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Household and similar electrical appliances - Safety - Part 2-3: Particular requirements for electric irons

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/16

Rozpracovanie prekladom.

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EUROPEAN STANDARD

EN 60335-2-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2016

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Supersedes EN 60335-2-3:2002

English Version

Household and similar electrical appliances - Safety -
Part 2-3: Particular requirements for electric irons
(IEC 60335-2-3:2012 , modified)

Appareils électrodomestiques et analogues - Sécurité -
Partie 2-3: Exigences particulières pour les fers à repasser
électriques
(IEC 60335-2-3:2012 , modifiée)

Sicherheit elektrischer Geräte für den Hausgebrauch und
ähnliche Zwecke - Teil 2-3: Besondere Anforderungen für
elektrische Bügeleisen
(IEC 60335-2-3:2012 , modifiziert)

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Europäisches Komitee für Elektrotechnische Normung

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European foreword

This document (EN 60335-2-3:2016) consists of the text of IEC 60335-2-3:2012 prepared by IEC/TC 61 "Safety of household and similar electrical appliances", together with the common modifications prepared by CLC/TC 61, "Safety of household and similar electrical appliances".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-07-15
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2018-10-05

This document supersedes EN 60335-2-3:2002.

This document is to be used in conjunction with EN 60335-1:2012 including its amendments.

NOTE When "Part 1" is mentioned in this standard, it refers to EN 60335-1.

This Part 2 supplements or modifies the corresponding clauses in EN 60335-1:2012, so as to convert that publication into the European Standard: *Safety requirements for electric irons*.

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 of Part 1 is to be adapted accordingly.

Clauses, subclauses, notes, tables, figures and annexes that are additional to those in the IEC standard are prefixed with the letter Z.

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

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

Endorsement notice

The text of the International Standard IEC 60335-2-3:2012 was approved by CENELEC as a European Standard with agreed common modifications.

COMMON MODIFICATIONS

1 Scope

This clause of Part 2 applies except by the following:

Replace the fourth paragraph by the following:

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

- children playing with the appliance,
- the use of the appliance by **very young children** and **young children**,
- user maintenance by **children**, including cleaning the appliance.

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

7 Marking and instructions

This clause of Part 1 is applicable except as follows:

7.1 Addition:

When the provisions of footnote ^c to Table Z101 apply, the appliance shall be marked with

- the substance of “CAUTION: Hot surface”, or
- symbol IEC 60417-5041.

The warning shall be put on the surface of the appliance having the highest temperature and shall be visible during normal operation.

7.6 Addition:



[symbol IEC 60417-5041] Caution, hot surface

7.10 Addition:

NOTE Z101 The sound of the steam emitted is regarded as audible feedback.

7.12 Add the following:

- keep the iron and its cord out of reach of children less than 8 years of age when it is energized or cooling down.

If symbol IEC 60417-5041 is marked on the appliance, the instructions shall state that surfaces are liable to get hot during use.

Add:

7.14 *Addition:*

The height of symbol IEC 60417-5041 shall be at least 8 mm.

The height of the warning "CAUTION. Hot surface" shall be at least 4 mm (measured on the capital letters).

11 Heating

11.8 *Modification:*

Replace the first paragraph of Part 1 by the following:

"During the test, the temperature rises are monitored continuously and shall not exceed the values shown in Table 3 and Table Z101 in accordance with 11.Z101."

*In Table 3, delete the row "External enclosure of **motor-operated appliances**, except handles held in normal use" and the corresponding footnotes.*

Add the following Table Z101.

Table Z101 – Maximum temperature rises for external surfaces under normal operating conditions

Surface ^{a, b}	Temperature rise of external surfaces K	
	Surfaces of separate tanks and boilers likely to be situated on the floor	Surfaces of other parts of appliances situated on a work surface ^c
<i>Bare metal</i>	40	45
<i>Coated metal</i> ^d	45	55
<i>Glass and ceramic</i>	55	60
<i>Plastic and plastic coating > 0,3 mm</i> ^e	60	65

^a The following surfaces or elements shall not be taken into consideration:

- hot functional surface: surface which is intentionally heated by an internal heat source and which has to be hot to carry out the function for which the equipment is intended to be used;
EXAMPLE The soleplate of an iron regardless of the thickness of the soleplate, including the metallic side parts and metallic functional ironing tips, if any;
- adjacent surface: a surface adjacent to a functional surface. The adjacent surface and the functional surface may consist of the same piece of material or are in thermal contact and have similar thermal properties. The adjacent surface is not heated intentionally during use of the product. However, as it is adjacent to the functional surface and may become hot through conduction, its temperature will be in the range between the functional and a touchable surface.
Examples are: the stand of an iron on a separated boiler and surface of the enclosure immediately surrounding the water heater enclosure plus 50 mm on all sides of a separated boiler, any part of the enclosure of an iron surrounding the soleplate plus 25 mm.
- handles or control knobs including keypads, keyboards and the like: part of the equipment that a user needs to touch to operate or adjust the equipment

The equipment has to be installed according to the manufacturer's instructions.

^b When the thickness of the plastic coating does not exceed 0,3 mm, the temperature rise limits of the coated metal or of glass and ceramic material apply.

^c When, due to the construction or dimensional limitations of the appliance, the required values cannot be met, the maximum temperature rise shall not be higher than twice the values indicated. In such cases, a warning shall be marked on the relevant surface of the appliance.

^d Metal is considered coated when a coating having a minimum thickness of 80 µm made by enamel or non substantially plastic coating is used.

^e The temperature rise limit of plastic also applies for plastic material having a metal finish of thickness less than 0,1 mm.

Add the following new subclause:

11.Z101 For the measurement of temperature rises, the instructions from the manufacturer on where the appliance has to be situated during normal operations shall be followed.

Temperature rises are not measured on the underside of appliances intended to be used on a working surface or floor.

20 Stability and mechanical hazards

This clause of Part 1 is applicable except as follows:

20.1 Replace "an angle of 10°" by "an angle of 15°".

22 Construction

Add a new subclause:

22.Z101 For irons fitted with a **supply cord**, other than those with a separate reservoir or boiler, the free length of the **supply cord**, measured between the point where the cord or the cord guard enters the iron and the point where the cord or cord guard enters the plug, shall be more than 1,9 m.

Bibliography

Add the following note for the standard indicated:

IEC 60335-2-44	NOTE	Harmonized as EN 60335-2-44.
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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

**Appareils électrodomestiques et analogues – Sécurité –
Partie 2-3: Exigences particulières pour les fers à repasser électriques**





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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

**Appareils électrodomestiques et analogues – Sécurité –
Partie 2-3: Exigences particulières pour les fers à repasser électriques**

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COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY –****Part 2-3: Particular requirements for electric irons**

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

This sixth edition cancels and replaces the fifth edition published in 2002 including its Amendment 1 (2004) and its Amendment 2 (2008). It constitutes a technical revision.

The principal changes in this edition as compared with the fifth edition of IEC 60335-2-3 are as follows (minor changes are not listed):

- some notes have been converted to normative text (20.1, 21.102, 22.106, 24.4, 25.5, 25.14);
- hoses that are subjected to the pressure test have been identified (22.7);
- the types of flexible cord that can be used are clarified (25.7).

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

FDIS	Report on voting
61/4342/FDIS	61/4353/RVD

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

This 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 electric irons.

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

NOTE 2 The following numbering system is used:

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

NOTE 3 The following print types are used:

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

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

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

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

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

NOTE 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:

- 5.7: The ambient temperature is $27\text{ °C} \pm 5\text{ °C}$ (India).
- 6.1: Class 0 and Class 0I irons are not allowed (Indonesia, India).
- 11.8: For the test with the iron on the pointed support, all the temperature rise limits apply (USA).
- 13.2: The test circuit and some leakage current limits are different (India).
- 19.4: The test is also carried out with the iron on the pointed supports (USA).
- 21.101: The drop test is different (USA).
- 22.105: The endurance test is different (USA).
- 25.7: Polyvinyl chloride cords are not allowed (USA).
- 25.14: The flexing test is different (USA).

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 which 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.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-3: Particular requirements for electric irons

1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of electric dry irons and **steam irons**, including those with a separate water reservoir or boiler having a capacity not exceeding 5 l, for household and similar purposes, their **rated voltage** being not more than 250 V.

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 by laymen in shops, in light industry and on farms, are within the scope of this standard.

As far as is practicable, this standard deals with the common hazards presented by appliances, which 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 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;
- additional requirements for pressure vessels may be specified by the national authorities responsible for the safety of pressure vessels.

NOTE 102 This standard does not apply to

- ironers (IEC 60335-2-44);
- appliances designed exclusively for industrial purposes;
- 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).

2 Normative references

This clause of Part 1 is applicable.

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