INTERNATIONAL STANDARD

ISO 20346

Third edition
2021-12

Personal protective equipment — Protective footwear

Équipement de protection individuelle — Chaussures de protection

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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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 voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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ISO 20346 was prepared by the European Committee for Standardization (CEN) Technical Committee 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).

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This third edition cancels and replaces the second edition (ISO 20346:2014), which has been technically revised. The main changes compared to the previous edition are as follows:

- revision of the terms and definitions Clause 3;
- Figures 1 to Figure 4 revised;
- Tables 1, 2 and 3 revised;
- heel area defined (5.2.3);
- toe protection, depending on ISO 22568 - 1 and ISO 22568 -2, exchanging EN 12568:2010;
- requirement on slip resistance revised (5.3.5 and 6.2.10); marking “SRA”, “SRB” and “SRC” deleted; marking “SR” and “Ø” introduced;
- pH value and chromium VI tests added in 5.3.6; former separate clauses under upper, lining, tongue and insole/insock deleted;
- requirement for seam strength of hybrid footwear added (5.3.7);
- requirement for upper materials not fulfilling WVP explained (5.4.6);
- abrasion of insoles revised (5.7.4);
- outsole requirements revised (5.8);
- outsole thickness revised (5.8.2.1);

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— flexing resistance of outsole clarified (5.8.5);

— perforation resistant insert, depending on ISO 22568-3 and ISO 22568-4, exchanging EN 12568:2010;

— tolerance added (6.2.3.1);

— former Annex A Hybrid Footwear included in the general text (Table 2, 5.4.1.2);

— optional requirement of metatarsal protection revised (6.2.6);

— optional requirement on ankle protection clarified (6.2.7);

— optional requirement for "SC" scuff caps added (6.2.9);

— water penetration and absorption, symbol "WRU" deleted, symbol "WPA" introduced;

— optional requirement for "LG" Ladder grip of outsoles added (6.4.3);

— marking revised (Table 16 and Table 20);

— two new categories added, P6 and P7 (Table 20);

— information on obsolescence date added (8.5);

— Annex A with requirements for customized protective footwear added;

— Annex B assessment of the footwear by the wearer added;

— Annex C Slip resistance added;

— requirement for electrically insulating footwear (EN 50321) deleted.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Personal protective equipment — Protective footwear

1 Scope

This document 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. It includes, for example, mechanical risks, slip resistance, thermal risks, ergonomic behaviour. It also specifies requirements for protective footwear equipped with customized insocks, customized protective footwear or individual manufactured customized protective footwear. This standard does not cover the property of high visibility because of interaction with the clothing (e.g. trousers cover the footwear) and work area conditions (e.g. dirt, mud).

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 motorcycle riders).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

The following referenced documents are indispensable for the application of this document.

ISO 20344:2021, *Personal protective equipment — Test methods for footwear*

ISO 22568-1:2019, *Foot and leg protectors — Requirements and test methods for footwear components — Part 1: Metallic toecaps*

ISO 22568-2:2019, *Foot and leg protectors — Requirements and test methods for footwear component — Part 2: Non-metallic toecaps*

EN 13832-3:2018, *Footwear protecting against chemicals — Part 3: Requirements for footwear highly resistant to chemicals under laboratory conditions*

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3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

Note 1 to entry The component parts of footwear are illustrated in Figure 1, 2 and 3.

Note 2 to entry Further terms and definitions can be found in ISO 19952[1].

3.1
protective footwear
footwear incorporating protective features to protect the wearer from injuries that could arise through accidents

Note 1 to entry: Items of protective footwear are fitted with toecaps designed to give protection against impact of at least 100 J and against compression of at least 10 kN.

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