



SLOVENSKI STANDARD
SIST EN 701:1999
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Vlaknene vrvi za vsakovrstno uporabo - Splošna specifikacija

Fibre ropes for general service - General specification

Faserseile für allgemeine Verwendung - Allgemeine Spezifikation

Cordages en fibres pour usages divers - Spécifications générales

Ta slovenski standard je istoveten z: EN 701:1995

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ICS:

59.080.50 Vrvi Ropes

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EUROPEAN STANDARD

EN 701

NORME EUROPÉENNE

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Descriptors: textiles, cordages, polyethylene, designation, specifications, linear density, breaking loads, marking

English version

Fibre ropes for general service - General specification

Cordages en fibres pour usages divers -
Spécifications généralesFaserseile für allgemeine Verwendung -
Allgemeine Spezifikation

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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.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard has been prepared by the Technical Committee CEN/TC 248 "Textiles and textile products", of which the secretariat 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of an identical text or by endorsement, at the latest by February 1996, and conflicting national standards shall be withdrawn at the latest by February 1996.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

This European standard specifies the general characteristics of fibre ropes for general service whatever their constituent material.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 696	Fibre ropes for general service - Polyamide
EN 697	Fibre ropes for general service - Polyester
EN 698	Fibre ropes for general service - Manila and Sisal
EN 699	Fibre ropes for general service - Polypropylene
EN 700	Fibre ropes for general service - Polyethylene
EN 919	Fibre ropes for general service - Determination of certain physical and mechanical properties
EN 1261	Fibre ropes for general service - Hemp

3 General

Fibre ropes shall conform to the particular specifications given in EN 696, EN 697, EN 698, EN 699, EN 700, EN 919, and EN 1261 and the requirements given in this European Standard.

The following shall be measured under tension:

- linear density;
- lay.

The tension to be used for measurements of the ropes shall be as defined in EN 919.

4 Manufacture

4.1 Constituent materials

4.1.1 Natural fibres (see EN 698)

The constituent yarns of the strands shall be made exclusively of new manila in the case of manila ropes and new sisal in the case of sisal ropes, with an approximate density of:

- manila: 1,35 kg/dm³, in accordance with EN 698;
- sisal: 1,35 kg/dm³, in accordance with EN 698;
- hemp: in accordance with EN 1261.

4.1.2 Man-made fibres

Apart from any identification yarn, the yarns constituting the strands shall conform to the requirements given in table 1.

The rope yarns shall not contain fibres which have been used or recovered.

Table 1: Yarns for man-made fibres

Fibre	Approximate density kg/dm ³	Type of yarn	In accordance with
Polyamide	1,14	Multifilament	EN 696
Polyester	1,38	Multifilament	EN 697
Polypropylene	0,91	Monofilament, multifilament, film, staple fibre	EN 699
Polyethylene	0,96	Monofilament	EN 700

4.2 Construction

Unless otherwise specified, 3-strand or 4-strand laid ropes shall be Z twist (right-hand lay), - see table 2 - their strands S twist and their roping yarns Z twist.

8-strand plaited ropes shall consist of two pairs of S twist strands and two pairs of Z twist strands arranged so that S twist pairs alternate with Z twist pairs.

Each strand shall consist of an equal number of rope yarns sufficient to provide the characteristics specified in the standards dealing with each fibre (see clause 2).

Table 2: 3-strand ropes, 4-strand ropes and 8-strand ropes

	Type A 3-strand ropes	Type B 4-strand ropes ¹⁾³⁾	Type L 8-strand ropes
Rope twist	Z twist in accordance with 4.2		
Rope lay	In accordance with clause 5		
Type of plait	-	-	Strands plaited in pairs
Plait pitch	-	-	In accordance with clause 5
Number of yarns	Not specified, see 4.2		
Rope yarn	Fibre in accordance with clause 3 Purity, type of construction, linear density and twist in accordance with clause 4 All the rope yarns (including the core yarns) to be made up of yarns of the same fibre		
Rope strand	Made by assembling rope yarns Minimum number of yarns: 2 In each strand, the number of filaments shall be the same (for type A and B ropes of reference number 36 or more, as well as for all type L ropes, small deviations are permitted. ²⁾)		
			2 pairs of S twist strands and 2 pairs of Z twist strands
Rope core	-	Cores shall be produced either as a strand or a laid or plaited rope of appropriate diameter	-
¹⁾ Type B may be made without a core. ²⁾ For these ropes, the number of yarns in each strand may differ by $\pm 2,5$ % from the mean number of yarns in a strand. ³⁾ The ropes are coreless when they have 3 strands, but more frequently have a central core when they have 4-strands.			

4.3 Structure

The ropes and their strands shall be continuous, without splice. Yarns may be joined in as necessary.

4.4 Treatment

4.4.1 *Polyamide and polyester ropes*

4.4.1.1 Polyamide and polyester ropes shall contain not more than 0,05 % by mass of titanium dioxide.

4.4.1.2 Laid ropes shall be subjected to heat treatment to fix and lay and dimensional stability. This treatment shall ensure that subsequent shrinkage in use shall be minimal.

The ropes shall be supplied in their natural state, i.e. without any impregnation or coating treatment except at the purchaser's request, they may be coated or impregnated to establish particular characteristics. The treatment applied shall not reduce the tensile strength of the rope.

NOTE: The nature of the coating or impregnation product is at the discretion of the manufacturer.

The increase in mass of the rope due to the treatment shall not exceed 5 % of the mass of the rope in its natural state.

4.4.2 *Polypropylene and polyethylene ropes*

The polypropylene ropes shall be stabilized against deterioration due to sunlight. Any ultra-violet (UV) inhibiting system may be used, such as pigmentation using carbon black, iron (III) oxide (Fe_2O_3) or any other colouring product or special inhibitor.

NOTE: The stabilization of the polyethylene against deterioration due to sunlight may be improved by these systems.

5 Lay

The maximum lay shall be as given in table 3, in which the values are for rope subjected to the tension given in EN 919.