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Elektrostatiska urladdningar – Del 4-3: Provningsmetoder för särskilda tillämpningar – Fotbeklädning

*Electrostatics –
Part 4-3: Standard test methods for specific applications –
Footwear*

Som svensk standard gäller europastandarden EN IEC 61340-4-3:2018. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 61340-4-3:2018.

Nationellt förord

Europastandarden EN IEC 61340-4-3:2018

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- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61340-4-3, Second edition, 2017 - Electrostatics - Part 4-3: Standard test methods for specific applications - Footwear**

utarbetad inom International Electrotechnical Commission, IEC.

EN från CENELEC som är identiska med motsvarande IEC-standarder och som görs tillgängliga för nationalkommittéerna efter den 1 januari 2018 får en beteckning som inleds med EN IEC istället för som tidigare bara EN.

Tidigare fastställd svensk standard SS-EN 61340-4-3, utgåva 1, 2002, gäller ej fr o m 2021-01-17.

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English Version

**Electrostatics - Part 4-3: Standard test methods for specific applications - Footwear
(IEC 61340-4-3:2017)**

Electrostatique - Partie 4-3: Méthodes d'essai normalisées pour des applications spécifiques - Chaussures
(IEC 61340-4-3:2017)

Elektrostatik - Teil 4-3: Standard-Prüfverfahren für spezielle Anwendungen - Schuhwerk
(IEC 61340-4-3:2017)

This European Standard was approved by CENELEC on 2018-01-17. CENELEC 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 CENELEC 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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

European foreword

The text of document 101/544/FDIS, future edition 2 of IEC 61340-4-3, prepared by IEC/TC 101 "Electrostatics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61340-4-3:2018.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-10-17
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-01-17

This document supersedes EN 61340-4-3:2001.

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

Endorsement notice

The text of the International Standard IEC 61340-4-3:2017 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

IEC 61340-2-3 NOTE Harmonized as EN 61340-2-3.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62631-3-1	-	Dielectric and resistive properties of solid insulating materials - Part 3-1 Determination of resistive properties (DC methods) - Volume resistance and volume resistivity, general method	EN 62631-3-1	-
IEC 62631-3-2	-	Dielectric and resistive properties of solid insulating materials - Part 3-2 Determination of resistive properties (DC methods) - Surface resistance and surface resistivity	EN 62631-3-2	-
IEC 62631-3-3	-	Dielectric and resistive properties of solid insulating materials - Part 3-3: Determination of resistive properties (DC methods) - Insulation resistance	EN 62631-3-3	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROSTATICS –

**Part 4-3: Standard test methods for specific applications –
Footwear**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61340-4-3 has been prepared by IEC technical committee 101: Electrostatics.

This second edition cancels and replaces the first edition published in 2001. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) classification of footwear as electrostatic conductive or electrostatic dissipative has been removed – classification is not specified;
- b) environmental classes for laboratory testing have been removed – one set of conditions for pre-conditioning, conditioning and testing is specified;
- c) reference to IEC 61340-2-3 for measuring the resistance of the counter electrode inserted inside footwear has been removed.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
101/544/FDIS	101/550/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all the parts in the IEC 61340 series, published under the general title *Electrostatics*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

Footwear, especially shoes, has become an important electrostatic control device in all areas, but particularly in electronics manufacturing. Standards exist from various national committees and these have served as guidance in the preparation of this part of IEC 61340 for electrostatic control footwear.

Control of unwanted electrostatic charge is of particular importance where personnel work around electrostatic-sensitive processes, materials or items. In many cases, devices such as wrist straps are employed to provide an electrical bond between a person's skin and a ground connection. Many instances exist in industry where wrist straps or other tethering devices cannot be safely or conveniently applied, but there is still a need to provide a ground connection for personnel. A convenient method to provide a ground connection for personnel is through their footwear while standing or walking on a defined and properly specified electrostatic control floor surface.

The measurement method described in this document can be used to monitor electrical specifications of footwear during manufacture, prior to selection by an end user or periodically during use. The method described involves the use of a specific set of test equipment and instruments. Other equipment and instruments may be used to measure the parameters specified, but in the event of any dispute, the equipment, instruments and measurement method established in this document apply.

ELECTROSTATICS –

Part 4-3: Standard test methods for specific applications – Footwear

1 Scope

This part of IEC 61340 describes a test method for determining the electrical resistance of footwear (shoes, slippers or booties) used in the control of electrostatic potential on people. This document is suitable for use by the manufacturer of footwear as well as the end user. A method for measuring the electrical resistance of footwear alone is described and serves as a qualification test or an acceptance test for new footwear, or as a periodic test of in-use footwear.

Although this document does not include requirements for personal safety, footwear used within the scope of this document in all places of work is regulated by the relevant local statutory requirements regarding the health and safety of all persons.

Insulating footwear is not included within the scope of this document although the electrical resistance measurement techniques can be applicable.

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.

IEC 62631-3-1, *Dielectric and resistive properties of solid insulating materials – Part 3-1: Determination of resistive properties (DC methods) – Volume resistance and volume resistivity – General method*

IEC 62631-3-2, *Dielectric and resistive properties of solid insulating materials – Part 3-2: Determination of resistive properties (DC methods) – Surface resistance and surface resistivity*

IEC 62631-3-3, *Dielectric and resistive properties of solid insulating materials – Part 3-3: Determination of resistive properties (DC methods) – Insulation resistance*