ropes classes covered by Tables 6 to 10	17
Annex B (informative) Information which should be provided with an enquiry or an order	18
Bibliography	20

This is a preview of BS EN 12385-5:2021+A1:2025. [Click here to purchase the full version from the ANSI store.](#)

European foreword

This document (EN 12385-5:2021+A1:2025) has been prepared by Technical Committee CEN/TC 168, "Chains, ropes, webbing, slings and accessories – Safety", 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 2025, and conflicting national standards shall be withdrawn at the latest by October 2025.

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 includes the corrigendum EN 12385-5:2021/AC:2021 issued by CEN on 10 November 2021, which replaces typical examples for ropes "6 x 9 W" with "6 x 19 W" in Table 6 and "6 x 6 WS" with "6 x 36 WS" in Table 9.

The start and finish of text introduced or altered by corrigendum is indicated in the text by tags AC AC.

This document includes Amendment 1 approved by CEN on 28 October 2024.

This document supersedes A1 EN 12385-5:2021+AC:2021 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

A1 EN 12385-5:2021+A1:2025 includes the following significant technical changes with respect to EN 12385-5:2021+AC:2021:

- added in 5.3.3.2 in list item b) rope with fibre core/steel core 1570;
- added in 5.3.3.3 rope grade 1960;
- added rope grade 1960 in Table 8;
- deletion of Annex ZA, covering the Lifts Directive 2014/33/EU;
- deletion of Annex ZB, covering the Machinery Directive 2006/42/EC. A1

A1 *deleted text* A1

A1 *deleted text* A1

A1 *deleted text* A1

The other Parts of EN 12385 are:

- *Part 1: General requirements;*
- *Part 2: Definitions, designation and classification;*
- *Part 3: Information for use and maintenance;*
- *Part 4: Stranded ropes for general lifting applications;*
- *Part 6: Stranded ropes for mine shafts;*

This is a preview of BS EN 12385-5:2021+A1:2025. [Click here to purchase the full version from the ANSI store.](#)

- *Part 7: Locked coil ropes for mine shafts;*
- *Part 8: Stranded hauling and carrying-hauling ropes for cableway installations designed to carry persons;*
- *Part 9: Locked coil carrying ropes for cableway installations designed to carry persons;*
- *Part 10: Spiral ropes for general structural applications.*

Part 1 provides the general requirements of Parts 4 to 10.

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

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Türkiye and the United Kingdom.

This is a preview of BS EN 12385-5:2021+A1:2025. [Click here to purchase the full version from the ANSI store.](#)

Introduction

This document is a type C standard as stated in EN ISO 12100.

A1 *deleted text* **A1**

During the preparation of this standard, it was assumed that a negotiation would take place between the purchaser and the manufacturer concerning the intended purpose of the rope.

Although tables of breaking forces and masses are provided for a number of the more common classes, diameters and rope grades, this Part of this standard is not limited to those given, providing all of the other requirements are met.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards for wire ropes that have been designed and produced according to the provisions of this type C standard.

1 Scope

This document specifies the particular materials, manufacturing and testing requirements for stranded ropes for suspension, compensating and governor duties for traction drive and hydraulic lifts moving between guides and similar applications.

The particular hazards covered by this Part are identified in Clause 4.

This document does not establish requirements for information for use other than those given in Clause 7 of Part 1. Neither does it cover the requirements for ropes fitted with terminations.

Minimum breaking force values for the more common classes, sizes and grades of rope are provided in Tables 6 to 10.

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.

EN 10264-2:2012, *Steel wire and wire products — Steel wire for ropes — Part 2: Cold drawn non alloy steel wire for ropes for general applications*

EN 12385-1:2002+A1:2008, *Steel wire ropes — Safety — Part 1: General requirements*

EN 12385-2:2002+A1:2008, *Steel wire ropes — Safety — Part 2: Definitions, designation and classification*

EN ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

ISO 4346:1977, *Steel wire ropes for general purposes — Lubricants — Basic requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100:2010 and EN 12385-2:2002+A1:2008 apply.

ISO and IEC maintain terminology 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/>

4 List of hazards

In addition to the general hazards identified in Clause 4 of Part 1, Table 1 contains all the particular hazards which require action to reduce risk as being specific and significant for steel wire ropes for lifts.