DRAFT INTERNATIONAL STANDARD ISO/DIS 20346

ISO/TC **94**/SC **3** Secretariat: **BSI**

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Personal protective equipment — Protective footwear

Équipement de protection individuelle — Chaussures de protection

[Revision of first edition (ISO 20346:2004)]

ICS 13.340.50

ISO/CEN PARALLEL PROCESSING

This draft has been developed within the European Committee for Standardization (CEN), and processed under the **CEN-lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five-month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

In accordance with the provisions of Council Resolution 15/1993 this document is circulated in the English language only.

Conformément aux dispositions de la Résolution du Conseil 15/1993, ce document est distribué en version anglaise seulement.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.

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Foreword

ISO 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 20346 was prepared by Technical Committee ISO/TC 94, *Personal safety - Protective clothing and equipment*, Subcommittee SC 3, and by Technical Committee CEN/TC 161, *Foot and leg protectors* in collaboration.

This second edition cancels and replaces the first edition (2004), which has been technically revised.

CEN Foreword

This document (prEN ISO 20346:2009) 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 xxx, and conflicting national standards shall be withdrawn at the latest by xxx.

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(s).

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

In conjunction with EN ISO 20344: 2004, this standard supersedes EN ISO 20346: 2004 + EN ISO 20344:2004/AC:2005 + EN ISO 20344:2004/A1:2007

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

1 Scope

This European Standard specifies basic and additional (optional) requirements for protective footwear.

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.

prEN 12568:2008[1)] *Foot and leg protectors – Requirements and test methods for toecaps and penetration resistant inserts*

prEN ISO 20344:2009[2)] *Personal protective equipment – Test methods for footwear*

3 Terms and definitions

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

NOTE The component parts of footwear are illustrated in figures 1 and 2.

3.1
protective footwear
footwear, incorporating protective features to protect the wearer from injuries which could arise through accidents, fitted with toecaps, designed to give protection against impact when tested at an energy level of at least 100 J and against compression when tested at a compression load of at least10 kN

3.2
leather

3.2.1
leather
hide or skin tanned to be imputrescible

3.2.2
leather split
flesh or middle part of a hide or skin tanned to be imputrescible obtained by splitting a thick leather

3.3
rubber
vulcanized elastomers

3.4
polymeric materials
for example polyurethane or polyvinylchloride

3.5
insole
non-removable component used to form the base of the shoe to which the upper is usually attached during lasting

1) Revision of EN 12568: 1998, currently at the stage of Enquiry

2) Revision of EN ISO 20344: 2004, currently at the stage of parallel Enquiry

3.6
insock
removable or permanent footwear component used to cover part or all of the insole

3.7
lining
material covering the inner surface of the upper

NOTE 1 The wearer's foot is in direct contact with the lining.

NOTE 2 Where an upper is split at the forepart to house the toecap, or if an external piece of material is stitched to the upper to form a pocket to house the toecap, the material under the toecap acts as a lining.

3.7.1
vamp lining
material covering the inner surface of the forepart of the upper

3.7.2
quarter lining
material covering the inner surface of the quarters of the upper

3.8
cleat(s)
protruding part(s) of the outer surface of the sole

3.9
rigid outsole
sole which, when the complete footwear is tested in accordance with prEN ISO 20344:2009, 8.4.1, can not be bent through an angle of 45° under a load of 30 N

3.10
cellular outsole
outsole having a density of 0,9 g/ml or less with a cell structure visible under 10x magnification

3.11
penetration-resistant insert
footwear component placed in the sole complex in order to provide protection against penetration

3.12
protective toecap
footwear component built into the footwear designed to protect the toes of the wearer from impacts up to an energy level of at least100 J and compression at a load of at least10 kN

3.13
seat region
rear quarter of the total length of the footwear (upper and sole)

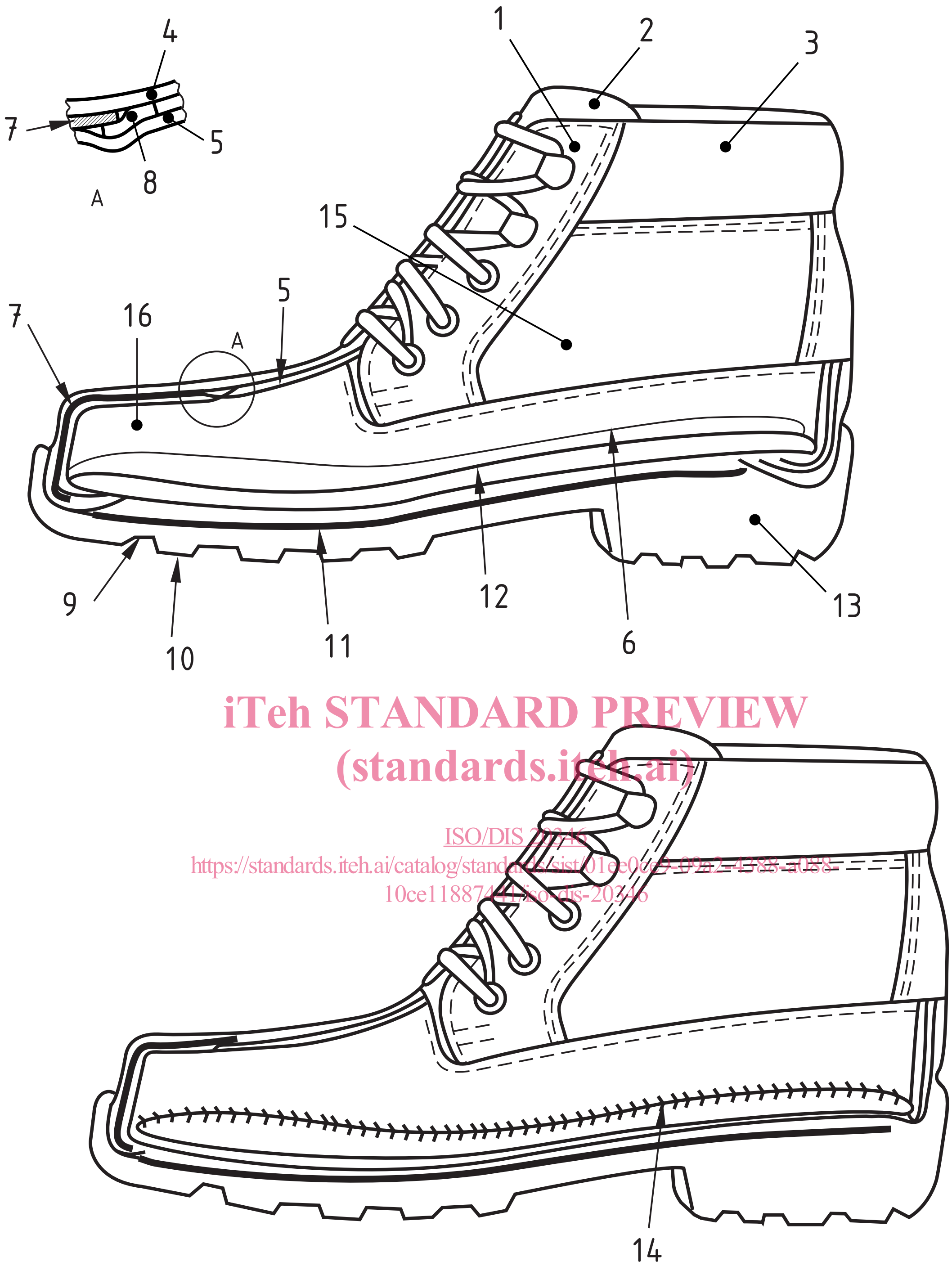
3.14
conductive footwear
footwear whose resistance, when measured according to prEN ISO 20344:2009, 5.10, lies in the range of 0 to 100 kΩ

3.15
antistatic footwear
footwear whose resistance, when measured according to prEN ISO 20344:2009, 5.10, lies above 100 kΩ and is less than or equal to 1 000 MΩ

3.16
electrically insulating footwear
footwear which protects the wearer against electrical shocks by preventing the passage of dangerous current through the body via the feet

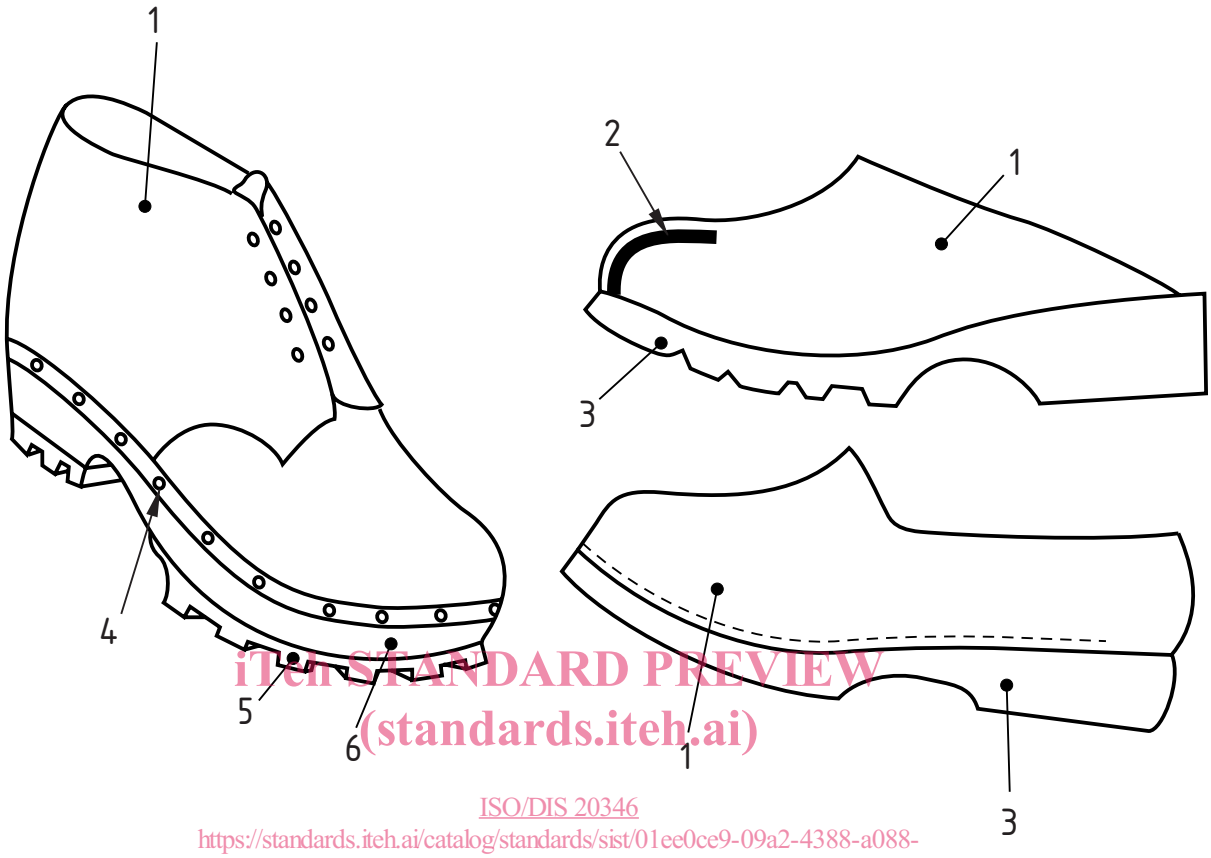
3.17
fuel oil
aliphatic hydrocarbon constituent of petroleum

3.18
specific job related footwear
safety, protective or occupational footwear relating to a specific profession, e.g. footwear for firefighters, footwear with resistance to chain saw cutting, etc.



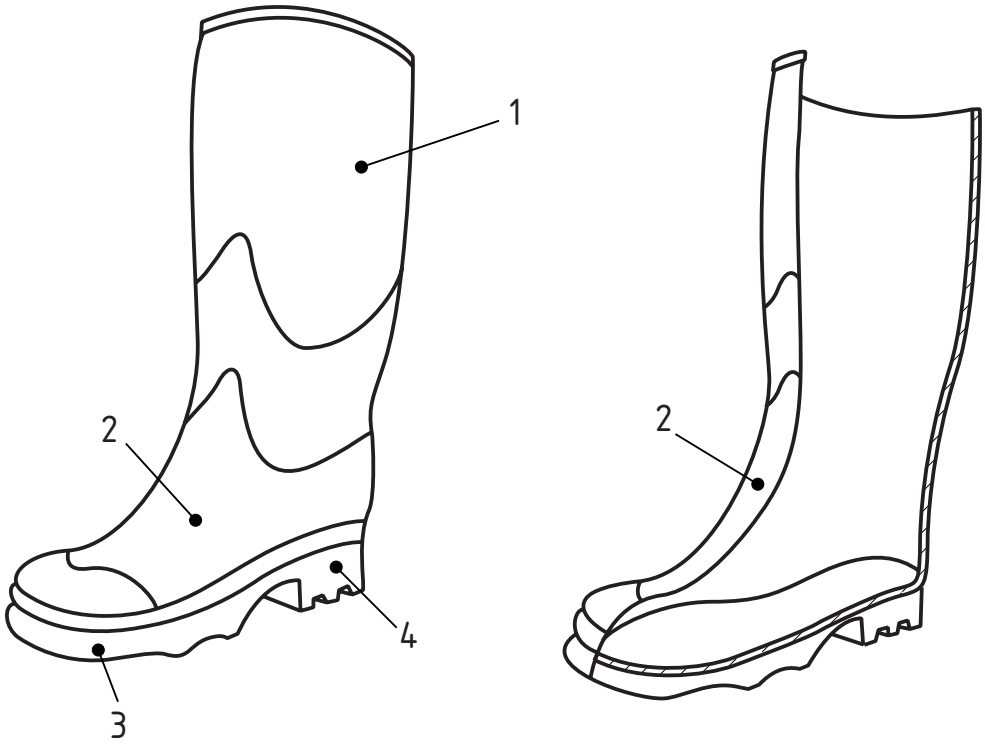
1	Facing	6	Insock	11	Penetration-resistant insert
2	Tongue	7	Toecap	12	Insole
3	Collar	8	Edge covering, e.g. foam strip	13	Heel
4	Upper	9	Outsole	14	Strobel stitching
5	Vamp lining	10	Cleat	15	Quarter
				16	Vamp

Figure 1a) Parts of footwear of Strobel construction



1	Upper	3	Rigid sole	5	Outsole
2	Toecap	4	Reinforcing welt with nails	6	Wooden sole

Figure 1b) Parts of footwear of conventional construction



1	Upper	3	Outsole
2	Vamp	4	Heel

Figure 2 — Parts of all-rubber (i.e. vulcanized) or all polymeric (i.e. entirely moulded) footwear