

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 2
AMENDEMENT 2

**Household and similar electrical appliances – Safety –
Part 2-17: Particular requirements for blankets, pads and similar flexible heating
appliances**
(<https://standards.iteh.ai>)

**Appareils électrodomestiques et analogues – Sécurité –
Partie 2-17: Règles particulières pour les couvertures, coussins et appareils
chauffants souples analogues**
(<https://standards.iteh.ai/catalog/standards/iec/5a39b807-61b0-4b0c-a4ab-4b05d143b1df/iec-60335-2-17-2002-amd2-2008>)



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PRICE CODE
CODE PRIX

J

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
61/3562/FDIS	61/3638/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 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,
- withdrawn,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.

Title

Replace the title by the following:

Household and similar electrical appliances – Safety – Part 2-17: Particular requirements for blankets, pads, clothing and similar flexible heating appliances

CONTENTS

Add the following:

Annex CC (normative) Clothing

INTRODUCTION

Replace the fifth paragraph by the following:

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.

1 Scope

In the second paragraph, replace “pads” by “pads, clothing”.

Add the following after the third paragraph:

Appliances not intended for normal household use but which nevertheless may be a source of danger to the public, such as appliances intended to be used in beauty parlours or by persons in cold ambient temperatures, are within the scope of this standard.

Requirements and tests for clothing are given in Annex CC.

Replace the two dashed items in the existing fourth paragraph by the following:

- 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.

2 Normative references

Replace the reference to ISO 3758 by the following:

ISO 3758:2005, *Textiles – Care labelling code using symbols*

5 General conditions for the tests

Add the following subclause:

5.12 Modification:

In the note, replace “25 %” by “10 %”.

6 Classification

6.1 *Replace the first sentence of the modification by the following:*

Appliances shall be **class I**, **class II** or **class III**.

Add the following note:

NOTE 101 **Class I appliances** are only provided with an earth for functional purposes.

7 Marking and instructions

7.1 In the fifth paragraph of the addition, as modified by Amendment 1, make the following changes:

- a) in the first dashed item, replace “1641 of ISO 7000” by “ISO 7000-0790”;
- b) add the following dashed item after the fourth dashed item:
 - intended orientation of blankets and mattresses (this marking is not required if the appliance complies with 11.101, whichever way it is placed on the bed);
- c) in the existing fifth dashed item, replace “for **moisture-proof appliances**” by “for **moisture-proof appliances or class III appliances**”.

Add the following to the last paragraph of the addition:

Washable appliances fitted with a **non-detachable flexible cord** shall be marked with the “hand wash” symbol specified in Table 1 of ISO 3758. Non-washable appliances shall be marked with the “do not wash” symbol in Table 1 of ISO 3758.

Add the following subclause:

7.6 Addition:



[symbol IEC 60417-5017 (2006-08)] earth



[symbol from Table 1 of ISO 3758] hand wash



[symbol from Table 1 of ISO 3758] do not wash

7.12 Add the following:

The instructions for washable appliances fitted with a **non-detachable cord** shall state that the switch or control unit must not be allowed to get wet during washing and that during drying the cord must be positioned to ensure that water does not flow into the switch or control.

The instructions for non-washable appliances shall state how they can be cleaned, for example with a damp sponge.

11 Heating

11.101 Replace the last paragraph of the test specification by the following:

The temperature shall not exceed 60 °C during the first hour of operation. It shall then not exceed

- 45 °C, for one third of the length of the **flexible part** nearest the foot end of the bed;
- 37 °C, for the remainder of the **flexible part**.

15 Moisture resistance

15.101 In the penultimate paragraph, replace “**clearances and creepage distances**” by “**clearances or creepage distances**”.

Add the following:

The **flexible part** of washable appliances fitted with a **non-detachable flexible cord** is immersed again in the saline solution until it is saturated. It is then folded about its major axis and placed over a line located 2 m above the floor. The cord is freely suspended, any excess length being stretched out along the floor, and the **flexible part** allowed to drip-dry for 24 h.

The switch or **control unit** shall then withstand the electric strength test of 16.3 and inspection shall show that there is no trace of water on insulation that could result in a reduction of **clearances** or **creepage distances** below the values specified in Clause 29.

15.102 In the last paragraph, replace “**clearances and creepage distances**” by “**clearances or creepage distances**”.

15.103 In the last paragraph, replace “**clearances and creepage distances**” by “**clearances or creepage distances**”.

19 Abnormal operation

19.1 Replace Note 101 by the following:

NOTE 101 Fuse-links incorporated in an appliance to protect the **flexible part** against overheating or ignition are not subjected to the tests of 19.12.

Add the following subclause:

19.11.3 Addition:

The test of 19.111 is not repeated.

19.101 Replace “the **flexible part** is folded” by “the **flexible part** is uncovered and folded”.

19.102 Replace “the **flexible part** is folded” by “the **flexible part** is uncovered and folded”.

19.103 Replace “the **flexible part** is folded” by “the **flexible part** is uncovered and folded”.

19.105 Replace “the **flexible part** is folded” by “the **flexible part** is uncovered and folded”.

21 Mechanical strength

21.105 In the second paragraph, replace “thermal insulation 90 mm thick” by “thermal insulation, as specified in Annex AA, having a thickness of 90 mm”.

21.111 Add the following:

The tests are also applied to a sheath that comprises **basic insulation** over earthed parts when the sheath is integral with the **heating element**.

22 Construction

Add the following new subclauses:

22.115 The **flexible part** of class I appliances shall have at least **double insulation** or **reinforced insulation** between **live parts** and earthed parts. There shall be at least **basic insulation** between earthed parts and **accessible parts**.

Compliance is checked by inspection.

22.116 Wraps and pads intended to be used in close contact with the human body in order to provide heat to create moisture for cosmetic purposes shall be **moisture-proof appliances** or the **flexible part** shall be **class III construction**.

NOTE Lotions may be used to enhance the moist conditions.

Compliance is checked by inspection and test.

24 Components

Add the following subclause:

24.1.5 Addition:

*Appliance couplers used for supplying the **flexible part** shall comply with the requirements of IEC 60320-1 as far as they reasonably apply.*

25 Supply connection and external flexible cords

25.7 *Delete the second paragraph of the addition.*

Add the following subclause:

25.14 Addition:

*The test is applicable to appliances fitted with a **non-detachable flexible cord**. It also applies to switches and controls fitted in the flexible cord.*

Add the following new subclause:

25.101 The length of cord of washable appliances fitted with a **non-detachable flexible cord**, measured between the points of entry to the **flexible part** and switch or **control unit**, shall be at least 0,4 m.

Compliance is checked by inspection and by measurement.

29 Clearances, creepage distances and solid insulation

Add the following subclause:

29.1.3 Addition:

*The **clearance** between the engagement face and contact tubes of appliance couplers used for supplying the **flexible part** shall be at least 3,5 mm.*

Annex AA

*In the first dashed item of the fourth paragraph, replace “**overblankets**” by “**overblankets and clothing**”.*

Add the following new annex.

Annex CC (normative)

Clothing

The following modifications to this standard are applicable for clothing.

NOTE Additional subclauses and notes in this annex are numbered starting with 201.

3 Definitions

3.1.9 Add the following:

Clothing is placed between sheets of thermal insulation. The bottom sheet has a thickness of 2 d and the top sheet a thickness of 0,2 d, as specified in Annex AA. The clothing is positioned so that different **heated areas** are separated from each other unless they are likely to come into contact with each other in normal use.

NOTE 201 It may be necessary to cut the clothing in order to separate the different **heated areas**.

5 General conditions for the tests

5.7 *The modification is not applicable.*

6 Classification

6.1 Modification:

Clothing shall be **class III**.

7 Marking and instructions

7.1 *The marking "Do not use folded or rucked" or the symbol of Figure 101 is not required.*

7.12 *The instruction "Do not crease the appliance by placing items on top of it during storage" is also applicable to clothing.*

Add the following:

The instructions for clothing shall state that if the clothing is likely to be used for an extended period, the control should be adjusted to the setting recommended for continuous use. Instructions shall also include advice on precautions and how to recognize heat fatigue and the onset of heat stroke.

The instructions for clothing, other than **controlled clothing**, shall state the substance of the following:

WARNING: In order to avoid the possibility of heatstroke, disconnect the clothing when moving to an environment having significantly higher temperature.

11 Heating

11.3 Replace the first paragraph of the addition by the following:

*Thermocouples used for determining the temperature of **heating elements** are tied to them with textile thread over a length of at least 10 mm. The temperature of the surface of the **flexible part** closest to the human body is determined by means of a thermocouple attached to the centre of a disk of copper or brass 15 mm in diameter and 1,0 mm thick.*

11.8 Add the following to Table 101:

Surface of clothing	50
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Add the following to Table 102:

Surface of clothing for use in sub-zero temperatures ^b	45
Surface of other clothing	30

^b Examples of such clothing are garments used in cold stores and in the polar regions.

19 Abnormal operation

19.1 Add the following:

Clothing is subjected to the tests of 19.107, 19.108, 19.201 and 19.202.

19.11.3 Add the following:

The test of 19.203 is not repeated.

19.107 Modification:

The reference to “19.101 to 19.106” is replaced by “19.201 and 19.202”.

19.201 *Clothing is operated under **normal operation**, except that the **flexible part** is uncovered and folded in the most unfavourable way so that four layers of the **flexible part** are placed one on top of the other.*

NOTE 1 A flattened sleeve is considered to be two layers of the **flexible part**.

A sheet of thermal insulation, having dimensions of 300 mm x 450 mm x 90 mm, is placed on the folded clothing at the most unfavourable location. An evenly distributed mass of 5 kg is placed on the sheet of thermal insulation.

NOTE 2 A sandbag may be used as the mass.

19.202 *Clothing is folded so that separate **heated areas** are positioned as close as possible to each other and then placed on the sheet of thermal insulation specified for **normal operation**. The clothing is operated without additional covering.*

19.203 *Clothing shall be constructed so that failure of a component does not give rise to a temperature that could be hazardous to the human body.*

Compliance is checked by carrying out the test of Clause 11 but with controls adjusted to the highest setting recommended for continuous use. Failure of components that could reasonably be expected to occur during normal use is simulated, except that switching contacts are not short circuited. Only one fault condition is applied at a time.