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ISOLEERKALOSSID

**Live working - Footwear for electrical protection – Part  
1: Insulating footwear and overboots**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 50321-1:2018 sisaldab Euroopa standardi EN 50321-1:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 50321-1:2018 consists of the English text of the European standard EN 50321-1:2018.
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English Version

**Live working - Footwear for electrical protection - Insulating footwear and overboots**

Travaux sous tension - Chaussures pour protection électrique - Chaussures et couvre-chaussures isolants

Arbeiten unter Spannung - Schuhe für elektrischen Schutz - Isolierende Schuhe und Überschuhe

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## European foreword

This document (EN 50321-1:2018) has been prepared by CLC/TC 78 "Equipment and tools for live working".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2019-01-12
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2021-01-12

EN 50321-1:2018 includes the following significant technical changes with respect to EN 50321:1999:

- the addition of electrical classifications 1, 2, 3 and 4 for AC voltages;
- the addition of DC voltage testing for class 00, 0, 1 and 2;
- the addition of classification of mechanical class II according to EN ISO 20345, EN ISO 20346, EN ISO 20347;
- 16 h moisture conditioning for type test;
- water as testing material for type test;
- revised marking test;
- inclusion of a test report;
- inclusion of a dielectric test on footwear with perforation resistant insert;
- inclusion of electrical insulating overboot style;
- revised marking and test method;
- periodic inspection;
- selection of EN 61318 for quality system within an annex;
- definition of overboot;
- definition of safety, occupational, electrical shock resistant, antistatic and conductive sole footwear;
- steel metal balls to be used for routine testing only;
- the addition of the Annex ZZ.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive.

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

## 1 Scope

This European Standard specifies the requirements and testing for PPE footwear used as *electrical insulating footwear and overboots* that provide protection of the worker against electric shock and used for working live or close to live parts on installations up to 36 000 V AC or 25 000 V DC.

The products designed and manufactured according to this standard contribute to the safety of the users provided they are used by skilled persons, in accordance with safe methods of work and the instructions for use.

Antistatic, electrical shock resistant and conductive footwear are not covered by this standard.

NOTE Part 2 Electrical Shock Resistant Footwear and Part 3 Conductive Footwear for Live Working are in development.

## 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.

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

EN 60060-1, *High-voltage test techniques - Part 1: General definitions and test requirements (IEC 60060-1)*

EN 60212, *Standard conditions for use prior to and during the testing of solid electrical insulating materials (IEC 60212)*

EN 61318:2008, *Live working - Conformity assessment applicable to tools, devices and equipment (IEC 61318:2007)*

EN ISO 20345:2011, *Personal protective equipment - Safety footwear (ISO 20345:2011)*

EN ISO 20346:2014, *Personal protective equipment - Protective footwear (ISO 20346:2014)*

EN ISO 20347:2012, *Personal protective equipment - Occupational footwear (ISO 20347:2012)*

IEC 60417 DB, *Graphical symbols for use on equipment*

## 3 Terms and definitions

For the purpose of this document, the terms and definitions given in EN 61318:2008 and the following apply.

### 3.1

#### **antistatic footwear**

footwear, the resistance of which is above 100 k $\Omega$  and less than or equal to 1 000 M $\Omega$

Note 1 to entry: Resistance is measured in accordance with ISO 20344:2011, 5.10.

[SOURCE: EN ISO 20345:2011, 3.15, modified]

### 3.2

#### **conductive footwear for live working**

footwear, the resistance of which is in the range of 0 k $\Omega$  to 10 k $\Omega$

Note 1 to entry: Resistance is measured in accordance with EN 60895:2003, 8.3 (*this was added in order to be comparable to conductive footwear*).

[SOURCE: EN 60895:2003, 8.3, modified]