



SLOVENSKI STANDARD SIST EN ISO 13287:2013

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Nadomešča:
SIST EN ISO 13287:2007

Osebna varovalna oprema - Obutev - Preskusna metoda za ugotavljanje upornosti zdrsna (ISO 13287:2012)

Personal protective equipment - Footwear - Test method for slip resistance (ISO 13287:2012)

Persönliche Schutzausrüstung - Schuhe - Prüfverfahren zur Bestimmung der Rutschhemmung (ISO 13287:2012)

Équipement de protection individuelle - Chaussures - Méthode d'essai pour la résistance au glissement (ISO 13287:2012)

Ta slovenski standard je istoveten z: EN ISO 13287:2012

ICS:

13.340.50 Varovanje nog in stopal Leg and foot protection

SIST EN ISO 13287:2013 en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 13287

October 2012

ICS 13.340.50

Supersedes EN ISO 13287:2007

English Version

Personal protective equipment - Footwear - Test method for slip resistance (ISO 13287:2012)

Équipement de protection individuelle - Chaussures -
Méthode d'essai pour la résistance au glissement (ISO
13287:2012)

Persönliche Schutzausrüstung - Schuhe - Prüfverfahren zur
Bestimmung der Rutschhemmung (ISO 13287:2012)

This European Standard was approved by CEN on 14 October 2012.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

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Foreword

This document (EN ISO 13287:2012) has been prepared by Technical Committee CEN/TC 161 "Foot and leg protectors", the secretariat of which is held by BSI, in collaboration with Technical Committee ISO/TC 94 "Personal safety - Protective clothing and equipment".

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of an identical text or by endorsement, at the latest by April 2013, and conflicting national standards shall be withdrawn at the latest by April 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 13287:2007.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive.

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Annex ZA
(informative)
Relationship between this European Standard and the Essential Requirements of EU Directive 89/686/EEC

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to the Essential Requirements of the New Approach Directive (89/686/EEC).

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the clauses of this standard, together with the relevant requirements given in the product standards, confers within the limits of the scope of those standards, a presumption of conformity with the corresponding Essential Requirements of that Directive and associated EFTA regulations."

The clauses of this European Standard specify a test method for the relevant requirement of safety, protective or occupational footwear to support the essential requirement 3.1.2.1 of Directive 89/686/EEC, Annex II.

WARNING: Other requirements and other EU Directives may be applicable to products falling within the scope of this standard.

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INTERNATIONAL STANDARD

ISO
13287

Second edition
2012-10-15

Personal protective equipment — Footwear — Test method for slip resistance

*Équipement de protection individuelle — Chaussures — Méthode
d'essai pour la résistance au glissement*

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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 13287 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 161, *Foot and leg protectors*, in collaboration with ISO Technical Committee ISO/TC 94, *Personal safety — Protective clothing and equipment*, Subcommittee SC 3, *Foot protection*, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 13287:2006), which has been restructured for ease of use, more precisely specified in many areas and technically revised. The main technical revisions are:

- Subclause 4.1.2 and Clause 6 allow the use of the footwear manufacturer's shoemaking last;
- Subclauses 4.5 and 8.9 and Annexes B and D introduce ceramic tile Eurotile 2 as a replacement for Eurotile 1 (Annex C);
- Subclause 6.2.4 changes a timing parameter in the test;
- Subclauses 7.1.6 and 7.2.4 limit the amount of use of footwear and floor specimens before requiring re-preparation;
- Annex E has been added, which amends and supersedes ISO 20344:2011, 5.11.2, including a technical change in E.4.6.

The Bibliography refers to an instructional video available to users of this International Standard.

Personal protective equipment — Footwear — Test method for slip resistance

1 Scope

This International Standard specifies a method of test for the slip resistance of PPE footwear. It is not applicable to special purpose footwear containing spikes, metal studs or similar.

NOTE For product development purposes, sole units or other soling components such as top pieces may be tested.

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 4287, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*

ISO 4662, *Rubber, vulcanized or thermoplastic — Determination of rebound resilience*

3 Terms and definitions (standards.iteh.ai)

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

3.1 <https://standards.iteh.ai/catalog/standards/sist/fe07f9bd-29af-46ea-9ff0-48483f2e71fd/sist-en-iso-13287-2013>
normal force

force applied to the surface through the footwear, perpendicular (90°) to the surface

NOTE The force includes the weight of the footwear, shoemaking last (4.1.1 or 4.1.2) or mechanical foot (4.1.3) and mounting.

3.2
frictional force

force parallel to the surface and against the direction of movement arising when footwear slides over a surface

3.3
coefficient of friction

CoF
 ratio of the frictional force divided by the normal force

3.4
static contact time

time between initial contact of the footwear with the surface achieving a normal force of 50 N and the beginning of movement

3.5
measurement period

time interval during which the frictional force measurement is taken and during which the test conditions are satisfied

3.6
floor

material (flooring), without contaminant (lubricant), to be used as the test surface

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3.7

surface

floor, with or without contaminant (lubricant), against which the footwear is tested

3.8

calibration test value**CTV**

coefficient of friction between the Slider 96¹⁾ and the test surface

4 Apparatus and materials

4.1 One or more of the following foot forms to hold the item of footwear to be tested.

4.1.1 Standard shoemaking last, conforming to Clause A.1.

4.1.2 Manufacturer's shoemaking last used to make the footwear sample to be tested, if required.

4.1.3 Mechanical foot, conforming to the dimensions given in Clause A.2.

4.2 Mechanism for lowering the item of footwear onto the surface and applying the required normal force at the required time in accordance with Clause 6.

4.3 Device for measuring the normal force between the footwear and surface when setting up the test and during the measurement period to an accuracy of 2 % or better.

4.4 Steel floor, consisting of a stainless steel plate.

NOTE 1 For example, steel Number 1.4301, Type 2G (cold rolled ground) conforming to EN 10088-2:2005.

Surface roughness shall be measured in the area where the slip measurements are actually made. Measurements shall be made at 10 locations within this area and in the direction parallel to the sliding movement. At each location, measurements shall be made with a sampling length of 0,8 mm, taking five sampling lengths per location (evaluation length 4,0 mm).

The average roughness, R_z , shall be measured in accordance with ISO 4287. The overall mean value from all 10 locations shall be for R_z between 1,6 μm and 2,5 μm .

When the roughness parameter does not conform to the above specifications, the steel shall be prepared using silicon carbide abrasive paper or cloth for polishing in a succession of reducing grit sizes. The polishing direction of each operation shall be perpendicular to the preceding operation with the final direction being in the test direction. The preparation shall continue until the roughness parameter falls within the above specifications.

NOTE 2 Grit sizes 100 to 600 can be suitable.

4.5 Pressed ceramic tile floor, as specified in either Annex C or Annex D. The tiles shall not be modified in any way, for example, by mechanical or chemical treatment.

4.6 Other floors, for example, wood, concrete, stone, polymeric flooring. The floor shall be characterized by determining the coefficient of friction in accordance with Annex E.

4.7 Mechanism for inducing movement between the footwear and the surface at a time and speed as specified in Clause 6.

1) Slider 96 (formerly known as Four S rubber) is the trade name of a product supplied by Rapra (www.rapra.net). This information is given for the convenience of users of this document and does not constitute an endorsement by ISO of the product named. Equivalent products may be used if they can be shown to lead to the same results.