

ISIKUKAITSEVAHENDID. TURVAJALATSID

**Personal protective equipment - Safety footwear
(ISO 20345:2021 + ISO 20345:2021/Amd 1:2024)**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 20345:2022+A1:2024 sisaldab Euroopa standardi EN ISO 20345:2022 ja selle muudatuse A1:2024 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 20345:2022+A1:2024 consists of the English text of the European standard EN ISO 20345:2022 and its amendment A1:2024.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas. Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 16.03.2022, muudatus A1 14.02.2024.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation. Date of Availability of the European standard is 16.03.2022, for A1 14.02.2024.
Muudatusega A1 lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega $\boxed{A1}$ $\boxed{A1}$. Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The start and finish of text introduced or altered by amendment A1 is indicated in the text by tags $\boxed{A1}$ $\boxed{A1}$. The standard is available from the Estonian Centre for Standardisation and Accreditation.

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English Version

Personal protective equipment - Safety footwear (ISO
20345:2021 + ISO 20345:2021/Amd 1:2024)

Équipement de protection individuelle - Chaussures de
sécurité (ISO 20345:2021 + ISO 20345:2021/Amd
1:2024)

Persönliche Schutzausrüstung - Sicherheitsschuhe (ISO
20345:2021 + ISO 20345:2021/Amd 1:2024)

This European Standard was approved by CEN on 30 December 2021. Amendment A1 was approved by CEN on 3 September 2023.

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO 20345:2022) has been prepared by Technical Committee ISO/TC 94 "Personal safety -- Personal protective 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of an identical text or by endorsement, at the latest by September 2022, and conflicting national standards shall be withdrawn at the latest by March 2023.

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This document supersedes EN ISO 20345:2011.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

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Endorsement notice

The text of ISO 20345:2021 has been approved by CEN as EN ISO 20345:2022 without any modification.

A1 Amendment A1 European foreword

This document (EN ISO 20345:2022/A1:2024) has been prepared by Technical Committee ISO/TC 94 "Personal safety -- Personal protective equipment" in collaboration with Technical Committee CEN/TC 161 "Foot and leg protectors" the secretariat of which is held by BSI.

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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.

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ISO 20345 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 161, *Foot and leg protectors*, in collaboration with 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 third edition cancels and replaces the second edition (ISO 20345:2011), which has been technically revised. The main changes compared to the previous edition are as follows:

- revision of the terms and definitions in Clause 3;
- Figure 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);
- 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 cap abrasion 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, S6 and S7 (Table 20);
- information on obsolescence date added (8.5);
- Annex A with requirements for customized safety footwear added;
- Annex B added;
- Annex C added;
- requirement for electrically insulating footwear (EN 50321) deleted.

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A1 Amendment A1 foreword

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Personal protective equipment — Safety footwear

1 Scope

This document specifies basic and additional (optional) requirements for safety footwear used for general purpose. It includes, for example, mechanical risks, slip resistance, thermal risks, ergonomic behaviour. It also specifies requirements for safety footwear equipped with customized insoles, customized safety footwear or individual manufactured customized safety 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.

ISO 20344:2021+Amd.1:2024 ^{A1}, *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, ^{A1} *Footwear protecting against chemicals — Part 3: Requirements for prolonged contact with chemicals* ^{A1}

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, Figure 2 and Figure 3.

Note 2 to entry: Further terms and definitions can be found in ISO 19952^[4].

3.1

safety footwear

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

Note 1 to entry: Items of safety footwear are fitted with toecaps designed to give protection against impact of at least 200 J and against compression at least 15 kN.