

Nederlandse norm

# **NEN-EN 13832-3**

(en)

Footwear protecting against chemicals - Part 3:  
Requirements for footwear highly resistant to  
chemicals under laboratory conditions

Vervangt NEN-EN 13832-3:2004 Ontw.

ICS 13.340.50  
september 2006

Als Nederlandse norm is aanvaard:  
 - EN 13832-3:2006, IDT

Voorbeeld  
 Preview

Normcommissie 302 094 "Persoonlijke beschermingsmiddelen"

---

Apart from exceptions provided by the law, nothing from this publication may be duplicated and/or published by means of photocopy, microfilm, storage in computer files or otherwise, which also applies to full or partial processing, without the written consent of the Netherlands Standardization Institute.

The Netherlands Standardization Institute shall, with the exclusion of any other beneficiary, collect payments owed by third parties for duplication and/or act in and out of law, where this authority is not transferred or falls by right to the Reproduction Rights Foundation.

---

Auteursrecht voorbehouden. Behoudens uitzondering door de wet gesteld mag zonder schriftelijke toestemming van het Nederlands Normalisatie-instituut niets uit deze uitgave worden verveelvoudigd en/of openbaar gemaakt door middel van fotokopie, microfilm, opslag in computerbestanden of anderszins, hetgeen ook van toepassing is op gehele of gedeeltelijke bewerking.

Het Nederlands Normalisatie-instituut is met uitsluiting van ieder ander gerechtigd de door derden verschuldigde vergoedingen voor verveelvoudiging te innen en/of daartoe in en buiten rechte op te treden, voor zover deze bevoegdheid niet is overgedragen c.q. rechtens toekomt aan de Stichting Reprorecht.

---

Although the utmost care has been taken with this publication, errors and omissions cannot be entirely excluded. The Netherlands Standardization Institute and/or the members of the committees therefore accept no liability, not even for direct or indirect damage, occurring due to or in relation with the application of publications issued by the Netherlands Standardization Institute.

---

Hoewel bij deze uitgave de uiterste zorg is nagestreefd, kunnen fouten en onvolledigheden niet geheel worden uitgesloten. Het Nederlands Normalisatie-instituut en/of de leden van de commissies aanvaarden derhalve geen enkele aansprakelijkheid, ook niet voor directe of indirecte schade, ontstaan door of verband houdend met toepassing van door het Nederlands Normalisatie-instituut gepubliceerde uitgaven.

## Nederlands voorwoord

Voor de in deze norm vermelde normatieve verwijzingen bestaan in Nederland de volgende equivalenten:

<u>vermelde norm</u>	<u>Nederlandse norm</u>	<u>titel</u>
EN 13832-1:2006	NEN-EN 13832-1	Schoeisel voor de bescherming tegen chemicaliën - Deel 1: Terminologie en beproevingsmethoden (en)
EN ISO 868	NEN-EN-ISO 868	Kunststoffen en eboniet - Bepaling van de indrukhardheid met behulp van een hardheidsmeter (Shore-hardheid) (en)
EN ISO 20344:2004	NEN-EN-ISO 20344:2004	Persoonlijke beschermingsmiddelen - Beproevingmethoden voor schoeisel (en)
EN ISO 20345:2004	NEN-EN-ISO 20345:2004	Persoonlijke beschermingsmiddelen - Veiligheidsschoeisel (en)
EN ISO 20346:2004	NEN-EN-ISO 20346:2004	Persoonlijke beschermingsmiddelen - Beschermend schoeisel (en)
EN ISO 20347:2004	NEN-EN-ISO 20347:2004	Persoonlijke beschermingsmiddelen - Werkschoeisel (en)

Preview

Voorbeeld  
Preview

ICS 13.340.50

English Version

Footwear protecting against chemicals - Part 3: Requirements  
for footwear highly resistant to chemicals under laboratory  
conditions

Chaussure protégeant contre les produits chimiques -  
Partie 3: Exigences pour les chaussures hautement  
résistantes aux produits chimiques dans des conditions de  
laboratoire

Schuhe zum Schutz gegen Chemikalien - Teil 3:  
Anforderungen an Schuhe, die gegen Chemikalien unter  
Laborbedingungen hochwiderstandsfähig sind

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.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

**Contents**

Page

<b>FOREWORD</b> .....	<b>3</b>
<b>1 SCOPE</b> .....	<b>4</b>
<b>2 NORMATIVE REFERENCES</b> .....	<b>4</b>
<b>3 TERMS AND DEFINITIONS</b> .....	<b>4</b>
<b>4 DESIGN</b> .....	<b>4</b>
<b>5 CLASSIFICATION</b> .....	<b>4</b>
<b>6 REQUIREMENTS</b> .....	<b>5</b>
6.1 BASIC REQUIREMENTS.....	5
6.2 WHOLE FOOTWEAR.....	7
6.2.1 <i>Chemicals</i> .....	7
6.2.2 <i>Degradation resistance</i> .....	8
6.2.3 <i>Permeation resistance</i> .....	9
6.3 OUTSOLE.....	10
<b>7 ADDITIONAL REQUIREMENTS FOR FOOTWEAR HIGHLY RESISTANT TO CHEMICALS ...</b>	<b>10</b>
<b>8 MARKING</b> .....	<b>11</b>
<b>9 INSTRUCTIONS FOR USE AND RELATED INFORMATION</b> .....	<b>11</b>
9.1 GENERAL.....	11
9.2 INSTRUCTIONS FOR USE AND RELATED INFORMATION.....	12
9.3 ELECTRICAL PROPERTIES.....	12
9.4 PROPERTIES OF PROTECTION AGAINST CHEMICALS.....	12
9.5 INSOCKS.....	13
<b>ANNEX ZA (INFORMATIVE) RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE ESSENTIAL REQUIREMENTS OF EU DIRECTIVE 89/686/EEC PERSONAL PROTECTIVE EQUIPMENT</b> .....	<b>14</b>
<b>BIBLIOGRAPHY</b> .....	<b>15</b>

## Foreword

This document (EN 13832-3:2006) 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 all-rubber and all-polymeric footwear constructed to be highly resistant to specific chemicals.

This standard does not cover footwear made from leather.

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 13832-3 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 in EN ISO 20345:2004 apply.

## 4 Design

For footwear highly resistant to chemicals, only designs C, D or E in Figure 1 shall be used.

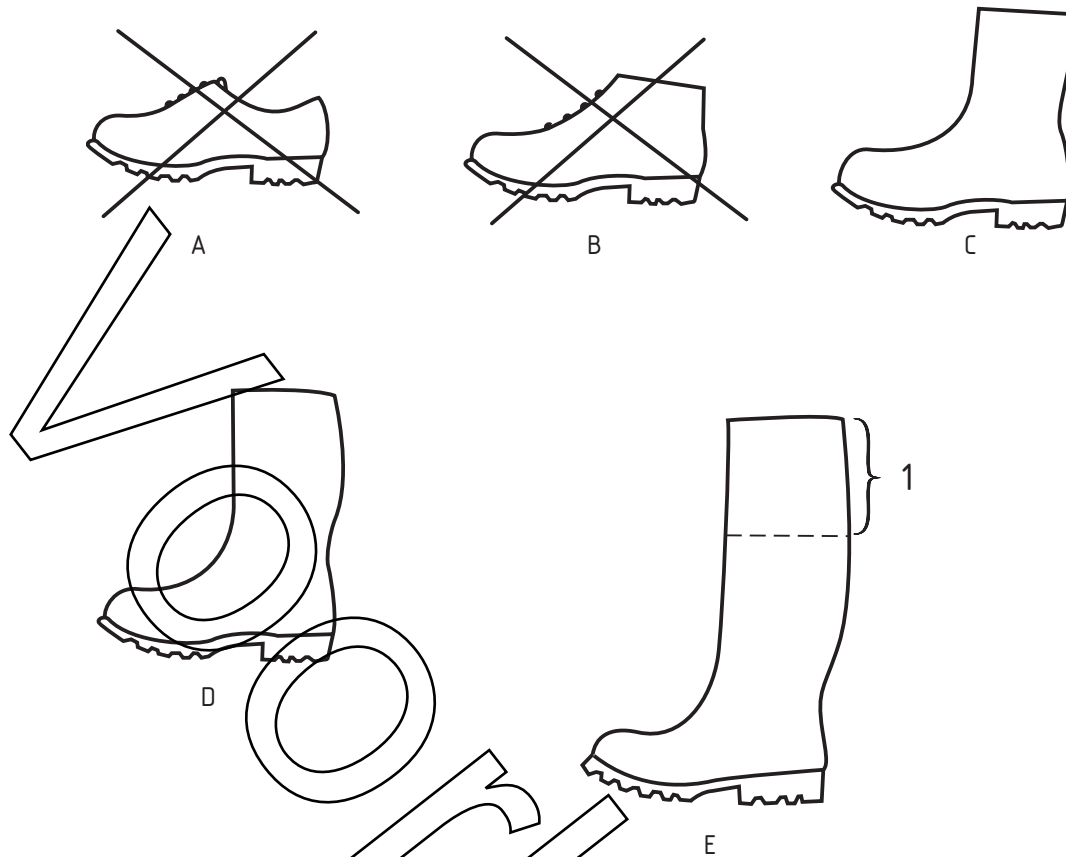
## 5 Classification

Footwear shall be classified in accordance with Table 1.

**Table 1 — Classification of footwear**

Code designation	Classification
II	All-rubber (i.e. entirely vulcanised) and all-polymeric footwear (i.e. entirely moulded) footwear



**Key**

1 Variable extension that can be adapted to the wearer

A Low shoe

C Half-knee boot

E Thigh boot

B Ankle boot

D Knee-height 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**

## 6 Requirements

### 6.1 Basic requirements

Footwear constructed to be highly resistant to chemicals shall conform to the requirements specified in Table 2.

Footwear highly resistant to 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.

# Bestelformulier

## Stuur naar:

NEN Standards Products & Services  
t.a.v. afdeling Klantenservice  
Antwoordnummer 10214  
2600 WB Delft



**NEN** Standards Products & Services

Postbus 5059  
2600 GB Delft

Vlinderweg 6  
2623 AX Delft

T (015) 2 690 390  
F (015) 2 690 271

[www.nen.nl/normshop](http://www.nen.nl/normshop)

## Ja, ik bestel

\_\_ ex. NEN-EN 13832-3:2006 en Schoeisel voor de bescherming tegen chemicaliën - Deel 3: Eisen voor schoeisel dat in hoge mate beschermt tegen chemicaliën onder laboratoriumomstandigheden € 50.04

**Wilt u deze norm in PDF-formaat? Deze bestelt u eenvoudig via [www.nen.nl/normshop](http://www.nen.nl/normshop)**

### Gratis e-mailnieuwsbrieven

Wilt u op de hoogte blijven van de laatste ontwikkelingen op het gebied van normen, normalisatie en regelgeving? Neem dan een gratis abonnement op een van onze e-mailnieuwsbrieven. [www.nen.nl/nieuwsbrieven](http://www.nen.nl/nieuwsbrieven)

## Gegevens

Bedrijf / Instelling \_\_\_\_\_

T.a.v. \_\_\_\_\_ O M O V

E-mail \_\_\_\_\_

Klantnummer NEN \_\_\_\_\_

Uw ordernummer \_\_\_\_\_ BTW nummer \_\_\_\_\_

Postbus / Adres \_\_\_\_\_

Postcode \_\_\_\_\_ Plaats \_\_\_\_\_

Telefoon \_\_\_\_\_ Fax \_\_\_\_\_

**Factuuradres** (indien dit afwijkt van bovenstaand adres)

Postbus / Adres \_\_\_\_\_

Postcode \_\_\_\_\_ Plaats \_\_\_\_\_

Datum \_\_\_\_\_ Handtekening \_\_\_\_\_

### Retourneren

Fax: 015 2 690 271

E-mail: [klantenservice@nen.nl](mailto:klantenservice@nen.nl)

Post: NEN Standards Products & Services,

t.a.v. afdeling Klantenservice  
Antwoordnummer 10214,  
2600 WB Delft

(geen postzegel nodig).

### Voorwaarden

- De prijzen zijn geldig tot 31 december 2018, tenzij anders aangegeven.
- Alle prijzen zijn excl. btw, verzend- en handelingskosten en onder voorbehoud bij o.m. ISO- en IEC-normen.
- Bestelt u via de normshop een pdf, dan betaalt u geen handeling en verzendkosten.
- Meer informatie: telefoon 015 2 690 391, dagelijks van 8.30 tot 17.00 uur.
- Wijzigingen en typfouten in teksten en prijsinformatie voorbehouden.
- U kunt onze algemene voorwaarden terugvinden op: [www.nen.nl/leveringsvoorwaarden](http://www.nen.nl/leveringsvoorwaarden).