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)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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)