IEC 60335-2-17

Edition 3.1 2015-07

CONSOLIDATED VERSION

VERSION CONSOLIDÉE

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

Appareils électrodomestiques et analogues – Sécurité – Partie 2-17: Exigences particulières pour les couvertures, coussins, vêtements et appareils chauffants souples analogues



IEC 60335-2-17:2012-03+AMD1:2015-07 CSV(en-fr)



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

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

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This Consolidated version of IEC 60335-2-17 bears the edition number 3.1. It consists of the third edition (2012-03) [documents 61/4336/FDIS and 61/4352/RVD] and its amendment 1 (2015-07) [documents 61/4834/CDV and 61/4910/RVC]. The technical content is identical to the base edition and its amendment.

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions and deletions are displayed in red, with deletions being struck through. A separate Final version with all changes accepted is available in this publication.

This part of International Standard IEC 60335 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

The principal changes in this edition as compared with the second edition are as follows (minor changes are not listed):

– The definition of PTC heating element has been deleted and the definition in Part 1 now applies. A definition of a heating element with PTC characteristics has been introduced instead (3.117). This has resulted in editorial changes to 5.7, 5.8.2, 7.1, 10.101, 11.2, 21.105, 21.111.1 and 21.112.
– The allowance for class I appliances has been deleted and requirements for appliances incorporating a functional earth have been incorporated (6.1, 7.1, 22.115).
– The working voltage of parts of class III construction is limited to 24 V (22.26).
– Some notes have been deleted or converted to normative text (3.107, 3.111, 3.113, 5.2, 5.3, 5.8.2, 11.8, 11.101, 11.102, 15.1, 15.101, 19.1, 19.13, 19.102, 19.103, 19.105, 19.106, 19.108, 19.109, 19.110, 19.111, 19.112, 21.1, 21.102, 21.103, 21.109, 21.110.3, 21.111.1, 21.111.2, 21.111.3, 21.112, 22.103, 22.114, 25.23, Annex AA, Annex CC 3.1.9, 19.201, 19.203).
– Modification of the marking requirements (7.1, 7.14, 7.15).
– Modification of the instructions (7.12).
– Clarification of the heat stroke test (11.101).
– The figure numbers have been updated to take into account deletion of Figure 103 in the previous edition.

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

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 fifth edition (2010) 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 blankets, pads, clothing and similar flexible heating appliances.

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.

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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 amendment 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 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: Class 0 products are allowed (Japan and USA).

– Annex AA: Felt is used for the thermal insulation (USA).

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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.

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.

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HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

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

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1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of electric **blankets, pads**, clothing and other flexible appliances that heat the bed or human body, for household and similar purposes, their **rated voltage** being not more than 250 V.

This standard also applies to **control units** supplied with the appliance.

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.

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 knowledge prevents them from using the appliance safely without supervision or instruction;
– children playing with the appliance.

NOTE 101 Children are considered to be old enough to use an appliance without supervision when they have been adequately instructed by a parent or guardian and are deemed competent to use the appliance safely.

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

– 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);
– rigid bed warmers, such as those of metal or ceramic material;
– water bed heaters (IEC 60335-2-66);
– heating appliances for breeding and rearing animals (IEC 60335-2-71);
– foot warmers and heating mats (IEC 60335-2-81);
– appliances specifically intended for use under medical supervision (IEC 60601-2-35).

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60320-1:2001, *Appliance couplers for household and similar general purposes – Part 1: General requirements*
Amendment 1 (2007)[1]

ISO 2439, *Flexible cellular polymeric materials – Determination of hardness (indentation technique)*

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

ISO 7000:2014, *Graphical symbols for use on equipment – Registered symbols*

ISO/IEC Guide 37, *Instructions for use of products of consumer interest*

3 Terms and definitions

This clause of Part 1 is applicable except as follows.

3.1.9 *Replacement:*

normal operation
operation of the appliance under the following conditions:

– **blankets** and **pads** are placed between sheets of thermal insulation;
– **duvets** are placed on a sheet of thermal insulation but not covered;
– **mattresses** are covered by a sheet of thermal insulation

NOTE 101 The specification for the thermal insulation is given in Annex AA.

The **flexible part** is supported on a plywood base 20 mm thick and positioned not less than 300 mm above the floor. The size of the plywood base is such that the thermal insulation can be fully supported over its entire area. The size of the sheets of thermal insulation is such that the edges extend at least 100 mm beyond the outline of the **heated area**.

Control units held in the hand when they are actuated and cord switches are positioned to hang away from the plywood base. Other **control units** are placed on a supporting surface away from the plywood base.

3.101
flexible part
all layers of material forming the permanent enclosure of the appliance together with the **heating element**, **electro-conductive textile**, **thermostats** and all other current-carrying parts contained within it

Note 1 to entry: The **flexible part** may be inside a **detachable cover**.

[1] There exists a consolidated edition 2.1 (2007) that includes edition 2 and its Amendment 1.

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