
**Textile conveyor belts — Full thickness
tensile strength, elongation at break
and elongation at the reference load
— Test method**

*Courroies transporteuses à carcasse textile — Résistance à la traction,
allongement à la rupture et allongement sous force de référence en
pleine épaisseur — Méthode d'essai*



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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 3, *Conveyor belts*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 188, *Conveyor belts*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fifth edition cancels and replaces the fourth edition (ISO 283:2015), which has been technically revised.

The main changes are as follows:

- addition of conditioning period requirement before being sampled in [6.1](#);
- clarification of sample width measuring point in [6.3](#);
- addition of cover reduction requirement in the grip areas in [6.3](#);
- deletion of the humidity requirement in [6.5](#).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Textile conveyor belts — Full thickness tensile strength, elongation at break and elongation at the reference load — Test method

1 Scope

This document specifies a test method for the determination of the full thickness tensile strength in the longitudinal direction and the elongation at the reference force and breaking point of conveyor belts having a textile carcass. The method can also be used for the determination of full thickness tensile strength in the transverse direction and the elongation at the breaking point, for use when the manufacturer is requested by the purchaser to state values for these properties.

This document does not apply to light conveyor belts as described in ISO 21183-1.

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.

ISO 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system*

ISO 18573, *Conveyor belts — Test atmospheres and conditioning periods*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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/>

3.1

tensile strength

greatest measured force during the tensile test divided by the width of the test piece

Note 1 to entry: It is expressed in N/mm.

3.2

nominal tensile strength

specified minimum value of the belt *tensile strength* (3.1)

Note 1 to entry: It is expressed in N/mm.

3.3

reference force

reference load

one-tenth of the *nominal tensile strength* (3.2) in the longitudinal direction multiplied by the width of the test piece in millimetres

EXAMPLE Nominal tensile strength = 1 600 N/mm; one tenth of the nominal tensile strength = 160 N/mm;
reference force for 25 mm test piece = 25 mm × 160 N/mm = 4 000 N.