
**Conveyor belts — Electrical conductivity —
Specification and test method**

*Courroies transporteuses — Conductibilité électrique — Spécification et
méthode d'essai*

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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

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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 284 was prepared by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 3, *Conveyor belts*.

This fourth edition cancels and replaces the third edition (ISO 284:2003), of which it constitutes a minor revision.

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Conveyor belts — Electrical conductivity — Specification and test method

1 Scope

This International Standard specifies the maximum electrical resistance of a conveyor belt and the corresponding test method.

The test is intended to ensure that the belt is sufficiently conductive to avoid the accumulation of electrical static charge which can be developed during service use.

This International Standard is not suitable or applicable to light conveyor belts as described in ISO 21183-1^[1], the static electrical properties of which are measured by ISO 21178^[2].

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

3 Specification

The electrical resistance of the conveyor belt when tested in accordance with the method described in Clause 4 shall not exceed $3 \times 10^8 \Omega$ (300 M Ω). Lower values may be specified for special applications.

4 Test method

4.1 Principle

An electric current of specified voltage is passed via electrodes through a suitably prepared test piece taken from the belt.

4.2 Materials and apparatus

4.2.1 Sheet of insulating material, a little larger than the test piece.

4.2.2 Two cylindrical and coaxial brass electrodes, the base of one being circular and the other annular.

The dimensions and masses are given in Figure 1. The bases of these electrodes shall be machined flat and polished. A flexible insulated wire shall be connected to each electrode.

4.2.3 Ohmmeter (resistance-measuring instrument), with a range up to $10^{10} \Omega$ and accurate to $\pm 5 \%$.

4.2.4 Source of direct current, adjustable to 1 000 V, and not permitting a current greater than 10 mA or causing an energy dissipation of more than 1 W in the test piece.

The source of current may be either an accumulator or a rectified, stabilized AC-power supply.