

# SLOVENSKI STANDARD SIST EN 564:2007

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# Gorniška oprema - Pomožna vrv - Varnostne zahteve in preskusne metode

Mountaineering equipment - Accessory cord - Safety requirements and test methods

Bergsteigerausrüstung - Reepschnur - Sicherheitstechnische Anforderungen und Prüfverfahren

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Equipement d'alpinisme et d'escalade Cordelette Exigences de sécurité et méthodes d'essai

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97.220.40 Oprema za športe na

Outdoor and water sports

prostem in vodne športe equipment

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# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

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#### **English Version**

# Mountaineering equipment - Accessory cord - Safety requirements and test methods

Equipement d'alpinisme et d'escalade - Cordelette -Exigences de sécurité et méthodes d'essai Bergsteigerausrüstung - Reepschnur - Sicherheitstechnische Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 25 October 2006.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

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

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# EN 564:2006 (E)

Contents		Page	
Forev	Foreword		
Introduction			
1	Scope	5	
2	Normative references	5	
3	Terms and definitions	5	
4 4.1 4.2 4.3 4.4 5 5.1 5.2	Safety requirements  Diameter Tensile strength Packaging Mass per unit length  Test methods Test sample Conditioning		
5.3 5.4 5.5	Diameter  Determination of tensile strength  Determination of mass per unit length	7 7	
6	Marking	8	
7 Anne	Information supplied by the manufacturer	8	
	x ZA (informative) Relationship between this European Standard and the Essential	10	

SIST EN 564:2007 https://standards.iteh.ai/catalog/standards/sist/11407201-247b-4395-adcd-

c4ca7d4fec9c/sist-en-564-2007

# **Foreword**

This document (EN 564:2006) has been prepared by Technical Committee CEN/TC 136 "Sports, playground and other recreational equipment", the secretariat of which is held by DIN.

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 June 2007, and conflicting national standards shall be withdrawn at the latest by June 2007.

This document supersedes EN 564:1997.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to support Essential Requirements of EU Directive 89/686/EEC.

For relationship with EU Directives, see informative Annex ZA, which is an integral part of this document.

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

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# Introduction

The text of this European Standard is based on the former UIAA-Standard G (Union Internationale des Associations d'Alpinisme), which has been developed with international participation.

This European Standard is one of a package of standards for mountaineering equipment, see Annex A.

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## 1 Scope

This European Standard specifies safety requirements and test methods for accessory cord comprising a core and a sheath, supplied on a drum or in separate lengths, for use in mountaineering including climbing.

#### 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.

EN ISO 139, Textiles — Standard atmospheres for conditioning and testing (ISO 139:2005)

EN ISO 2307:2005, Fibre ropes — Determination of certain physical and mechanical properties (ISO 2307:2005)

#### 3 Terms and definitions

For the purposes of this document, the following term and definition applies.

#### 3.1

# accessory cord iTeh STANDARD PREVIEW

cord or rope, comprising a core and a sheath, that has a nominal diameter of 4 mm to 8 mm and is intended to withstand forces, but not intended to absorb energy sitehai

#### SIST EN 564:2007

# 4 Safety requirements ards.iteh.ai/catalog/standards/sist/11407201-247b-4395-adcd-c4ca7d4fec9c/sist-en-564-2007

#### 4.1 Diameter

The nominal diameter  $d_{\rm nom}$  shall be one of the values given in Table 1.

The limit deviation between the actual value  $d_{\rm eff}$  and the given nominal diameter shall be not more than  $\begin{pmatrix} + & 0.5 \\ - & 0.2 \end{pmatrix}$  mm.

The actual diameter shall be determined according to 5.3.

Table 1 — Nominal diameter and minimum tensile strength

Nominal diameter	Minimum tensile strength
$d_{ m nom} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	$F_{ m Bmin}$ kN
4	3,2
5	5,0
6	7,2
7	9,8
8	12,8

## 4.2 Tensile strength

**4.2.1** The tensile strength of the accessory cord shall be not less than the value of  $F_{\rm B}$ , calculated using Equation (1):

$$F_{\rm B} = d_{\rm nom}^2 \,\mathsf{f} \tag{1}$$

where

 $d_{\text{nom}}$  is the nominal diameter in millimetres;

f is 200 N/mm<sup>2</sup>. **iTeh STANDARD PREVIEW** 

- **4.2.2** The minimum tensile strength of the accessory cord,  $F_{Bmn}$  shall be as given in Table 1 for the appropriate diameter.
- 4.2.3 The tensile strength shall be determined according to 5s4 11407201-247b-4395-adcd-c4ca7d4fec9c/sist-en-564-2007

### 4.3 Packaging

If accessory cord is supplied on a drum and consists of more than one piece, the ends of the pieces shall be clearly visible and not joined together.

No testing required.

#### 4.4 Mass per unit length

This mass shall be given as information according to 7 d).

## 5 Test methods

#### 5.1 Test sample

- **5.1.1** Carry out the tests described in 5.4 on one test sample.
- **5.1.2** Carry out the test described in 5.5 on one test sample.

### 5.2 Conditioning

Condition the test samples as described in EN ISO 139.

Carry out the test at a relative humidity which may be outside the standard atmosphere given in EN ISO 139, but at a temperature of  $(23 \pm 5)$  °C, in which case the test shall begin within 5 min of removal from conditioning atmosphere.

#### 5.3 Diameter

Measure the actual diameter  $d_{\text{eff}}$  under a load of  $(4 \pm 0.05)$  kg after the latter has been applied for  $(60 \pm 15)$  s.

Ensure that the cross-sectional area of the accessory cord is not subjected to any deformation during the measurement.

Take the measurements in two directions around the diameter, starting at points 90° apart, at each of three locations approximately 300 mm apart. The length of the contact areas of the measuring instrument shall be  $(50 \pm 1)$  mm.

Report the arithmetic mean of the six measurements, to the nearest 0,1 mm.

# 5.4 Determination of tensile strength

Carry out the determination of the tensile strength by using a tensile testing machine and fixing devices in accordance with 5.1 of EN ISO 2307:2005.

The minimum free length between attachment points shall be 200 mm.

Determine the loading speed, v, as a function of the free length of the test sample, using Equation (2):

$$v = 0.5 l$$
 with an accuracy of  $\pm 20\%$  ndards.iteh.ai) (2)

where

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v is the loadingrspeed in millimetres/peruminute;ist/11407201-247b-4395-adcd-c4ca7d4fec9c/sist-en-564-2007

is the free length in millimetres between points of attachment.

#### 5.5 Determination of mass per unit length

Carry out the test with a minimum free length between points of attachment of 1 300 mm.

NOTE There is no requirement for any particular type of fixing device.

Load the test sample without shock at a rate not exceeding 1 mm/s by means of a  $(4 \pm 0.05)$  kg test mass.

Retain the maximum load for  $(60 \pm 15)$  s and mark a reference length of  $(1\ 000 \pm 1)$  mm, with a distance between the marks and the points of attachment of at least 100 mm.

Release the load and cut the marked part from the test sample and determine its mass to the nearest 0,1 g.

Report the mass per unit length in grams per metre, to at least two significant figures.

There is no specific requirement for mass per unit length, but it can be marked on the drum or packaging of the accessory cord (see Clause 6).