
**Footwear — Test methods for outsoles —
Abrasion resistance**

*Chaussures — Méthodes d'essai applicables aux semelles d'usure —
Résistance à l'abrasion*



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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 3.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 20871 was prepared by the European Committee for Standardization (as EN 12770:1999) and was adopted, under a special "fast-track procedure", by Technical Committee ISO/TC 216, *Footwear* in parallel with its approval by the ISO member bodies.

Annex A of this International Standard is given for information only.

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 309 "Footwear", the secretariat of which is held by AENOR.

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of an identical text or by endorsement, at the latest by June 2000, and conflicting national standards shall be withdrawn at the latest by June 2000.

This standard is based on ISO 4649:1985 and it contains slight adaptations for the practice of footwear testing.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, 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 a method for the determination of the abrasion resistance for outsoles, irrespective of the 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 12222	Footwear - Standard atmospheres for conditioning and testing of footwear and components for footwear.
prEN 13400:1998	Footwear - Sampling location of components for footwear.
ISO 2420	Leather - Determination of apparent density.
ISO 2781	Rubber vulcanized - Determination of density.
ISO 4649:1985	Rubber - Determination of abrasion resistance using a rotating cylindrical drum device

3 Terms and definitions

For the purposes of this standard the following definitions apply:

3.1

abrasion resistance

the resistance to wear by mechanical action upon a surface

3.2

relative mass loss

the mass loss, in milligrams, of the outsole after being subjected to abrasion by an abrasive cloth will cause the appropriate standard rubber to lose a mass of 200 mg under the preferred conditions, namely a distance of 40 m, a load of 10 N and using a non-rotating test piece