INTERNATIONAL STANDARD

ISO 20347

First edition
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Personal protective equipment — Occupational footwear

Équipement de protection individuelle — Chaussures de travail

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Foreword

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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 20347 was prepared by the European Committee for Standardization (CEN) in collaboration with 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).

Throughout the text of this document, read "...this European Standard..." to mean "...this International Standard...".

This first edition of ISO 20347 cancels and replaces ISO 8782-4:1998, which has been technically revised.

For the purposes of this International Standard the CEN annex regarding fulfilment of European Council Directives has been removed.

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Foreword

This document (EN ISO 20347:2004) 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of an identical text or by endorsement, at the latest by February 2005, and conflicting national standards shall be withdrawn at the latest by August 2005.

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).

In conjunction with EN ISO 20344:2004, this standard supersedes EN 347:1992 and EN 347-2:1996.

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

1 Scope

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

EN 12568: 1998, *Foot and leg protectors – Requirements and test methods for toecaps and metal penetration resistant inserts*

EN ISO 20344:2004, *Personal protective equipment - Test methods for footwear (ISO 20344:2004)*

3 Terms and definitions

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

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

3.1
occupational footwear
footwear, incorporating protective features to protect the wearer from injuries which could arise through accidents

3.2
leather

3.2.1
full grain leather
hide or skin tanned to be imputrescible having conserved the totality of its grain

3.2.2
corrected grain leather
hide or skin tanned to be imputrescible which has been subjected to mechanical buffing to modify its grain structure

3.2.3
leather split
flesh or middle part of a hide or skintanned 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

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 EN ISO 20344:2004, 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
seat region
backpart of the footwear (upper and sole)

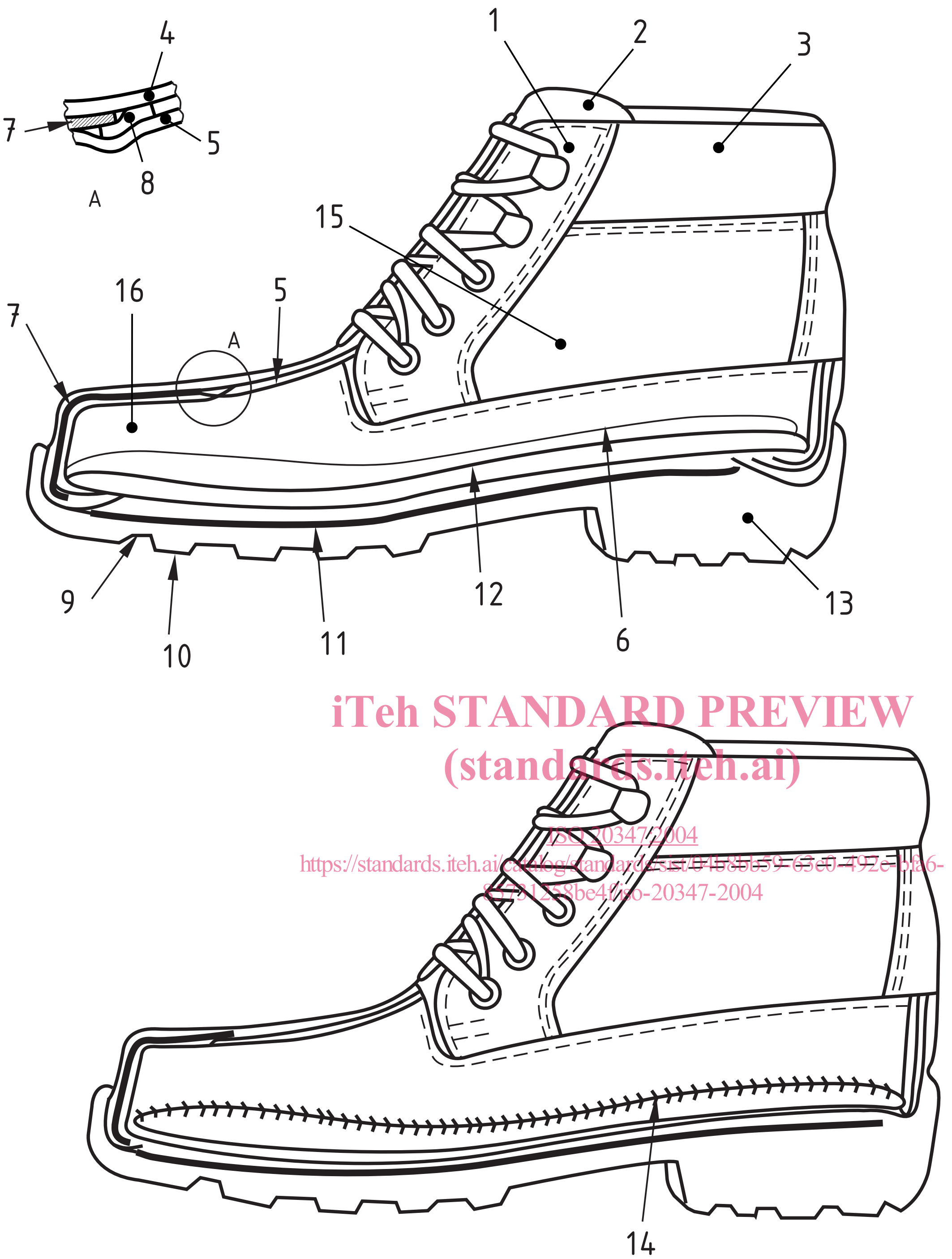
3.13
conductive footwear
footwear whose resistance, when measured according to EN ISO 20344:2004, 5.10, lies in the range of 0 to 100 kΩ

3.14
antistatic footwear
footwear whose resistance, when measured according to EN ISO 20344:2004, 5.10, lies above 100 kΩ and is less than or equal to 1 000 MΩ

3.15
electrically insulating footwear
denotes footwear which protects the wearer against electrical shocks by preventing the passage of dangerous current through the body via the feet

3.16
fuel oil
aliphatic hydrocarbon constituent of petroleum

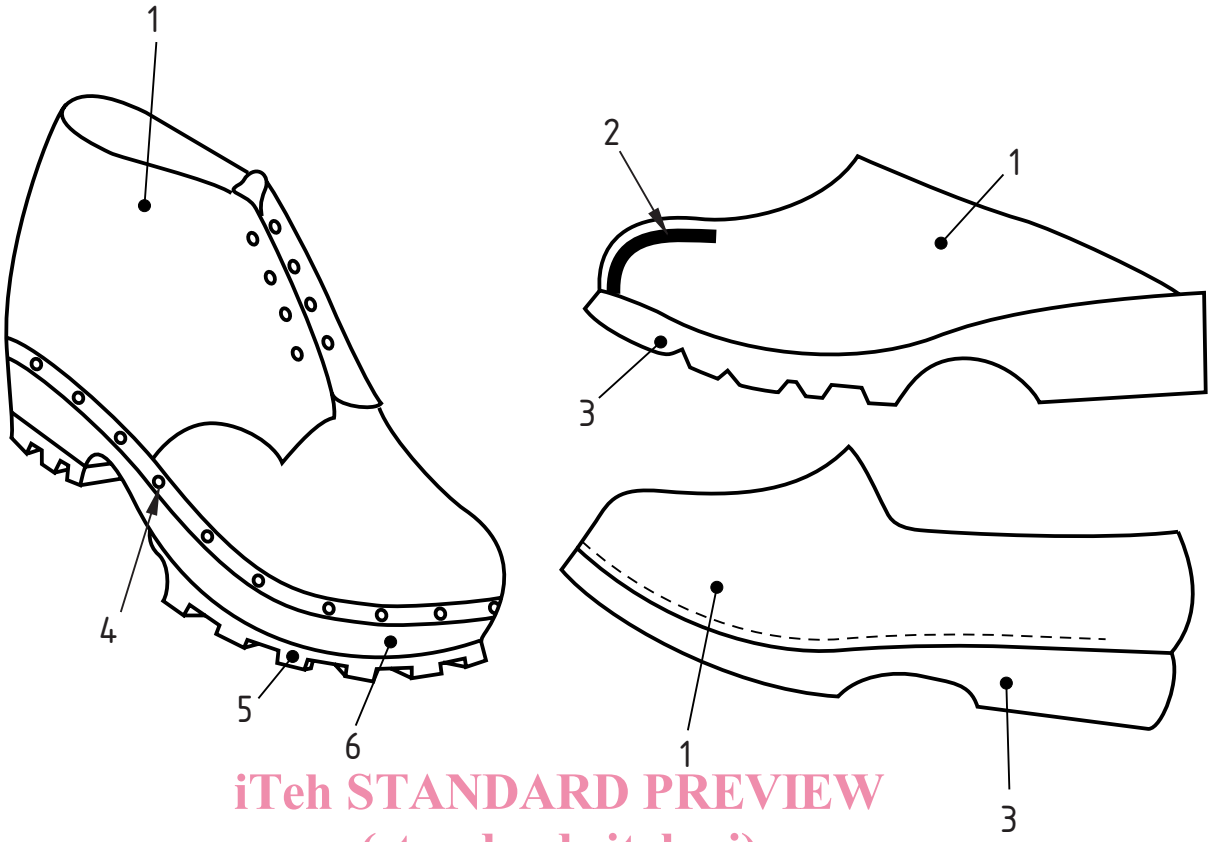
3.17
specific job related footwear
safety, protective or occupational footwear relating to a specific profession, e.g. footwear for firefighters, footwear with resistance to chain saw cutting, etc.



Key

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

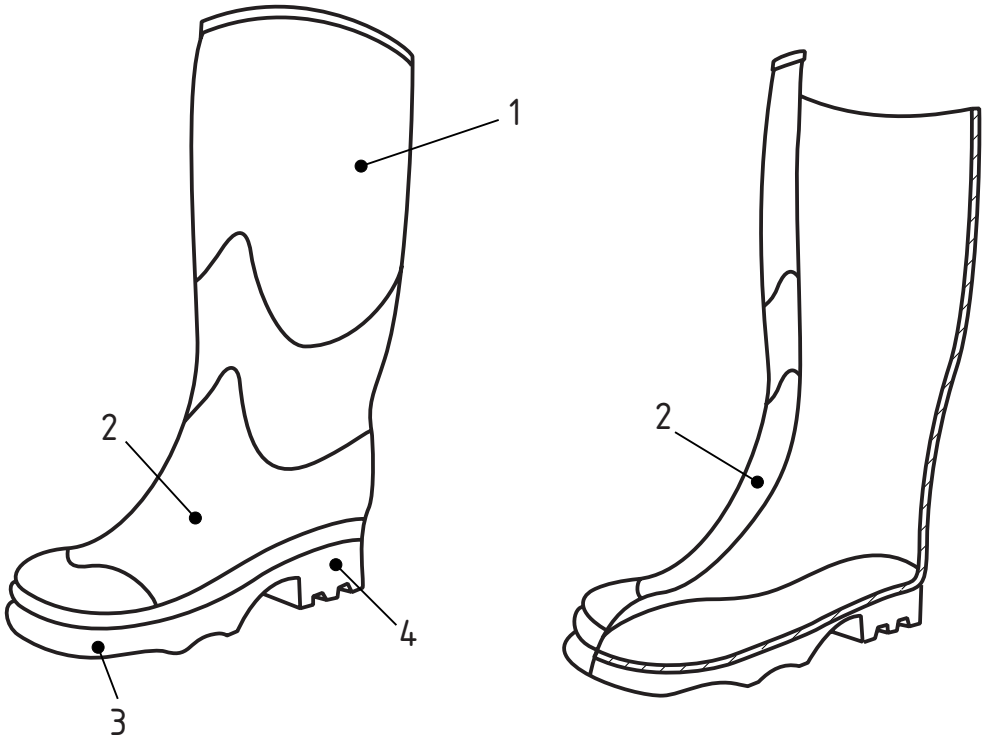
Figure 1a) Parts of footwear of Strobel construction



Key

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



Key			
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