

INTERNATIONAL STANDARD



Household and similar electrical appliances – Safety –
Part 2-85: Particular requirements for fabric steamers

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Household and similar electrical appliances – Safety –
Part 2-85: Particular requirements for fabric steamers

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-85: Particular requirements for fabric steamers

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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This commented version (CMV) of the official standard IEC 60335-2-85:2022 edition 3.0 allows the user to identify the changes made to the previous IEC 60335-2-85:2002+AMD1:2008+AMD2:2017 CSV edition 2.2. Furthermore, comments from IEC TC 61 experts are provided to explain the reasons of the most relevant changes, or to clarify any part of the content.

A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text. Experts' comments are identified by a blue-background number. Mouse over a number to display a pop-up note with the comment.

This publication contains the CMV and the official standard. The full list of comments is available at the end of the CMV.

IEC 60335-2-85 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances. It is an International Standard.

This third edition cancels and replaces the second edition published in 2002, Amendment 1:2008 and Amendment 2:2017. This edition constitutes a technical revision.

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

- a) alignment with IEC 60335-1:2020;
- b) conversion of some notes to normative text (Clause 1);
- c) introduction of pressurized fabric steamer.

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

Draft	Report on voting
61/6673/FDIS	61/6748/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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.

This part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments unless that edition precludes it; in that case, the latest edition that does not preclude it is used. It was established on the basis of the sixth edition (2020) 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: Particular requirements for fabric steamers.

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.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under 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.

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.

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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.

Guidance documents concerning the application of the safety requirements for appliances can be accessed via TC 61 supporting documents on the IEC website

<https://www.iec.ch/tc61/supportingdocuments>

This information is given for the convenience of users of this International Standard and does not constitute a replacement for the normative text in this standard.

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~~ can 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~~ publications, basic safety publications and group safety publications 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.~~ **1**

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.

NOTE 3 Standards dealing with non-safety aspects of household appliances are:

- IEC standards published by TC 59 concerning methods of measuring performance;
- CISPR 11, CISPR 14-1 and relevant IEC 61000-3 series standards concerning electromagnetic emissions;
- CISPR 14-2 concerning electromagnetic immunity;
- IEC standards published by TC 111 concerning environmental matters. **2**

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-85: Particular requirements for fabric steamers

1 Scope

This clause of Part 1 is replaced by the following.

This part of IEC 60335 deals with the safety of electric **fabric steamers** intended for household and similar purposes, their **rated voltage** being not more than 250 V including direct current (DC) supplied appliances and **battery-operated appliances**. **3**

Appliances not intended for normal household use, but that nevertheless ~~may be~~ possibly pose a source of danger to the public, such as appliances intended to be used by laymen in shops, laundries and dry cleaners, are within the scope of this standard.

~~NOTE 101 – Examples of such appliances are those for use in laundries and dry cleaners.~~

As far as is practicable, this standard deals with the common hazards presented by appliances that are encountered by all persons in and around the home. However, in general, it does not take into account:

- persons (including children) whose
 - physical, sensory or mental capabilities; or
 - lack of experience and knowledgeprevents them from using the appliance safely without supervision or instruction;
- children playing with the appliance.

~~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~~ can 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~~

- 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);
- electric irons (IEC 60335-2-3);
- ironers (IEC 60335-2-44);
- surface-cleaning appliances for household use employing liquids or steam (IEC 60335-2-54);
- appliances connected to the water mains.

2 Normative references

This clause of Part 1 is applicable.

3 Terms and definitions

This clause of Part 1 is applicable except as follows.

3.1 Definitions relating to physical characteristics

3.1.6 Addition:

Note 101 to entry: For **electrode-type appliances**, if no current is assigned to the appliance, the **rated current** is calculated from the **rated voltage** and the mean value of the power input during the first 2 min of operation, the appliance being supplied at **rated voltage** and operated under **normal operation**.

3.1.9 ~~Replacement~~ Addition: 4

normal operation

operation of the appliance in the normal position of use but away from any surface, with the container filled with water and with any lid closed

~~For **electrode-type appliances**, the water has a resistivity of approximately 500 Ωcm at a temperature of 20 °C~~

~~NOTE 101 The appropriate resistivity may be obtained by adding sodium chloride to the water. 5~~

3.5 Definitions relating to types of appliances

3.5.101

fabric steamer

appliance for removing creases from garments and fabrics by directing steam at their surface

3.5.102

electrode-type appliance

appliance in which a conductive liquid is heated by a current flowing through it

3.5.103

vented fabric steamer

fabric steamer in which steam is produced when the water contacts the heated nozzle of the fabric steamer, the water reservoir being at atmospheric pressure

Note 1 to entry: The water reservoir can be incorporated in the fabric steamer or connected to the fabric steamer by a hose.

3.5.104

instantaneous fabric steamer

fabric steamer in which small quantities of water are pumped from the water reservoir and in which steam is produced when the water contacts the walls of the boiler, the water reservoir and the boiler being at atmospheric pressure

Note 1 to entry: The water reservoir and the boiler are connected to the iron by a hose.

3.5.105

pressurized fabric steamer

fabric steamer in which steam is produced in a boiler at a pressure exceeding 50 kPa

Note 1 to entry: The boiler can be incorporated in the fabric steamer or connected to the fabric steamer 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.

5.101 *Fabric steamers are tested as heating appliances even if they incorporate a motor.* **6**

5.102 *For electrode-type appliances, the water in the container has a resistivity of approximately 500 Ωcm at a temperature of 20 °C.*

NOTE The appropriate resistivity can be obtained by adding sodium chloride to the water. **7**

6 Classification

This clause of Part 1 is applicable except as follows.

6.1 Modification:

Electrode-type appliances and appliances with bare heating elements shall be **class I**, **class II** or **class III**.

7 Marking and instructions

This clause of Part 1 is applicable except as follows.

7.1 *Modification:*

Electrode-type appliances shall be marked with their **rated power input**.

7.12 *Addition:*

The instructions shall include details regarding filling, cleaning and descaling.

The instructions shall state the substance of the following:

- care should be taken when using the appliance due to the emission of steam;
- unplug the appliance during filling and cleaning;
- the filling, or decalcifying, or rinsing, or inspection apertures that are under pressure shall not be opened during use (for fabric steamers with pressurized compartments only); **8**
- the fabric steamer is not to be used if it has been dropped, if there are visible signs of damage or if it is leaking. **9**

The instructions for **electrode-type appliances** shall include the substance of the following:

- the composition and quantity of solution to be used and advice not to use an excessive amount of salt;
- the appliance is not to be operated from a DC supply.

The instructions for appliances incorporating an appliance inlet, and intended to be partially or completely immersed in water for cleaning, shall state that the connector must be removed before the appliance is cleaned and the appliance inlet dried before the appliance is used again.

8 Protection against access to live parts

This clause of Part 1 is applicable.

9 Starting of motor-operated appliances

This clause of Part 1 is not applicable.

10 Power input and current

This clause of Part 1 is applicable except as follows.

10.1 ~~Modification~~ Addition:

NOTE 101 For **electrode-type appliances**, the negative deviation is not limited.

11 Heating

This clause of Part 1 is applicable except as follows.

11.2 Addition:

***Fabric steamers** are tested with and without steam emission, the water reservoir or boiler being filled with water. 10*

11.4 Modification:

***Electrode-type appliances** are supplied at the most unfavourable voltage between 0,94 and 1,06 times **rated voltage**.*

11.7 ~~Replacement~~ Modification: 11

Appliances are operated until steady conditions are established.

NOTE 101 Water is added to maintain the generation of steam.

*The container of **electrode-type appliances** is refilled as quickly as possible and as many times as necessary.*

NOTE 102 The appliance is not cleaned between refilling.

Addition:

*For **instantaneous fabric steamers** with a manual steam actuator, steam is emitted in cycles, each cycle having a period of 10 s with steam emission and a period of 10 s with the steam emission interrupted. 12*

11.8 Addition:

*Temperature rises of **accessible surfaces** of hoses that supply steam to parts held in the hand shall comply with the temperature rise limits for handles that are held for short periods only in normal use. However, if a non-metallic hose is covered by textile material, the temperature rise of the surface of the textile material shall not exceed 80 K.*

*The temperature rise limits of motors, transformers and components of **electronic circuits**, including parts directly influenced by them, may be exceeded when the appliance is operated at 1,15 times **rated power input**.*

NOTE 101 The pressure in **pressurized appliances** is measured so that the test of 22.7 can be carried out. 13

12 ~~Void~~ Charging of metal-ion batteries 14

This clause of Part 1 is applicable.

13 Leakage current and electric strength at operating temperature

This clause of Part 1 is applicable except as follows.

13.1 Modification:

Electrode-type appliances are supplied at 1,06 times rated voltage.

13.2 Addition:

For electrode-type appliances and appliances having bare heating elements, the leakage current is measured between a metallic mesh placed in the steam 10 mm from the outlet, and accessible metal parts.

The leakage current shall not exceed 0,25 mA.

NOTE 101 Accessible metal parts include the metal foil.

14 Transient overvoltages

This clause of Part 1 is applicable.

15 Moisture resistance

This clause of Part 1 is applicable.

16 Leakage current and electric strength

This clause of Part 1 is applicable.

17 Overload protection of transformers and associated circuits

This clause of Part 1 is applicable.

18 Endurance

This clause of Part 1 is not applicable.

19 Abnormal operation

This clause of Part 1 is applicable except as follows.

19.2 Addition:

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*Appliances are placed in any stable position on a black-painted plywood board. They are filled or empty, whichever is more unfavourable. However, the container of **electrode-type appliances** is filled with a saturated solution of NaCl at 20 °C ± 5 °C, the appliance being supplied at **rated voltage**.*

NOTE 101 It can be necessary to conduct the test with and without water to determine the most unfavourable condition.

NOTE ~~101~~ 102 A solution is saturated when no more salt can be dissolved.

19.3 Addition:

*This test is not applicable to **electrode-type appliances**.*

19.4 Addition:

*For **pressurized fabric steamers**, any control that limits the pressure during the test of Clause 11 is rendered inoperative. 15*

20 Stability and mechanical hazards

This clause of Part 1 is applicable.

21 Mechanical strength

This clause of Part 1 is applicable except as follows.

21.1 Addition:

*Compliance is also checked by holding **hand-held appliances** and hand-held parts of appliances incorporating electrical components in the most unfavourable position at a height of 2 m and dropping them onto a concrete floor. This test is carried out three times.*

NOTE 101 It can be necessary to conduct the test in various positions to determine the most unfavourable position. 16

22 Construction

This clause of Part 1 is applicable except as follows.

22.7 Replacement:

Pressurized fabric steamers and **instantaneous fabric steamers** shall incorporate adequate safeguards against the risk of excessive pressure.

If jets of steam or hot water are emitted through **protective devices**, the electrical insulation shall not be affected or the user exposed to a hazard.

Compliance is checked by inspection and by the following test.

*For **pressurized fabric steamers**, the maximum pressure occurring during the test of Clause 11 with the boiler filled but without steam emission is measured. All pressure-regulating devices that operated during the test are rendered inoperative and the pressure shall not exceed three times the previously measured value. Any pressure-limiting **protective device** is then rendered inoperative and the pressure in the boiler is raised hydraulically to five times the pressure measured originally or twice the pressure measured with the pressure-regulating*

devices rendered inoperative, whichever is higher. This pressure is maintained for 1 min. There shall be no leakage from the appliance. Hoses that are subjected to the pressure within the boiler when the fabric steamer is located in its rest position or during normal use of the appliance are also subjected to the hydraulic pressure test.

Pressurized fabric steamers in which the device regulating the steam supply is within the boiler are operated as specified in Clause 11 but with all pressure-regulating devices operating during the test of Clause 11 rendered inoperative. All vents in the nozzle are sealed and the device regulating the steam supply is opened. There shall be no leakage from the hose except at an intentionally weak place within the enclosure of the boiler. If this occurs, the test is repeated on another appliance that shall also leak in the same way.

All vents in the nozzle of **instantaneous fabric steamers** are sealed and the pressure in the water reservoir is raised hydraulically until the pressure-limiting **protective device** operates. The pressure shall not exceed 50 kPa. The outlet through the **protective device** is then sealed and the pressure is raised to 100 kPa and maintained at this value for 1 min. There shall be no leakage from the appliance. **17**

22.33 Modification:

Liquids may be heated using electrodes and may be in direct contact with their **live parts**, and with **live parts** of bare heating elements.

22.101 Appliances Fabric steamers shall be constructed so that there ~~are~~ is no spillage of water or no sudden jets of steam or hot water likely to expose the user to a hazard when the ~~appliance fabric steamer~~ is used as in ~~normal use~~ accordance with the instructions.

When removing the filling cap of boilers, the pressure shall be relieved in a controlled manner before the cap is removed completely, to avoid the emission of jets of steam or hot water in a manner likely to expose the user to a hazard. **18**

Compliance is checked by inspection during the test of Clause 11 and by removing the filling cap at the end of the test.

22.102 For vented fabric steamers or instantaneous fabric steamers, ~~Water containers~~ the boilers, cavities, pipes or similar areas where water is heated shall be vented to the atmosphere. The aperture shall be at least 5 mm in diameter or 20 mm² in area with a minimum dimension of at least 3 mm.

For **pressurized fabric steamers** the pressure-limiting **protective devices** that operate during the tests of 19.4 and 22.7 shall have an inlet aperture at least 5 mm in diameter or 20 mm² in area and a width of at least 4 mm. The area of the aperture at the outlet shall not be less than that of the aperture at the inlet. **19**

Compliance is checked ~~by inspection and~~ by measurement.

22.103 Electrode-type appliances shall be constructed to ensure that when the filling aperture of the container is open, both electrodes are disconnected to provide **all-pole disconnection** under overvoltage category III conditions.

NOTE An appliance that requires the withdrawal of an appliance connector in order to gain access to the filling aperture is considered to meet this requirement.

Compliance is checked by inspection.

22.104 Portable electrode-type appliances and portable appliances having bare heating elements shall be constructed so that they do not give rise to a hazard when they are overturned.

Compliance is checked by the following test.

*The appliance is filled and operated as in normal use. It is then overturned in the most unfavourable position. No water shall flow out before a **protective device** providing **all-pole disconnection** operates.*

NOTE It can be necessary to conduct the test in various positions to determine the most unfavourable position.

22.105 Pressurized fabric steamers incorporating more than one boiler connected together shall incorporate a pressure-limiting **protective device** in each boiler.

Compliance is checked by inspection. **20**

23 Internal wiring

This clause of Part 1 is applicable.

24 Components

This clause of Part 1 is applicable.

25 Supply connection and external flexible cords

This clause of Part 1 is applicable except as follows.

25.1 Modification:

Hand-held appliances, and hand-held parts of other appliances, shall not incorporate an appliance inlet if water could leak onto the pins through a seal in the container.

NOTE 101 This requirement does not apply to hand-held parts of **class III construction**.

25.5 Addition:

Type Z attachment is allowed for **hand-held appliances**.

25.7 Addition:

Braided cords (code designation 60245 IEC 89) may be used.

25.14 Modification:

*The number of flexings for **type Z attachments** is 50 000 and for other attachments 20 000.*

26 Terminals for external conductors

This clause of Part 1 is applicable.

27 Provision for earthing

This clause of Part 1 is applicable.

28 Screws and connections

This clause of Part 1 is applicable.

29 Clearances, creepage distances and solid insulation

This clause of Part 1 is applicable except as follows.

29.2 Addition:

For **electrode-type appliances**, the microenvironment of the insulation supporting the electrodes is pollution degree 3.

30 Resistance to heat and fire

This clause of Part 1 is applicable except as follows.

30.2 Modification:

Replace the two dashed items in the compliance criteria with the following:

- for **fabric steamers**, 30.2.2 is applicable.

~~30.2.3 Not applicable.~~ 21

31 Resistance to rusting

This clause of Part 1 is applicable.

32 Radiation, toxicity and similar hazards

This clause of Part 1 is applicable.

Annexes

The annexes of Part 1 are applicable.

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Bibliography

The bibliography of Part 1 is applicable except as follows.

Addition:

IEC 60335-2-3, *Household and similar electrical appliances – Safety – Part 2-3: Particular requirements for electric irons*

IEC 60335-2-44, *Household and similar electrical appliances – Safety – Part 2-44: Particular requirements for ironers*

IEC 60335-2-54, *Household and similar electrical appliances – Safety – Part 2-54: Particular requirements for surface-cleaning appliances for household use employing liquids or steam*

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List of comments

- 1 This revision is for alignment with IEC 60335-1:2020.
 - 2 This revision is for alignment with IEC 60335-1:2020.
 - 3 This revision is for alignment with IEC 60335-1:2020.
 - 4 This revision maintains the normal operation while charging as specified in IEC 60335-1:2020.
 - 5 This is relocated from Subclause 3.1.9 to Clause 5.
 - 6 This revision is for alignment with IEC 60335-2-3.
 - 7 This is relocated from Subclause 3.1.9 to Clause 5.
 - 8 Additional requirements are added to the standard for pressurized fabric steamers based on the requirements for pressurized steam irons in IEC 60335-2-3.
 - 9 This revision is for alignment with IEC 60335-2-3.
 - 10 This revision is based on IEC 60335-2-3, but modified for this standard to also test with steam emission, since that is the primary function of these appliances.
 - 11 This revision maintains the test duration while charging as specified in IEC 60335-1:2020.
 - 12 Additional requirements are added to the standard for instantaneous fabric steamers based on the requirements for instantaneous steam irons in IEC 60335-2-3.
 - 13 This revision is for alignment with IEC 60335-2-3.
 - 14 This revision is for alignment with IEC 60335-1:2020.
 - 15 Additional requirements are added to the standard for pressurized fabric steamers based on the requirements for pressurized steam irons in IEC 60335-2-3.
 - 16 Appliances and parts of appliances held in the hand during use are likely to be dropped by the user. Therefore, a drop test is added to ensure that dropping does not result in a hazardous condition. The height of 2 m is specified to represent use of a steamer above the user's head, such as when steaming curtains.
 - 17 Additional requirements are added to the standard for pressurized and instantaneous fabric steamers based on the requirements for pressurized and instantaneous steam irons in IEC 60335-2-3.
 - 18 Additional requirements are added to the standard for pressurized fabric steamers based on the requirements for pressurized steam irons in IEC 60335-2-3.
 - 19 Additional requirements are added to the standard for pressurized fabric steamers based on the requirements for pressurized steam irons in IEC 60335-2-3.
 - 20 Additional requirements are added to the standard for pressurized fabric steamers based on the requirements for pressurized steam irons in IEC 60335-2-3.
 - 21 These tests may be applicable for appliances for remote operation and for parts connected to the supply mains during the charging period as specified in Subclause 30.2 of IEC 60335-1:2020. This is now clarified in the modification to Subclause 30.2.
-

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Household and similar electrical appliances – Safety –
Part 2-85: Particular requirements for fabric steamers**

**Appareils électrodomestiques et analogues – Sécurité –
Partie 2-85: Exigences particulières pour les appareils à vapeur pour tissus**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY –****Part 2-85: Particular requirements for fabric steamers**

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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
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- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 60335-2-85 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances. It is an International Standard.

This third edition cancels and replaces the second edition published in 2002, Amendment 1:2008 and Amendment 2:2017. This edition constitutes a technical revision.

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

- a) alignment with IEC 60335-1:2020;
- b) conversion of some notes to normative text (Clause 1);
- c) introduction of pressurized fabric steamer.

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

Draft	Report on voting
61/6673/FDIS	61/6748/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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.

This part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments unless that edition precludes it; in that case, the latest edition that does not preclude it is used. It was established on the basis of the sixth edition (2020) 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: Particular requirements for fabric steamers.

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.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under 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.

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.

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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.

Guidance documents concerning the application of the safety requirements for appliances can be accessed via TC 61 supporting documents on the IEC website

<https://www.iec.ch/tc61/supportingdocuments>

This information is given for the convenience of users of this International Standard and does not constitute a replacement for the normative text in this standard.

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 can 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 publications, basic safety publications and group safety publications 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.

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.

NOTE 3 Standards dealing with non-safety aspects of household appliances are:

- IEC standards published by TC 59 concerning methods of measuring performance;
- CISPR 11, CISPR 14-1 and relevant IEC 61000-3 series standards concerning electromagnetic emissions;
- CISPR 14-2 concerning electromagnetic immunity;
- IEC standards published by TC 111 concerning environmental matters.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-85: Particular requirements for fabric steamers

1 Scope

This clause of Part 1 is replaced by the following.

This part of IEC 60335 deals with the safety of electric **fabric steamers** intended for household and similar purposes, their **rated voltage** being not more than 250 V including direct current (DC) supplied appliances and **battery-operated appliances**.

Appliances not intended for normal household use, but that nevertheless possibly pose a source of danger to the public, such as appliances intended to be used by laymen in shops, laundries and dry cleaners, are within the scope of this standard.

As far as is practicable, this standard deals with the common hazards presented by appliances that are encountered by all persons in and around the home. However, in general, it does not take into account:

- persons (including children) whose
 - physical, sensory or mental capabilities; or
 - lack of experience and knowledgeprevents them from using the appliance safely without supervision or instruction;
- children playing with the appliance.

Attention is drawn to the fact that

- for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements can 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.

This standard does not apply to

- 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);
- electric irons (IEC 60335-2-3);
- ironers (IEC 60335-2-44);
- surface-cleaning appliances for household use employing liquids or steam (IEC 60335-2-54);
- appliances connected to the water mains.

2 Normative references

This clause of Part 1 is applicable.

3 Terms and definitions

This clause of Part 1 is applicable except as follows.

3.1 Definitions relating to physical characteristics

3.1.6 Addition:

Note 101 to entry: For **electrode-type appliances**, if no current is assigned to the appliance, the **rated current** is calculated from the **rated voltage** and the mean value of the power input during the first 2 min of operation, the appliance being supplied at **rated voltage** and operated under **normal operation**.

3.1.9 Addition:

normal operation

operation of the appliance in the normal position of use but away from any surface, with the container filled with water and with any lid closed

3.5 Definitions relating to types of appliances

3.5.101

fabric steamer

appliance for removing creases from garments and fabrics by directing steam at their surface

3.5.102

electrode-type appliance

appliance in which a conductive liquid is heated by a current flowing through it

3.5.103

vented fabric steamer

fabric steamer in which steam is produced when the water contacts the heated nozzle of the fabric steamer, the water reservoir being at atmospheric pressure

Note 1 to entry: The water reservoir can be incorporated in the fabric steamer or connected to the fabric steamer by a hose.

3.5.104

instantaneous fabric steamer

fabric steamer in which small quantities of water are pumped from the water reservoir and in which steam is produced when the water contacts the walls of the boiler, the water reservoir and the boiler being at atmospheric pressure

Note 1 to entry: The water reservoir and the boiler are connected to the iron by a hose.

3.5.105

pressurized fabric steamer

fabric steamer in which steam is produced in a boiler at a pressure exceeding 50 kPa

Note 1 to entry: The boiler can be incorporated in the fabric steamer or connected to the fabric steamer 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.

5.101 *Fabric steamers are tested as heating appliances even if they incorporate a motor.*

5.102 For **electrode-type appliances**, the water in the container has a resistivity of approximately 500 Ωcm at a temperature of 20 °C.

NOTE The appropriate resistivity can be obtained by adding sodium chloride to the water.

6 Classification

This clause of Part 1 is applicable except as follows.

6.1 Modification:

Electrode-type appliances and appliances with bare heating elements shall be **class I**, **class II** or **class III**.

7 Marking and instructions

This clause of Part 1 is applicable except as follows.

7.1 Modification:

Electrode-type appliances shall be marked with their **rated power input**.

7.12 Addition:

The instructions shall include details regarding filling, cleaning and descaling.

The instructions shall state the substance of the following:

- care should be taken when using the appliance due to the emission of steam;
- unplug the appliance during filling and cleaning;
- the filling, or decalcifying, or rinsing, or inspection apertures that are under pressure shall not be opened during use (for fabric steamers with pressurized compartments only);
- the fabric steamer is not to be used if it has been dropped, if there are visible signs of damage or if it is leaking.

The instructions for **electrode-type appliances** shall include the substance of the following:

- the composition and quantity of solution to be used and advice not to use an excessive amount of salt;
- the appliance is not to be operated from a DC supply.

The instructions for appliances incorporating an appliance inlet, and intended to be partially or completely immersed in water for cleaning, shall state that the connector must be removed before the appliance is cleaned and the appliance inlet dried before the appliance is used again.

8 Protection against access to live parts

This clause of Part 1 is applicable.

9 Starting of motor-operated appliances

This clause of Part 1 is not applicable.

10 Power input and current

This clause of Part 1 is applicable except as follows.

10.1 Addition:

NOTE 101 For **electrode-type appliances**, the negative deviation is not limited.

11 Heating

This clause of Part 1 is applicable except as follows.

11.2 Addition:

Fabric steamers are tested with and without steam emission, the water reservoir or boiler being filled with water.

11.4 Modification:

Electrode-type appliances are supplied at the most unfavourable voltage between 0,94 and 1,06 times **rated voltage**.

11.7 Modification:

Appliances are operated until steady conditions are established.

NOTE 101 Water is added to maintain the generation of steam.

*The container of **electrode-type appliances** is refilled as quickly as possible and as many times as necessary.*

NOTE 102 The appliance is not cleaned between refilling.

Addition:

*For **instantaneous fabric steamers** with a manual steam actuator, steam is emitted in cycles, each cycle having a period of 10 s with steam emission and a period of 10 s with the steam emission interrupted.*

11.8 Addition:

*Temperature rises of **accessible surfaces** of hoses that supply steam to parts held in the hand shall comply with the temperature rise limits for handles that are held for short periods only in normal use. However, if a non-metallic hose is covered by textile material, the temperature rise of the surface of the textile material shall not exceed 80 K.*

*The temperature rise limits of motors, transformers and components of **electronic circuits**, including parts directly influenced by them, may be exceeded when the appliance is operated at 1,15 times **rated power input**.*

NOTE 101 The pressure in **pressurized appliances** is measured so that the test of 22.7 can be carried out.

12 Charging of metal-ion batteries

This clause of Part 1 is applicable.

13 Leakage current and electric strength at operating temperature

This clause of Part 1 is applicable except as follows.

13.1 Modification:

Electrode-type appliances are supplied at 1,06 times rated voltage.

13.2 Addition:

For electrode-type appliances and appliances having bare heating elements, the leakage current is measured between a metallic mesh placed in the steam 10 mm from the outlet, and accessible metal parts.

The leakage current shall not exceed 0,25 mA.

NOTE 101 Accessible metal parts include the metal foil.

14 Transient overvoltages

This clause of Part 1 is applicable.

15 Moisture resistance

This clause of Part 1 is applicable.

16 Leakage current and electric strength

This clause of Part 1 is applicable.

17 Overload protection of transformers and associated circuits

This clause of Part 1 is applicable.

18 Endurance

This clause of Part 1 is not applicable.

19 Abnormal operation

This clause of Part 1 is applicable except as follows.

19.2 Addition:

Appliances are placed in any stable position on a black-painted plywood board. They are filled or empty, whichever is more unfavourable. However, the container of electrode-type appliances is filled with a saturated solution of NaCl at 20 °C ± 5 °C, the appliance being supplied at rated voltage.

NOTE 101 It can be necessary to conduct the test with and without water to determine the most unfavourable condition.

NOTE 102 A solution is saturated when no more salt can be dissolved.

19.3 Addition:

*This test is not applicable to **electrode-type appliances**.*

19.4 Addition:

*For **pressurized fabric steamers**, any control that limits the pressure during the test of Clause 11 is rendered inoperative.*

20 Stability and mechanical hazards

This clause of Part 1 is applicable.

21 Mechanical strength

This clause of Part 1 is applicable except as follows.

21.1 Addition:

*Compliance is also checked by holding **hand-held appliances** and hand-held parts of appliances incorporating electrical components in the most unfavourable position at a height of 2 m and dropping them onto a concrete floor. This test is carried out three times.*

NOTE 101 It can be necessary to conduct the test in various positions to determine the most unfavourable position.

22 Construction

This clause of Part 1 is applicable except as follows.

22.7 Replacement:

Pressurized fabric steamers and **instantaneous fabric steamers** shall incorporate adequate safeguards against the risk of excessive pressure.

If jets of steam or hot water are emitted through **protective devices**, the electrical insulation shall not be affected or the user exposed to a hazard.

Compliance is checked by inspection and by the following test.

*For **pressurized fabric steamers**, the maximum pressure occurring during the test of Clause 11 with the boiler filled but without steam emission is measured. All pressure-regulating devices that operated during the test are rendered inoperative and the pressure shall not exceed three times the previously measured value. Any pressure-limiting **protective device** is then rendered inoperative and the pressure in the boiler is raised hydraulically to five times the pressure measured originally or twice the pressure measured with the pressure-regulating devices rendered inoperative, whichever is higher. This pressure is maintained for 1 min. There shall be no leakage from the appliance. Hoses that are subjected to the pressure within the boiler when the fabric steamer is located in its rest position or during normal use of the appliance are also subjected to the hydraulic pressure test.*

Pressurized fabric steamers in which the device regulating the steam supply is within the boiler are operated as specified in Clause 11 but with all pressure-regulating devices operating during the test of Clause 11 rendered inoperative. All vents in the nozzle are sealed and the device regulating the steam supply is opened. There shall be no leakage from the hose except at an intentionally weak place within the enclosure of the boiler. If this occurs, the test is repeated on another appliance that shall also leak in the same way.

All vents in the nozzle of **instantaneous fabric steamers** are sealed and the pressure in the water reservoir is raised hydraulically until the pressure-limiting **protective device** operates. The pressure shall not exceed 50 kPa. The outlet through the **protective device** is then sealed and the pressure is raised to 100 kPa and maintained at this value for 1 min. There shall be no leakage from the appliance.

22.33 Modification:

Liquids may be heated using electrodes and may be in direct contact with their **live parts**, and with **live parts** of bare heating elements.

22.101 Fabric steamers shall be constructed so that there is no spillage of water or no sudden jets of steam or hot water likely to expose the user to a hazard when the **fabric steamer** is used as in accordance with the instructions.

When removing the filling cap of boilers, the pressure shall be relieved in a controlled manner before the cap is removed completely, to avoid the emission of jets of steam or hot water in a manner likely to expose the user to a hazard.

Compliance is checked by inspection during the test of Clause 11 and by removing the filling cap at the end of the test.

22.102 For **vented fabric steamers** or **instantaneous fabric steamers**, the boilers, cavities, pipes or similar areas where water is heated shall be vented to the atmosphere. The aperture shall be at least 5 mm in diameter or 20 mm² in area with a minimum dimension of at least 3 mm.

For **pressurized fabric steamers** the pressure-limiting **protective devices** that operate during the tests of 19.4 and 22.7 shall have an inlet aperture at least 5 mm in diameter or 20 mm² in area and a width of at least 4 mm. The area of the aperture at the outlet shall not be less than that of the aperture at the inlet.

Compliance is checked by measurement.

22.103 Electrode-type appliances shall be constructed to ensure that when the filling aperture of the container is open, both electrodes are disconnected to provide **all-pole disconnection** under overvoltage category III conditions.

NOTE An appliance that requires the withdrawal of an appliance connector in order to gain access to the filling aperture is considered to meet this requirement.

Compliance is checked by inspection.

22.104 Portable electrode-type appliances and **portable appliances** having bare heating elements shall be constructed so that they do not give rise to a hazard when they are overturned.

Compliance is checked by the following test.

*The appliance is filled and operated as in normal use. It is then overturned in the most unfavourable position. No water shall flow out before a **protective device** providing **all-pole disconnection** operates.*

NOTE It can be necessary to conduct the test in various positions to determine the most unfavourable position.

22.105 Pressurized fabric steamers incorporating more than one boiler connected together shall incorporate a pressure-limiting **protective device** in each boiler.

Compliance is checked by inspection.

23 Internal wiring

This clause of Part 1 is applicable.

24 Components

This clause of Part 1 is applicable.

25 Supply connection and external flexible cords

This clause of Part 1 is applicable except as follows.

25.1 Modification:

Hand-held appliances, and hand-held parts of other appliances, shall not incorporate an appliance inlet if water could leak onto the pins through a seal in the container.

NOTE 101 This requirement does not apply to hand-held parts of **class III construction**.

25.5 Addition:

Type Z attachment is allowed for **hand-held appliances**.

25.7 Addition:

Braided cords (code designation 60245 IEC 89) may be used.

25.14 Modification:

*The number of flexings for **type Z attachments** is 50 000 and for other attachments 20 000.*

26 Terminals for external conductors

This clause of Part 1 is applicable.

27 Provision for earthing

This clause of Part 1 is applicable.

28 Screws and connections

This clause of Part 1 is applicable.

29 Clearances, creepage distances and solid insulation

This clause of Part 1 is applicable except as follows.

29.2 Addition:

For **electrode-type appliances**, the microenvironment of the insulation supporting the electrodes is pollution degree 3.

30 Resistance to heat and fire

This clause of Part 1 is applicable except as follows.

30.2 Modification:

Replace the two dashed items in the compliance criteria with the following:

- for **fabric steamers**, 30.2.2 is applicable.

31 Resistance to rusting

This clause of Part 1 is applicable.

32 Radiation, toxicity and similar hazards

This clause of Part 1 is applicable.

Annexes

The annexes of Part 1 are applicable.

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Bibliography

The bibliography of Part 1 is applicable except as follows.

Addition:

IEC 60335-2-3, *Household and similar electrical appliances – Safety – Part 2-3: Particular requirements for electric irons*

IEC 60335-2-44, *Household and similar electrical appliances – Safety – Part 2-44: Particular requirements for ironers*

IEC 60335-2-54, *Household and similar electrical appliances – Safety – Part 2-54: Particular requirements for surface-cleaning appliances for household use employing liquids or steam*

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

**APPAREILS ÉLECTRODOMESTIQUES ET ANALOGUES –
SÉCURITÉ –****Partie 2-85: Exigences particulières
pour les appareils à vapeur pour tissus**

AVANT-PROPOS

- 1) La Commission Electrotechnique Internationale (IEC) est une organisation mondiale de normalisation composée de l'ensemble des comités électrotechniques nationaux (Comités nationaux de l'IEC). L'IEC a pour objet de favoriser la coopération internationale pour toutes les questions de normalisation dans les domaines de l'électricité et de l'électronique. A cet effet, l'IEC – entre autres activités – publie des Normes internationales, des Spécifications techniques, des Rapports techniques, des Spécifications accessibles au public (PAS) et des Guides (ci-après dénommés "Publication(s) de l'IEC"). Leur élaboration est confiée à des comités d'études, aux travaux desquels tout Comité national intéressé par le sujet traité peut participer. Les organisations internationales, gouvernementales et non gouvernementales, en liaison avec l'IEC, participent également aux travaux. L'IEC collabore étroitement avec l'Organisation Internationale de Normalisation (ISO), selon des conditions fixées par accord entre les deux organisations.
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L'IEC 60335-2-85 a été établie par le comité d'études 61 de l'IEC: Sécurité des appareils électrodomestiques et analogues. Il s'agit d'une Norme internationale.

Cette troisième édition annule et remplace la deuxième édition parue en 2002, l'Amendement 1:2008 et l'Amendement 2:2017. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) le texte a été aligné sur l'IEC 60335-1:2020;
- b) certaines notes ont été converties en texte normatif (Article 1);
- c) les appareils à vapeur sous pression pour tissus ont été ajoutés.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
61/6673/FDIS	61/6748/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/standardsdev/publications.

Une liste de toutes les parties de la série IEC 60335, publiées sous le titre général *Appareils électrodomestiques et analogues – Sécurité*, se trouve sur le site web de l'IEC.

La présente partie 2 doit être utilisée conjointement avec la dernière édition de l'IEC 60335-1 et ses amendements sauf si cette édition l'exclut. Dans ce cas, la dernière édition qui n'exclut pas la présente partie 2 est utilisée. Elle a été établie sur la base de la sixième édition (2020) de cette norme.

NOTE 1 L'expression "la Partie 1" utilisée dans la présente norme fait référence à l'IEC 60335-1.

La présente partie 2 complète ou modifie les articles correspondants de l'IEC 60335-1, de façon à transformer cette publication en norme IEC: Exigences particulières pour les appareils à vapeur pour tissus.

Lorsqu'un paragraphe particulier de la Partie 1 n'est pas mentionné dans cette partie 2, ce paragraphe s'applique pour autant que cela soit raisonnable. Lorsque la présente norme mentionne "addition", "modification" ou "remplacement", le texte correspondant de la Partie 1 doit être adapté en conséquence.

NOTE 2 Le système de numérotation suivant est utilisé:

- les paragraphes, tableaux et figures qui s'ajoutent à ceux de la Partie 1 sont numérotés à partir de 101;
- à l'exception de celles qui sont dans un nouveau paragraphe ou de celles qui concernent des notes de la Partie 1, les notes sont numérotées à partir de 101, y compris celles des articles ou paragraphes qui sont remplacés;
- les annexes qui sont ajoutées sont désignées AA, BB, etc.

NOTE 3 Les caractères d'imprimerie suivants sont utilisés:

- exigences: caractères romains;
- *modalités d'essais: caractères italiques;*
- notes: petits caractères romains.

Les termes en **gras** dans le texte sont définis à l'Article 3. Lorsqu'une définition concerne un adjectif, l'adjectif et le nom associé figurent également en gras.

Le comité a décidé que le contenu de ce document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous webstore.iec.ch dans les données relatives au document recherché. A cette date, le document sera

- reconduit,
- supprimé,
- remplacé par une édition révisée, ou
- amendé.

NOTE 4 L'attention des Comités nationaux est attirée sur le fait que les fabricants d'appareils et les organismes d'essai peuvent avoir besoin d'une période transitoire après la publication d'une nouvelle publication IEC, ou d'une publication amendée ou révisée, pour fabriquer des produits conformes aux nouvelles exigences et pour adapter leurs équipements aux nouveaux essais ou aux essais révisés.

Le comité recommande que le contenu de cette publication soit adopté pour application nationale (obligatoire) au plus tôt 12 mois et au plus tard 36 mois après la date de publication.

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INTRODUCTION

Il a été admis par hypothèse, en établissant la présente Norme internationale, que l'exécution de ses dispositions était confiée à des personnes expérimentées et ayant une qualification appropriée.

Les documents de recommandations concernant l'application des exigences de sécurité pour les appareils peuvent être consultés dans les documents de support du CE 61, accessibles sur le site web de l'IEC à l'adresse:

<https://www.iec.ch/tc61/supportingdocuments>

Cette information est donnée à l'intention des utilisateurs de la présente Norme internationale et ne constitue nullement un remplacement du texte normatif de la présente norme.

La présente norme reconnaît le niveau de protection internationalement accepté contre les risques électriques, mécaniques, thermiques, liés au feu et au rayonnement des appareils, lorsqu'ils fonctionnent comme en usage normal en tenant compte des instructions du fabricant. Elle couvre également les situations anormales qui peuvent être attendues dans la pratique et elle tient compte de la façon dont les phénomènes électromagnétiques peuvent altérer le fonctionnement sûr des appareils.

La présente norme tient compte autant que possible des exigences de l'IEC 60364, de façon à rester compatible avec les règles d'installation quand l'appareil est raccordé au réseau d'alimentation. Cependant, des règles nationales d'installation peuvent être différentes.

Si un appareil relevant du domaine d'application de la présente norme comporte également des fonctions couvertes par une autre partie 2 de l'IEC 60335, la partie 2 correspondante est appliquée à chaque fonction séparément, dans la limite du raisonnable. Si cela s'applique, l'influence d'une fonction sur les autres fonctions est prise en compte.

Lorsqu'une partie 2 ne comporte pas d'exigences complémentaires pour couvrir les dangers traités dans la Partie 1, la Partie 1 s'applique.

NOTE 1 Cela signifie que les comités d'études responsables pour les parties 2 ont déterminé qu'il n'était pas nécessaire de spécifier des exigences particulières pour l'appareil en question en plus des exigences générales.

La présente norme est une norme de famille de produits traitant de la sécurité d'appareils et a préséance sur les normes horizontales et génériques couvrant le même sujet.

NOTE 2 Les publications horizontales, les publications fondamentales de sécurité et les publications groupées de sécurité couvrant un danger ne s'appliquent pas, parce qu'elles ont été prises en considération lorsque les exigences générales et particulières ont été étudiées pour la série de normes IEC 60335.

Un appareil conforme au texte de la présente norme ne sera pas nécessairement jugé conforme aux principes de sécurité de la norme si, lorsqu'il est examiné et soumis aux essais, il apparaît qu'il présente d'autres caractéristiques qui compromettent le niveau de sécurité visé par ces exigences.

Un appareil utilisant des matériaux ou présentant des modes de construction différents de ceux décrits dans les exigences de la présente norme peut être examiné et soumis aux essais en fonction de l'objectif poursuivi par ces exigences et, s'il est jugé pratiquement équivalent, il peut être estimé conforme aux principes de sécurité de la présente norme.

NOTE 3 Les normes traitant des aspects non relatifs à la sécurité des appareils électrodomestiques sont:

- les normes IEC publiées par le comité d'études 59 concernant les méthodes de mesure d'aptitude à la fonction;
- les normes CISPR 11 et CISPR 14-1, ainsi que les normes applicables de la série IEC 61000-3 concernant les émissions électromagnétiques;
- la norme CISPR 14-2 concernant l'immunité électromagnétique;
- les normes IEC publiées par le comité d'études 111 concernant l'environnement.

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APPAREILS ÉLECTRODOMESTIQUES ET ANALOGUES – SÉCURITÉ –

Partie 2-85: Exigences particulières pour les appareils à vapeur pour tissus

1 Domaine d'application

L'article de la Partie 1 est remplacé par le texte suivant.

La présente partie de l'IEC 60335 traite de la sécurité des **appareils à vapeur pour tissus** électriques destinés à un usage domestique et analogue, dont la **tension assignée** est inférieure ou égale à 250 V, y compris les appareils alimentés en courant continu et les **appareils alimentés par batteries**.

Les appareils non destinés à un usage domestique normal, mais qui peuvent néanmoins constituer une source de danger pour le public, tels que les appareils destinés à être utilisés par des usagers non avertis dans des magasins, chez des artisans et dans des fermes, sont compris dans le domaine d'application de la présente norme.

Dans la mesure du possible, la présente norme traite des dangers courants que présentent les appareils et auxquels sont exposés tous les individus situés à l'intérieur et autour de l'habitation. Cependant, elle ne tient en général pas compte

- des personnes (y compris des enfants) dont:
 - les capacités physiques, sensorielles ou mentales; ou
 - le manque d'expérience et de connaissanceles empêchent d'utiliser l'appareil en toute sécurité sans surveillance ou instruction;
- des enfants qui jouent avec l'appareil.

L'attention est attirée sur le fait que

- pour les appareils destinés à être utilisés dans des véhicules ou à bord de navires ou d'avions, des exigences supplémentaires peuvent être nécessaires;
- dans de nombreux pays, des exigences supplémentaires sont spécifiées par les organismes nationaux de la santé, par les organismes nationaux responsables de la protection des travailleurs et par des organismes similaires.

La présente norme ne s'applique pas

- aux appareils destinés à être utilisés dans des locaux qui présentent des conditions particulières, telles que la présence d'une atmosphère corrosive ou explosive (poussière, vapeur ou gaz);
- aux fers à repasser électriques (IEC 60335-2-3);
- aux machines à repasser (IEC 60335-2-44);
- aux appareils de nettoyage des surfaces à usage domestique, utilisant des liquides ou de la vapeur (IEC 60335-2-54);
- aux appareils raccordés au réseau d'alimentation en eau.

2 Références normatives

L'article de la Partie 1 s'applique.

3 Termes et définitions

L'article de la Partie 1 s'applique, avec les exceptions suivantes.

3.1 Définitions relatives aux caractéristiques physiques

3.1.6 *Addition:*

Note 101 à l'article: Pour les **appareils du type à électrodes**, si aucun courant n'est attribué à l'appareil, le **courant assigné** est calculé à partir de la **tension assignée** et de la valeur moyenne de la puissance au cours des deux premières minutes de fonctionnement, l'appareil étant alimenté à la **tension assignée** et mis en fonctionnement dans les conditions de **fonctionnement normal**.

3.1.9 *Addition:*

conditions de fonctionnement normal

fonctionnement de l'appareil dans la position normale d'emploi, mais éloigné de toute surface, le réservoir étant rempli d'eau et tout couvercle étant fermé

3.5 Définitions relatives aux types d'appareils

3.5.101

appareil à vapeur pour tissus

appareil destiné à enlever les faux plis des vêtements ou des tissus en projetant de la vapeur sur leur surface

3.5.102

appareil du type à électrodes

appareil dans lequel un liquide conducteur est chauffé par un courant qui le traverse

3.5.103

appareil à vapeur ouvert à l'air libre pour tissus

appareil à vapeur pour tissus dans lequel la vapeur est produite lorsque l'eau vient au contact de la buse chauffante de l'appareil à vapeur pour tissus, le réservoir d'eau étant à la pression atmosphérique

Note 1 à l'article: Le réservoir d'eau peut être incorporé dans l'appareil à vapeur pour tissus ou être raccordé à celui-ci par un flexible.

3.5.104

appareil à vapeur instantané pour tissus

appareil à vapeur pour tissus dans lequel de faibles quantités d'eau sont pompées dans le réservoir d'eau et dans lequel la vapeur est produite lorsque l'eau vient au contact des parois du bouilleur, le réservoir d'eau et le bouilleur étant à la pression atmosphérique

Note 1 à l'article: Le réservoir d'eau et le bouilleur sont raccordés à l'appareil à vapeur pour tissus par un flexible.

3.5.105

appareil à vapeur sous pression pour tissus

appareil à vapeur pour tissus dans lequel la vapeur est produite dans un bouilleur à une pression supérieure à 50 kPa

Note 1 à l'article: Le bouilleur peut être incorporé dans l'appareil à vapeur pour tissus ou être raccordé à celui-ci par un flexible.

4 Exigences générales

L'article de la Partie 1 s'applique.

5 Conditions générales d'essais

L'article de la Partie 1 s'applique, avec les exceptions suivantes.

5.101 Les **appareils à vapeur pour tissus** sont soumis à l'essai comme des **appareils chauffants** même s'ils comportent un moteur.

5.102 Pour les **appareils du type à électrodes**, l'eau dans le réservoir a une résistivité d'environ 500 Ωcm à une température de 20 °C.

NOTE La résistivité appropriée peut être obtenue en ajoutant à l'eau du chlorure de sodium.

6 Classification

L'article de la Partie 1 s'applique, avec l'exception suivante.

6.1 Modification:

Les **appareils du type à électrodes** et les appareils à éléments chauffants nus doivent être de la **classe I**, de la **classe II** ou de la **classe III**.

7 Marquage et instructions

L'article de la Partie 1 s'applique, avec les exceptions suivantes.

7.1 Modification:

Les **appareils du type à électrodes** doivent porter le marquage de la **puissance assignée**.

7.12 Addition:

Les instructions doivent comprendre des informations pour le remplissage, le nettoyage et le détartrage.

Les instructions doivent comporter en substance les indications suivantes:

- lors de l'utilisation de l'appareil, il convient d'accorder une attention particulière à l'émission de vapeur;
- débrancher l'appareil lors du remplissage et du nettoyage;
- les orifices de remplissage, de détartrage, de rinçage ou d'examen qui sont sous pression ne doivent pas être ouverts pendant l'utilisation (uniquement pour les appareils à vapeur pour tissus qui comportent des compartiments sous pression);
- l'appareil à vapeur pour tissus ne doit pas être utilisé s'il a subi une chute, s'il présente des signes visibles de détérioration ou s'il fuit.