SLOVENSKI STANDARD
SIST EN 13832-2:2006

01-december-2006

Obutev za varovanje pred kemikalijami - 2. del: Zahteve za obutev, odporno proti kemikalijam pri laboratorijskih razmerah

Footwear protecting against chemicals - Part 2: Requirements for footwear resistant to chemicals under laboratory conditions

Schuhe zum Schutz gegen Chemikalien - Teil 2: Anforderungen an Schuhe, die gegen Chemikalien unter Laborbedingungen widerstandsfähig sind

Chaussure protégeant contre les produits chimiques - Partie 2: Exigences pour les chaussures résistant aux produits chimiques dans des conditions de laboratoire

Ta slovenski standard je istoveten z: EN 13832-2:2006

ICS:

13.340.50 Zaġ ļ itna obutev Protective footwear

SIST EN 13832-2:2006 en

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13832-2

August 2006

ICS 13.340.50

English Version

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This European Standard was approved by CEN on 1 August 2006.

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.

CEN members are the national standards bodies of Austria, Belgium, 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.

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COMITÉ EUROPÉEN DE NORMALISATION
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Ref. No. EN 13832-2:2006: E

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Foreword

This document (EN 13832-2:2006) has been prepared by Technical Committee CEN/TC 161 “Foot and leg protectors”, the secretariat of which is held by BSI.

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 2007, and conflicting national standards shall be withdrawn at the latest by February 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(s).

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

EN 13832, *Footwear protecting against chemicals*, is published in three parts

— Part 1 : *Terminology and test methods*

— Part 2 : *Requirements for footwear resistant to chemicals under laboratory conditions*

— Part 3 : *Requirements for footwear highly resistant to chemicals under laboratory conditions*

This standard is intended for use in conjunction with EN ISO 20345, EN ISO 20346 and EN ISO 20347.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This standard specifies requirements for footwear to protect the user against specific chemicals.

This standard does not apply to footwear with leather outsoles.

NOTE Requirements for slip resistance are not given in the current (2004) editions of EN ISO 20345, EN ISO 20346 or EN ISO 20347. CEN/TC 161 Working Group 3 is continuing its work to develop slip requirements and it is expected that EN 13832-2 will be amended as soon as this work is finished.

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 13832-1:2006, *Footwear protecting against chemicals - Part 1: Terminology and test methods*

EN ISO 868, *Plastics and ebonite - Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868:2003)*

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

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

EN ISO 20346: 2004, *Personal protective equipment - Protective footwear (ISO 20346:2004)*

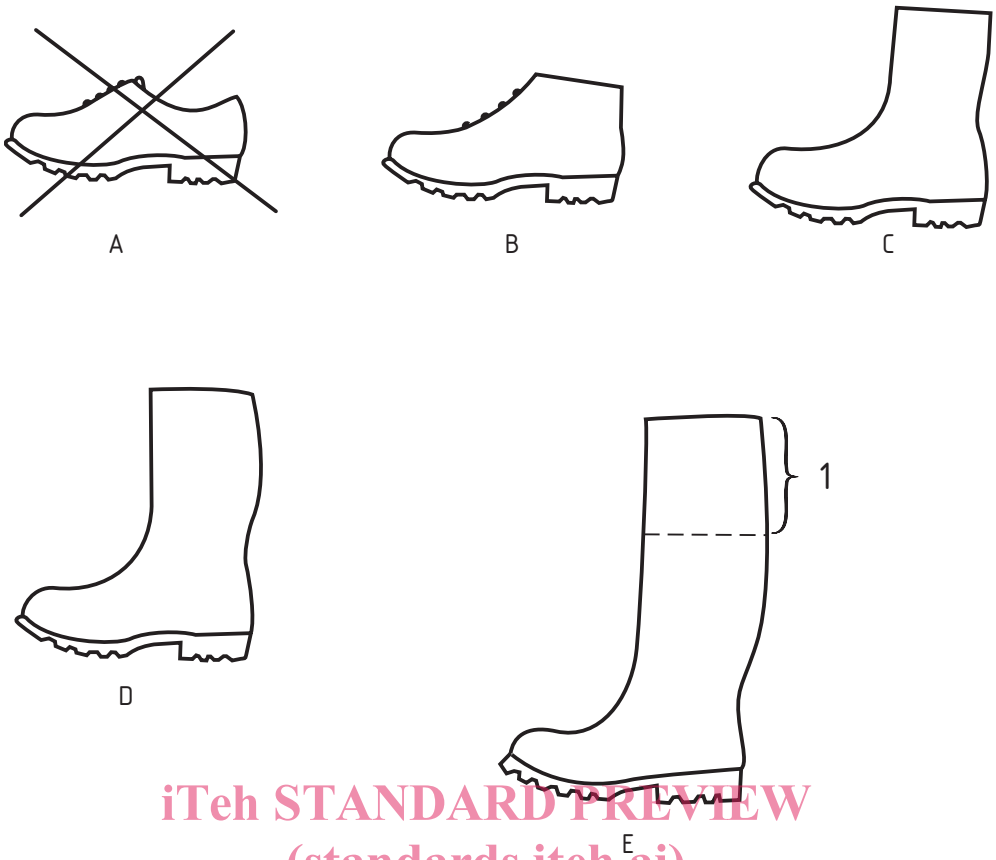
EN ISO 20347: 2004, *Personal protective equipment - Occupational footwear (ISO 20347:2004)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13832-1: 2006 and EN ISO 20345:2004 apply.

4 Design

For footwear protecting against chemicals, only designs B, C, D or E in Figure 1 shall be used.



Key

1 variable extension that 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 is a knee-height boot (design D) equipped with a thin impermeable material that extends the upper and that can be cut to adapt the boot to the wearer.

Figure 1 — Designs of footwear

5 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 and all-polymeric footwear
II	All-rubber (i.e. entirely vulcanized) and all-polymeric footwear (i.e. entirely moulded) footwear

6 Requirements

6.1 Basic requirements

Footwear protecting against chemicals shall conform to the requirements specified in Table 2.

Footwear protecting against chemicals may or may not include a toe cap. The choice shall be made from one of the three columns (EN ISO 20345, EN ISO 20346 or EN ISO 20347) in Table 2.

Table 2 — Basic requirements for footwear protecting against chemicals

Requirements			Reference				Classification	
			EN ISO 20345: 2004	EN ISO 20346: 2004	EN ISO 20347: 2004	EN 13832-2: 2006	I	II
General	Whole footwear	Types and classifications				4 and 5	X	X
		Height of upper	5.2.1	5.2.1	5.2.1		X	X
		Specific ergonomic features	5.3.4	5.3.4	5.3.3		X	X
		Leakproofness	5.3.3	5.3.3	5.3.2			X
		Water resistance	6.2.5	6.2.5	6.2.5		X	
	Seat region	Designs B, C and D (Figure 1)	5.2.2	5.2.2	5.2.2		X	X
		Design E (Figure 1)	5.2.2	5.2.2	5.2.2			X
Whole footwear	Sole performance	Construction	5.3.1.1	5.3.1.1	5.3.1.1		X	
		Upper/outsole bond strength	5.3.1.2	5.3.1.2	5.3.1.2		X	
		Slip resistance				scope	X	X
	Toe Protection	General	5.3.2.1	5.3.2.1			X	X
		Toe cap length	5.3.2.2	5.3.2.2			X	X
		Impact resistance	5.3.2.3	5.3.2.3			X	X
		Compression resistance	5.3.2.4	5.3.2.4			X	X
		Corrosion resistance of metal toe caps	5.3.2.5	5.3.2.5			X	X
		Non- metallic toe caps	5.3.2.6	5.3.2.6				
	Resistance of whole footwear to chemicals					6.2	X	X
Upper		General	5.4.1	5.4.1	5.4.1		X	X
		Thickness	5.4.2	5.4.2	5.4.2			X
		Tear strength	5.4.3	5.4.3	5.4.3		X	
		Tensile properties	5.4.4	5.4.4	5.4.4		X	X
		Flexing resistance	5.4.5	5.4.5	5.4.5			X
		pH value	5.4.7	5.4.7	5.4.7		X	
		Chromium VI	5.4.9	5.4.9	5.4.9		X	
		Water penetration and water absorption	6.3.1	6.3.1	6.3.1		X	
		Upper construction	6.3.2	6.3.2	6.3.2		X	
Vamp lining		Tear strength	5.5.1	5.5.1	5.5.1		O	
		Abrasion resistance	5.5.2	5.5.2	5.5.2		O	
		pH value	5.5.4	5.5.4	5.5.4		O	
		Chromium VI	5.5.5	5.5.5	5.5.5		O	
Quarter lining		Tear strength	5.5.1	5.5.1	5.5.1		O	
		Abrasion resistance	5.5.2	5.5.2	5.5.2		O	
		pH value	5.5.4	5.5.4	5.5.4		O	
		Chromium VI	5.5.5	5.5.5	5.5.5		O	
Tongue		Tear strength	5.6.1	5.6.1	5.6.1		O	
		pH value	5.6.2	5.6.2	5.6.2		O	
		Chromium VI	5.6.3	5.6.3	5.6.3		O	
Insole/insocks		See Table 3						