SLOVENSKI STANDARD
SIST EN ISO 20345:2004

01-oktober-2004

Osebna varovalna oprema - Zaġḷ itna obutev (ISO 20345:2004)

Personal protective equipment - Safety footwear - (ISO 20345:2004)

Persönliche Schutzausrüstung - Sicherheitsschuhe (ISO 20345:2004)

Équipement de protection individuelle - Chaussures de sécurité (ISO 20345:2004)

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Ta slovenski standard je istoveten z: EN ISO 20345:2004

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ICS:

13.340.50 Varovanje nog in stopal Leg and foot protection

SIST EN ISO 20345:2004 en

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 20345

August 2004

ICS 13.340.50

Supersedes EN 345:1992, EN 345-2:1996

English version

Personal protective equipment - Safety footwear (ISO 20345:2004)

Équipement de protection individuelle - Chaussures de sécurité (ISO 20345:2004)

Persönliche Schutzausrüstung - Sicherheitsschuhe (ISO 20345:2004)

This European Standard was approved by CEN on 2 January 2004.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN ISO 20345:2004) 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of an identical text or by endorsement, at the latest by February 2005, and conflicting national standards shall be withdrawn at the latest by August 2005.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).

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 345:1992 and EN 345-2:1996.

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.

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1 Scope

This European Standard specifies basic and additional (optional) requirements for safety 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 European Standard, the following terms and definitions apply.

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

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3.1
safety 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 200 J and against compression when tested at a compression load of at least 15 kN

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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 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

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

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

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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
safety toecap
footwear component built into the footwear designed to protect the toes of the wearer from impacts up to an energy level of at least 200 J and compression at a load of at least 15 kN

3.13
seat region
back part of the footwear (upper and sole)

3.14
conductive footwear
footwear whose resistance, when measured according to EN ISO 20344:2004, 5.10, lies in the range of 0 to 100 kΩ

3.15
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

3.16
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.

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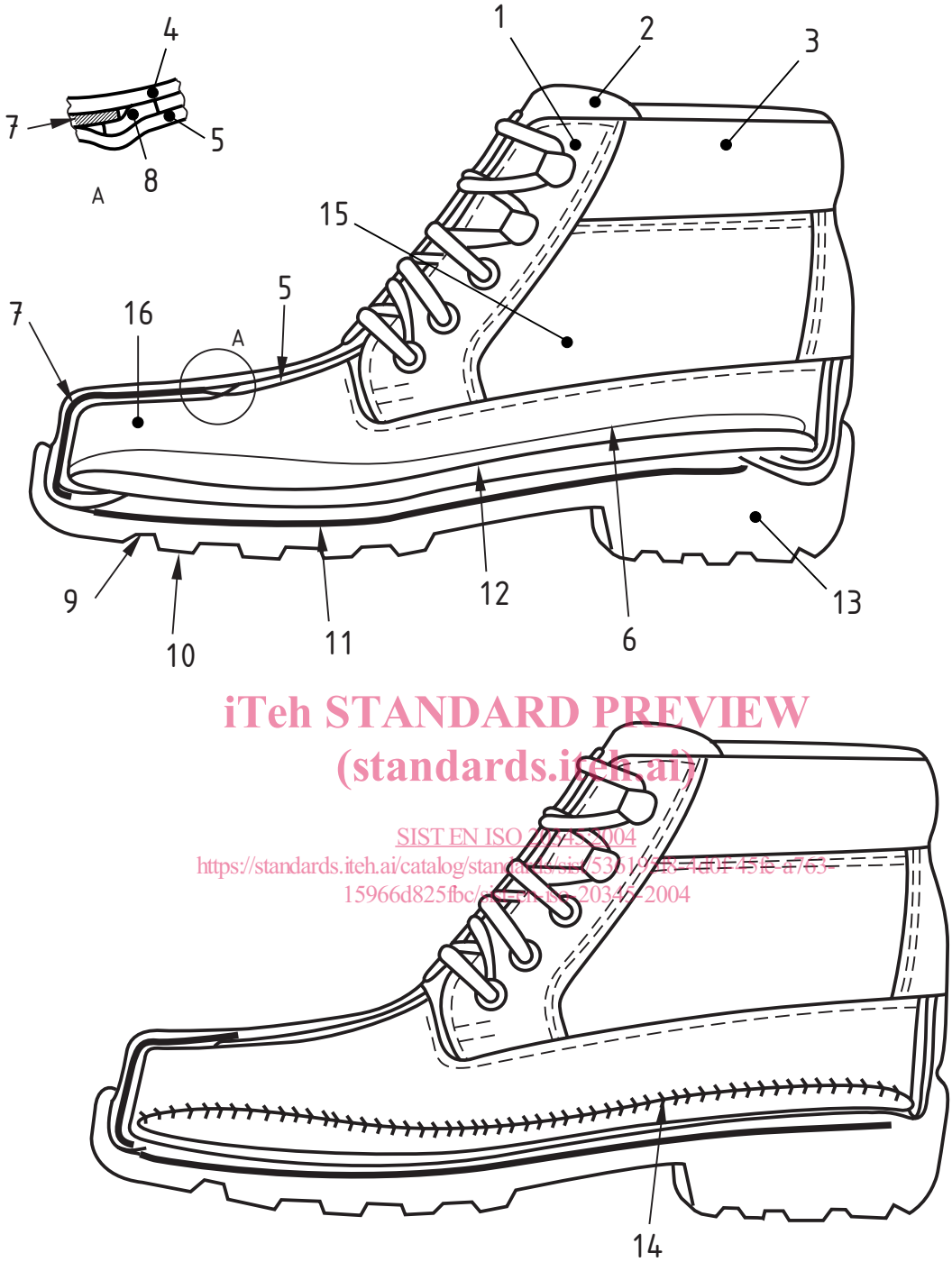

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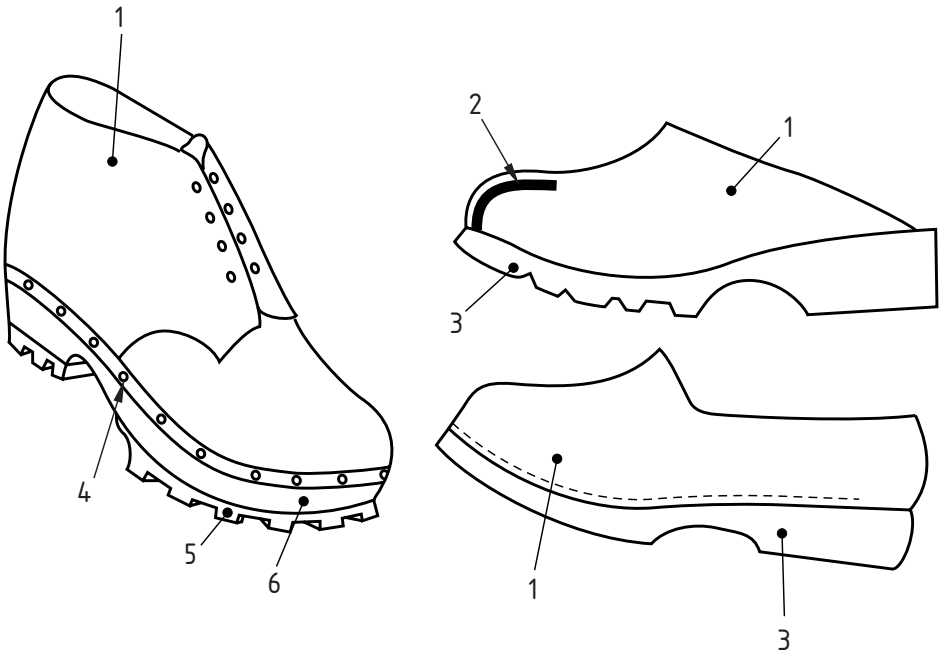
Key

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

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Figure 1b) Parts of footwear of conventional construction

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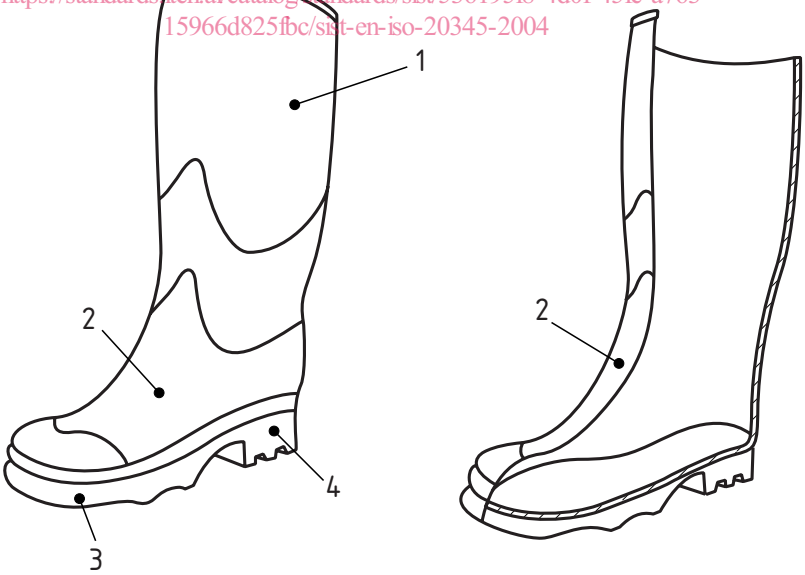

1	Upper	3	Outsole
2	Vamp	4	Heel

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

4 Classification

Footwear shall be classified in accordance with table 1.

Table 1 — Classification of footwear

Code designation	Classification
I	Footwear made from leather and other materials, excluding all-rubber or all-polymeric footwear
II	All-rubber (i.e. entirely vulcanized) or all-polymeric (i.e. entirely moulded) footwear

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1 Variable extension which can be adapted to the wearer

A Low shoe
B Ankle boot
C Half-knee boot
D Knee-height boot
E Thigh boot

NOTE Design *E* can be a knee-height boot (design *D*) equipped with a thin impermeable material which extends the upper and which can be cut to adapt the boot to the wearer

Figure 3 — Designs of footwear