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OHUTUS. OSA 2-54: ERINÕUDED
PINNAPUHAUSTUSSEADMETELE, MIS KASUTAVAD
VEDELIKKE VÕI AURU**

**Household and similar electrical appliances - Safety -
Part 2-54: Particular requirements for surface-cleaning
appliances for household use employing liquids or
steam (IEC 60335-2-54:2008 +
IEC 60335-2-54:2008/A1:2015 +
IEC 60335-2-54:2008/A2:2019)**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 60335-2-54:2009+A11+A1+A12+A2:2021 sisaldab Euroopa standardi EN 60335-2-54:2008 ja selle muudatuste A11:2012, A1:2015, A12:2021 ja A2:2021 ja muudatuse A11 paranduse AC:2015 ingliskeelset teksti.</p>	<p>This Estonian standard EVS-EN 60335-2-54:2009+A11+A1+A12+A2:2021 consists of the English text of the European standard EN 60335-2-54:2008 and its amendments A11:2012, A1:2015, A12:2021 and A2:2021 and amendment A11 corrigendum AC:2015.</p>
<p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 27.11.2008, muudatused A11 30.11.2012, A1 23.10.2015, A12 24.12.2021 ja A2 24.12.2021.</p>	<p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 27.11.2008, for A11 30.11.2012, A1 23.10.2015, A12 24.12.2021 and A2 24.12.2021.</p>
<p>Muudatusega A11 lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega A11 A11.</p> <p>Muudatusega A1 lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega A1 A1.</p> <p>Muudatusega A12 lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega A12 A12.</p> <p>Muudatusega A2 lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega A2 A2.</p> <p>Parandusega AC lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega AC AC.</p> <p>Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.</p>	<p>The start and finish of text introduced or altered by amendment A11 is indicated in the text by tags A11 A11.</p> <p>The start and finish of text introduced or altered by amendment A1 is indicated in the text by tags A1 A1.</p> <p>The start and finish of text introduced or altered by amendment A12 is indicated in the text by tags A12 A12.</p> <p>The start and finish of text introduced or altered by amendment A2 is indicated in the text by tags A2 A2.</p> <p>The start and finish of text introduced or altered by corrigendum AC is indicated in the text by tags AC AC.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>

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English Version

**Household and similar electrical appliances - Safety - Part 2-54:
Particular requirements for surface-cleaning appliances for
household use employing liquids or steam
(IEC 60335-2-54:2008 + IEC 60335-2-54:2008/A1:2015 + IEC
60335-2-54:2008/A2:2019)**

Appareils électrodomestiques et analogues - Sécurité -
Partie 2-54: Règles particulières pour les appareils de
nettoyage des surfaces à usage domestique, utilisant des
liquides ou de la vapeur
(CEI 60335-2-54:2008 + IEC 60335-2-54:2008/A1:2015 +
IEC 60335-2-54:2008/A2:2019)

Sicherheit elektrischer Geräte für den Hausgebrauch und
ähnliche Zwecke - Teil 2-54: Besondere Anforderungen für
Geräte zur Oberflächenreinigung mit Flüssigkeiten oder
Dampf
(IEC 60335-2-54:2008 + IEC 60335-2-54:2008/A1:2015 +
IEC 60335-2-54:2008/A2:2019)

This European Standard was approved by CENELEC on 2008-10-01. Amendment A11 was approved by CENELEC on 2012-02-20. Amendment A1 was approved by CENELEC on 2015-09-09. Amendment A12 was approved by CENELEC on 2021-09-20. Amendment A2 was approved by CENELEC on 2021-12-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard and its amendments 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 and its Amendments A11, A1, A12 and A2 exist 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.

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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

Foreword

The text of document 61/3676/FDIS, future edition 4 of IEC 60335-2-54, prepared by IEC Technical Committee 61, Safety of household and similar electrical appliances, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60335-2-54 on 2008-10-01.

This European Standard supersedes EN 60335-2-54:2003 + A1:2004 + A11:2006 + A2:2007.

The following dates are applicable:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2009-07-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2013-10-01

This part 2 has to be used in conjunction with EN 60335-1, Household and similar electrical appliances – Safety – Part 1: General requirements. It was established on the basis of the 2002 edition of that standard. Amendments and revisions of Part 1 have also to be taken into account and the dates when such changes become applicable will be stated in the relevant amendment of revision of Part 1.

This part 2 supplements or modifies the corresponding clauses in EN 60335-1, so as to convert it into the European Standard: Safety requirements for electric surface-cleaning appliances employing liquids or steam.

When a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. When this standard states "addition", "modification" or "replacement", the relevant text in Part 1 is to be adapted accordingly.

NOTE 1 The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.
- subclauses, notes and annexes that are additional to those in the IEC standard are prefixed with the letter Z.

NOTE 2 The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in small roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

There are no special national conditions causing a deviation from this European Standard, other than those listed in Annex ZA to EN 60335-1.

There are no national deviations from this European Standard, other than those listed in Annex ZB to EN 60335-1.

Endorsement notice

The text of the International Standard IEC 60335-2-54:2008 was approved by CENELEC as a European Standard without any modification.

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A11 Amendment A11 foreword

This document (EN 60335-2-54:2008/A11:2012) has been prepared by CLC/TC 61 "Safety of household and similar electrical appliances".

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) 2013-05-30
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) **AC** 2016-04-30 **AC**

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights. This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

This amendment supplements or modifies the corresponding clauses of EN 60335-1:2012 and EN 60335-2-54:2008.

There are no special national conditions causing a deviation from this amendment.

There are no national deviations from this amendment. **A11**

A1 Amendment A1 European foreword

The text of document 61/4867/CDV, future IEC 60335-2-54:2008/A1 prepared by IEC/TC 61 "Safety of household and similar electrical appliances" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60335-2-54:2008/A1:2015.

The following dates are fixed:

- latest date by which the document has to be (dop) 2016-06-09
implemented at national level by
publication of an identical national
standard or by endorsement
- latest date by which the national (dow) 2018-09-09
standards conflicting with the
document have to be withdrawn

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

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 60335-2-54:2008/A1:2015 was approved by CENELEC as a European Standard without any modification.

In the Bibliography of EN 60335-2-54:2008, **delete** the following note for the standard indicated:

ISO 13732-1 NOTE Harmonized as EN ISO 13732-1.



A₁₂ Amendment A12 European foreword

This document (EN 60335-2-54:2008/A12:2021) has been prepared by CLC/TC 61, "Safety of household and similar electrical appliances".

The following dates are fixed:

latest date by which this document has to be implemented (dop)	2022-09-20
at national level by publication of an identical national standard or by endorsement	

latest date by which the national standards conflicting with (dow)	2024-09-20
this document have to be withdrawn	

This document is read in conjunction with EN 60335-2-54:2008/A2:2021.

The numbering system for European clauses, subclauses, notes, tables, figures and annexes that are additional to those in the IEC standard are prefixed with the letter "Z".

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(s).

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For the relationship with EU Directive(s) see informative Annex ZZA, which is an integral part of this document. **A₁₂**

A₂ Amendment A2 European foreword

This document (EN 60335-2-54:2008/A2:2021) consists of the text of IEC 60335-2-54:2008/A2:2019 prepared by IEC/TC 61 "Safety of household and similar electrical appliances".

The following dates are fixed:

- latest date by which this document has to be (dop) 2022-12-01
implemented at national level by publication of an
identical national standard or by endorsement
- latest date by which the national standards conflicting (dow) 2024-12-01
with this document have to be withdrawn

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This document is read in conjunction with EN 60335-2-54:2008/A12:2021.

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

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZZA, which is an integral part of EN 60335-2-54:2008/A12:2021.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 60335-2-54:2008/A2:2019 was approved by CENELEC as a European Standard without any modification. **A₂**

CONSOLIDATED VERSION

VERSION CONSOLIDÉE



**Household and similar electrical appliances – Safety –
Part 2-54: Particular requirements for surface-cleaning appliances for household
use employing liquids or steam**

**Appareils électrodomestiques et analogues – Sécurité –
Partie 2-54: Règles particulières pour les appareils de nettoyage des surfaces
à usage domestique, utilisant des liquides ou de la vapeur**



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CONSOLIDATED VERSION

VERSION CONSOLIDÉE



**Household and similar electrical appliances – Safety –
Part 2-54: Particular requirements for surface-cleaning appliances for
household use employing liquids or steam**

**Appareils électrodomestiques et analogues – Sécurité –
Partie 2-54: Règles particulières pour les appareils de nettoyage des
surfaces à usage domestique, utilisant des liquides ou de la vapeur**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-54: Particular requirements for surface-cleaning appliances for household use employing liquids or steam

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 60335-2-54 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

This fourth edition cancels and replaces the third edition published in 2002 and its Amendment 1 (2004) and Amendment 2 (2007). It constitutes a technical revision.

The principal change in this edition as compared with the third edition of IEC 60335-2-54 is as follows (minor changes are not listed):

The scope has been further restricted to cover appliances where the product of pressure (in MPa) and container volume (in l) does not exceed 5.

The text of this standard is based on the following documents:

FDIS	Report on voting
61/3676/FDIS	61/3699/RVD

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

This part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments. It was established on the basis of the fourth edition (2001) of that standard.

NOTE 1 When “Part 1” is mentioned in this standard, it refers to IEC 60335-1.

This part 2 supplements or modifies the corresponding clauses in IEC 60335-1, so as to convert that publication into the IEC standard: Safety requirements for electric surface-cleaning appliances employing liquids or steam.

When a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. When this standard states “addition”, “modification” or “replacement”, the relevant text in Part 1 is to be adapted accordingly.

NOTE 2 The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.

NOTE 3 The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in small roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

A list of all parts of the IEC 60335 series, under the general title: *Household and similar electrical appliances – Safety*, can be found on the IEC website.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
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- amended.

NOTE 4 The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 12 months or later than 36 months from the date of publication.

The following differences exist in the countries indicated below.

- 6.1: Hand-held cleaning appliances and parts held in the hand in normal use shall be class II or class III (Netherlands).
- 22.103: The dimensions of the inlet aperture are different (USA).

A1 AMENDMENT A1 FOREWORD

This amendment has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

This bilingual version (2018-11) corresponds to the monolingual English version, published in 2015-08.

The text of this amendment is based on the following documents:

CDV	Report on voting
61/4867/CDV	61/4944/RVC

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

The French version of this amendment has not been voted upon.

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

- reconfirmed,
- withdrawn,
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- amended.

NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 12 months or later than 36 months from the date of publication. **A1**

A₂ AMENDMENT A2 FOREWORD

This amendment has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

The text of this amendment is based on the following documents:

FDIS	Report on voting
61/5758/FDIS	61/5793/RVD

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

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

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

NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 12 months or later than 36 months from the date of publication. **A₂**

INTRODUCTION

It has been assumed in the drafting of this International Standard that the execution of its provisions is entrusted to appropriately qualified and experienced persons.

This standard recognizes the internationally accepted level of protection against hazards such as electrical, mechanical, thermal, fire and radiation of appliances when operated as in normal use taking into account the manufacturer's instructions. It also covers abnormal situations that can be expected in practice and takes into account the way in which electromagnetic phenomena can affect the safe operation of appliances.

This standard takes into account the requirements of IEC 60364 as far as possible so that there is compatibility with the wiring rules when the appliance is connected to the supply mains. However, national wiring rules may differ.

If an appliance within the scope of this standard also incorporates functions that are covered by another part 2 of IEC 60335, the relevant part 2 is applied to each function separately, as far as is reasonable. If applicable, the influence of one function on the other is taken into account.

When a part 2 standard does not include additional requirements to cover hazards dealt with in Part 1, Part 1 applies.

NOTE 1 This means that the technical committees responsible for the part 2 standards have determined that it is not necessary to specify particular requirements for the appliance in question over and above the general requirements.

This standard is a product family standard dealing with the safety of appliances and takes precedence over horizontal and generic standards covering the same subject.

NOTE 2 Horizontal and generic standards covering a hazard are not applicable since they have been taken into consideration when developing the general and particular requirements for the IEC 60335 series of standards. For example, in the case of temperature requirements for surfaces on many appliances, generic standards, such as ISO 13732-1 for hot surfaces, are not applicable in addition to Part 1 or part 2 standards.

An appliance that complies with the text of this standard will not necessarily be considered to comply with the safety principles of the standard if, when examined and tested, it is found to have other features that impair the level of safety covered by these requirements.

An appliance employing materials or having forms of construction differing from those detailed in the requirements of this standard may be examined and tested according to the intent of the requirements and, if found to be substantially equivalent, may be considered to comply with the standard.

A12 *deleted text* **A12**

A12 This European amendment A12 supplements or modifies the corresponding clauses of the standards below:

- EN 60335-1:2012 +A11:2014+A13:2017+A1:2019+A14:2019+A2:2019 (Part 1)
- EN 60335-2-54:2008+A11:2012+A1:2015 (Part 2) **A12**

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-54: Particular requirements for surface-cleaning appliances for household use employing liquids or steam

1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of electric cleaning appliances for household use that are intended for cleaning surfaces ~~by using liquid cleansing agents or steam~~ by using liquid cleansing agents or steam, their **rated voltage** being not more than 250 V. It also covers wallpaper strippers.

NOTE 101 Appliances may incorporate heating elements or means for pressurising the liquid container.

A11 As far as is practicable, this standard deals with the common hazards presented by appliances that are encountered by all persons in household and similar environments.

However, in general, it does not take into account

- children playing with the appliance,
- the use of the appliance by **children**.

It is recognized that very vulnerable people may have needs beyond the level addressed in this standard. **A11**

NOTE 102 Attention is drawn to the fact that

- for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary;
- in many countries additional requirements are specified by the national health authorities, the national authorities responsible for the protection of labour, and similar authorities.

NOTE 103 This standard does not apply to

- floor treatment and wet scrubbing machines (IEC 60335-2-10);
- cleaning appliances that are permanently fixed to a building;
- cleaning appliances covered by IEC 60335-2-79, namely those having a
 - pressure exceeding 2,5 MPa;
 - pressurised volume over 5 l;
 - product of pressure (in MPa) and container volume (in l) exceeding 5;
 - liquid temperature exceeding 160 °C;
 - **rated power input** exceeding 3 500 W;
- cleaning appliances intended for commercial or industrial use;
- appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas);
- fabric steamers (IEC 60335-2-85).

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

ISO 6344-2: *Coated abrasives – Grain size analysis – Part 2: Determination of grain size distribution of macrogrits P12 to P220*

3 A1 Terms and definitions A1

This clause of Part 1 is applicable except as follows.

3.1.9 *Replacement:*

normal operation

operation of the appliance under the most unfavourable conditions specified in the instructions

The cleaning head is pressed with a force of 30 N against a vertical pane of plain glass and moved up and down over a length of 1 m at a rate of 15 cycles per minute. A film of water is maintained on the pane of glass by continuously applying water having a temperature of 20° C ± 5 °C.

For steam cleaners and wallpaper strippers, a sheet of stainless steel is used instead of glass, without additional wetting. However, if the steam outlet is not intended to be pressed against the surface, the appliance is operated with the outlet in free air directed downwards at an angle of approximately 45°.

A1 For steam cleaners intended to clean horizontal surfaces, the sheet of stainless steel is horizontal and the appliance is moved forward and backward over a length of 1 m at a rate of 15 cycles per minute instead of up and down. No additional force other than the weight of the appliance is applied. A1

3.101

pressurised appliance

appliance in which steam is produced in a boiler at a pressure exceeding 50 kPa and in which the pressure does not drop to atmospheric pressure when the steam is not supplied

NOTE The boiler may be incorporated in the appliance or connected to the appliance by a hose.

4 General requirement

This clause of Part 1 is applicable.

5 General conditions for the tests

This clause of Part 1 is applicable except as follows.

5.2 *Addition:*

A new hose is used for each of the tests of 21.101 to 21.105.

5.101 *Appliances incorporating heating elements are tested as **heating appliances** even if they incorporate motors.*