SLOVENSKI STANDARD

SIST EN ISO 22721:2008

01-maj-2008

Naprave za kontinuirni transport - Trakovi traļ nih transportejev - Zahteve za traļ ne transportne trakove z gumeno ali plastiļ no oblogo ter tekstilnim vloģkom za podzemno rudarstvo (ISO 22721:2007)

Conveyor belts - Specification for rubber- or plastics-covered conveyor belts of textile construction for underground mining (ISO 22721:2007)

Fördergurte - Anforderungen an Textilfördergurte mit Gummi- oder Kunststoff-Deckplatten für Anwendungen unter Tage (ISO 22721:2007)

Courroies transporteuses - Spécification pour courroies transporteuses à structure textile recouvertes de caoutchouc ou de plastique, pour utilisation dans les mines souterraines (ISO 22721:2007)

Ta slovenski standard je istoveten z: **EN ISO 22721:2007**

ICS:

53.040.20

73.100.40

SIST EN ISO 22721:2008 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 22721

July 2007

ICS 53.040.20; 73.100.40

English Version

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This European Standard was approved by CEN on 20 June 2007.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, 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.

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

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Ref. No. EN ISO 22721:2007: E

Foreword

This document (EN ISO 22721:2007) has been prepared by Technical Committee CEN/TC 188 "Conveyor belts", the secretariat of which is held by BSI, in collaboration with Technical Committee ISO/TC 41 "Pulleys and belts (including veebelts)".

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 January 2008, and conflicting national standards shall be withdrawn at the latest by January 2008.

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, 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.

INTERNATIONAL STANDARD

ISO 22721

First edition
2007-07-15

Conveyor belts — Specification for rubber- or plastics-covered conveyor belts of textile construction for underground mining

Courroies transporteuses — Spécification pour courroies transporteuses à structure textile recouvertes de caoutchouc ou de plastique, pour utilisation dans les mines souterraines

Reference number
ISO 22721:2007(E)

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Published in Switzerland

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 22721 was prepared by the European Committee for Standardization (CEN) in collaboration with Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 3, *Conveyor belts*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Conveyor belts — Specification for rubber- or plastics-covered conveyor belts of textile construction for underground mining

WARNING — Users of this International Standard should be aware that relevant electrical and flammability safety requirements are given in EN 14973, which specifies safety classes for belts intended for use in underground installations. When contracts are entered into for the purchase of belts for use in underground mining, compliance with both this International Standard and the relevant class in EN 14973 should be specified. Attention is drawn to local regulations for safety which might be in place where the belts are to be used.

1 Scope

This International Standard specifies requirements for rubber- or plastics-covered conveyor belting of textile construction for underground mining on flat or troughed idlers. It is not applicable to light conveyor belts as described in ISO 21183-1.

This International Standard does not include requirements for plastics covers. These will need to be agreed upon by the manufacturer and purchaser, taking into account the type of plastics to be used.

Related items that are not requirements of this International Standard, but which it is recommended be agreed upon by the manufacturer and purchaser, are included in Annex A.

Details recommended to be supplied by the purchaser of belting with an enquiry are given in Annex B.

The ability of a belt to run straight cannot be assessed until the belt is installed. Requirements for this are, therefore, outside the scope of this International Standard; nevertheless, recommendations for lateral drift are given in Annex C.

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.

ISO 37, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties*

ISO 188, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 252, *Conveyor belts — Adhesion between constitutive elements — Test methods*

ISO 282, *Conveyor belts — Sampling*

ISO 283, *Conveyor belts — Full thickness tensile strength, elongation at break and elongation at the reference force — Test method*

ISO 583, *Conveyor belts with a textile carcass — Total belt thickness and thickness of constitutive elements — Test methods*[1)]

ISO 703, *Conveyor belts — Transverse flexibility (troughability) — Test method*

ISO 1120, *Conveyor belts — Determination of strength of mechanical fastenings — Static test method*

ISO 4649:2002, *Rubber, vulcanized or thermoplastic — Determination of abrasion resistance using a rotating cylindrical drum device*

ISO 10247, *Conveyor belts — Characteristics of covers — Classification*

ISO 16851, *Textile conveyor belts — Determination of the net length of an endless (spliced) conveyor belt*

EN 14973:2006, *Conveyor belts for use in underground installations — Electrical and flammability safety requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
slab belting
conveyor belting made in wide widths and long lengths for subsequent slitting and cutting into narrower widths and shorter lengths to suit individual conveyor installations

3.2
solid woven belting
conveyor belting consisting of a carcass of more than one ply, the plies being interlocked in the weave or bound together by binding threads in the course of weaving

3.3
mono-ply belting
conveyor belting with a carcass consisting of one ply of woven textile fabric

3.4
duo-ply belting
conveyor belting with a carcass consisting of two plies of woven textile fabric bonded together by an intermediate layer of elastomer of sufficient thickness to allow the incorporation of a tension element in the joint

3.5
multi-ply belting
conveyor belting with a carcass of two or more plies of woven textile fabric, the adjacent plies being bonded together by an intermediate layer of elastomer

3.6
primary yarn
load-carrying yarn which contributes more than 50 % of the full thickness tensile strength

3.7
secondary yarn
load-carrying yarn which contributes less than 50 % of the full thickness tensile strength

1) To be published. (Revision of ISO 583-1:1999 and ISO 583:1990)

4 Construction

The carcass shall consist either of one or more plies of woven fabric, or of solid woven fabric, and shall be impregnated or coated with a rubber or plastic.

If a breaker consisting of open mesh fabric or cord fabric or cord layer is placed between the cover and carcass, or is embedded in the cover for the purpose of carcass protection, such a layer shall be considered to be part of the cover thickness and shall not be counted as a fabric ply.

If a fabric pile is integrally woven with the carcass on either one or both surfaces of the carcass, it shall be considered to be part of the carcass thickness.

NOTE The external surfaces of the conveyor belt will generally consist of a defined thickness and quality of elastomeric material.

5 Length

5.1 Belting that is ordered to an open-ended length shall be supplied subject to the tolerances in accordance with Table 1.

5.2 The length of belting supplied in the spliced endless form shall be described by the term *net endless length*. The net endless length shall be supplied subject to the tolerances in accordance with Table 2, when measured in accordance with ISO 16851.

It is recommended that, when placing orders for belting, purchasers specify a length of belting that includes such lengths as are required for testing and any additional lengths necessary for vulcanized joints.

Table 1 — Tolerances on open-end lengths of belting

Belt delivery condition	Maximum permissible difference between delivered length and ordered length %
Slab belting	± 5
As one length	$^{+2,5}_{\ \ 0}$
In several lengths:	
for each single length	± 5
for the sum of all lengths	$^{+2,5}_{\ \ 0}$

Table 2 — Tolerances on net endless lengths of belting

Length of belt	Tolerance
⩽ 15 m	± 50 mm
> 15 m and ⩽ 20 m	± 75 mm
> 20 m	± 0,5 %