This is a free page sample. Access the full version online.

NSAI Standards

Irish Standard
I.S. EN ISO 20346:2014

# Personal protective equipment - Protective footwear (ISO 20346:2014)

© CEN 2014 No copying without NSAI permission except as permitted by copyright law.

This is a free page sample. Access the full version online.

**I.S. EN ISO 20346:2014**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):*

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

| *This document is based on:* | *Published:* |
|---|---|
| EN ISO 20346:2014 | 2014-05-07 |

| *This document was published* under the authority of the NSAI and comes into effect on: | ICS number: |
|---|---|
| 2014-05-17 | 13.340.50 |
| | NOTE: If blank see CEN/CENELEC cover page |


| NSAI | T +353 1 807 3800 | Sales: |
|---|---|---|
| 1 Swift Square, | F +353 1 807 3838 | T +353 1 857 6730 |
| Northwood, Santry | E standards@nsai.ie | F +353 1 857 6729 |
| Dublin 9 | W NSAI.ie | W standards.ie |

Údarás um Chaighdeáin Náisiúnta na hÉireann

This is a free page sample. Access the full version online.


EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN ISO 20346

May 2014

ICS 13.340.50

Supersedes EN ISO 20346:2004

English Version

# Personal protective equipment - Protective footwear (ISO 20346:2014)

Équipement de protection individuelle - Chaussures de protection (ISO 20346:2014)

Persönliche Schutzausrüstung - Schutzschuhe (ISO 20346:2014)

This European Standard was approved by CEN on 17 April 2014.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

© 2014 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN ISO 20346:2014 E

This is a free page sample. Access the full version online.


# Contents

Page

**Foreword** ..... 3

**Annex ZA** (informative) **Relationship between this European Standard and the Essential Requirements of EU Directive 89/686/EEC Personal Protective Equipment** ..... 4

This is a free page sample. Access the full version online.


# Foreword

This document (EN ISO 20346:2014) has been prepared by Technical Committee ISO/TC 94 "Personal safety - Protective clothing and equipment" in collaboration with 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 November 2014, and conflicting national standards shall be withdrawn at the latest by November 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 20346:2004.

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.

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

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

**Endorsement notice**

The text of ISO 20346:2014 has been approved by CEN as EN ISO 20346:2014 without any modification.

This is a free page sample. Access the full version online.


# Annex ZA
(informative)

## Relationship between this European Standard and the Essential Requirements of EU Directive 89/686/EEC Personal Protective Equipment

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 89/686/EEC Personal Protective Equipment.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements of that Directive and associated EFTA regulations.

**Table ZA.1 — Clauses of this European Standard addressing Essential Requirements or other provisions of EU Directives**

| Clauses of this European Standard | Essential requirements (ERs) of EU Directive 89/686/EEC Annex II | |
|---|---|---|
| | 1. | General requirements applicable to all PPE |
| 5.3.4 | 1.1.1 | Ergonomics |
| 5.3.4 | 1.1.2.1 | Highest level of protection possible |
| | 1.2 | Innocuousness of PPE |
| 5.3.2.2; 5.4.8; 5.8.5; 6.2.1.2; 6.2.1.3; 6.2.5; 6.3 | 1.2.1 | Absence of risks and other inherent nuisance factors |
| 5.4.7; 5.4.9; 5.5.4; 5.5.5; 5.6.2; 5.6.3; 5.7.2; 5.7.5 | 1.2.1.1 | Suitable constituent materials |
| 5.3.4 | 1.2.1.2 | Satisfactory surface condition of all PPE parts in contact with the user |
| 5.3.4 | 1.2.1.3 | Maximum user impediment |
| | 1.3 | Comfort and efficiency |
| 5.3.1.2; 5.3.2.5.1; 5.3.2.5.2; 5.4.3; 5.4.4; 5.4.5; 5.5.1; 5.5.2; 5.6.1; 5.7.4; 5.8.2; 5.8.3; 5.8.4; 5.8.6; 6.2.1.4; 6.2.1.5.1; 6.4.1; 6.4.2 | 1.3.2 | Lightness and design strength |
| 8 | 1.4 | Information supplied by the manufacturer |
| 5.4.6; 5.5.3 | 2.2 | PPE enclosing the parts of the body to be protected |
| 6.2.2.1; 6.2.2.2 | 2.6 | PPE for use in explosive atmospheres |
| 6.1; 7 | 2.12 | PPE bearing one or more identification or recognition marks directly indirectly or relating to health and safety |
| | 3.1 | Protection against mechanical impact |
| 5.3.2.3; 6.2.4; 6.2.6; 6.2.7 | 3.1.1 | Impact caused by falling objects and collision of parts of the body with an obstacle |

This is a free page sample. Access the full version online.


| | | |
|---|---|---|
| 5.3.5 | 3.1.2 | Prevention of falls due to slipping |
| 5.3.2.4 | 3.2 | Protection against (static) compression of part of the body |
| 6.2.1.1; 6.2.1.5.2; 6.2.8 | 3.3 | Protection against physical injury (abrasion, perforation, cuts, bites) |
| 6.2.3.1 | 3.6 | Protection against heat and/or fire |
| 6.2.3.2 | 3.7 | Protection against cold |
| 6.2.2.3 | 3.8 | Protection against electric shock |

**WARNING —** Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

This is a free page sample. Access the full version online.

This page is intentionally left blank

This is a free page sample. Access the full version online.


# INTERNATIONAL STANDARD

# ISO 20346

Second edition
2014-05-01

# Personal protective equipment — Protective footwear

*Équipement de protection individuelle — Chaussures de protection*

Reference number
ISO 20346:2014(E)

© ISO 2014

This is a free page sample. Access the full version online.


**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2014

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a free page sample. Access the full version online.


# Contents

Page

**Foreword** ..... **iv**

**1 Scope** ..... **1**

**2 Normative references** ..... **1**

**3 Terms and definitions** ..... **1**

**4 Classification and designs** ..... **6**

**5 Basic requirements for protective footwear** ..... **7**
- 5.1 General ..... 7
- 5.2 Design ..... 10
- 5.3 Whole footwear ..... 11
- 5.4 Upper ..... 14
- 5.5 Vamp and quarter lining ..... 16
- 5.6 Tongue ..... 16
- 5.7 Insole and insock ..... 17
- 5.8 Outsole ..... 18

**6 Additional requirements for protective footwear** ..... **19**
- 6.1 General ..... 19
- 6.2 Whole footwear ..... 20
- 6.3 Upper — Water penetration and absorption ..... 23
- 6.4 Outsole ..... 23

**7 Marking** ..... **24**

**8 Information to be supplied** ..... **25**
- 8.1 General ..... 25
- 8.2 Electrical properties ..... 26
- 8.3 Insocks ..... 27

**Annex A** (normative) **Hybrid footwear** ..... **28**

**Bibliography** ..... **30**

© ISO 2014 – All rights reserved

This is a free page sample. Access the full version online.


# 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.

ISO 20346 was prepared by the European Committee for Standardization (CEN) Technical Commitee CEN/TC 161, *Foot and leg protectors*, in collaboration with ISO 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).

This second edition cancels and replaces the first edition (ISO 20346:2004), which has been technically revised. It also incorporates the Amendment ISO 20346:2004/Amd. 1:2007 and the Technical Corrigenda ISO 20346:2004/Cor. 1:2005 and ISO 20346:2004/Cor. 2:2006.

Changes between this edition and the 2004 version are as follows.

— Slip resistance was moved from Annex A into the main text (5.3.5).

— The requirements for seat region (5.2.3) are more specific.

— The requirements for corrosion resistance of metallic toecaps (5.3.2.5.1) have been slightly changed.

— Innocuousness (5.3.6) has been added.

— The requirement for Chromium VI content was exactly specified.

— The requirement for abrasion resistance of seat region lining has been included.

— The requirements for penetration resistance have been adjusted to EN 12568.

— A new kind of footwear "Hybrid Footwear" has been included in Annex A.


© ISO 2014 – All rights reserved

This is a free page sample. Access the full version online.


# Personal protective equipment — Protective footwear

## 1 Scope

This International Standard specifies basic and additional (optional) requirements for protective footwear used for general purpose. It includes, for example, mechanical risks, slip resistance, thermal risks, ergonomic behaviour.

Special risks are covered by complementary job-related standards (e.g. footwear for firefighters, electrical insulating footwear, protection against chain saw injuries, protection against chemicals and molten metal splash, protection for motor cycle riders).

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 17075, *Leather — Chemical tests — Determination of chromium(VI) content*

ISO 20344:2011, *Personal protective equipment — Test methods for footwear*

EN 12568:2010, *Foot and leg protectors — Requirements and test methods for toecaps and penetration resistant inserts*

EN 50321, *Electrically insulating footwear for working on low voltage installations*

## 3 Terms and definitions

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

NOTE The component parts of footwear are illustrated in Figures 1, 2 and 3.

© ISO 2014 – All rights reserved

SAI GLOBAL

This is a free preview.  Purchase the entire publication at the link below:

Product Page

Looking for additional Standards? Visit Intertek Inform Infostore

Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation