



# SLOVENSKI STANDARD

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**Gospodinjski in podobni električni aparati - Varnost - 2-81. del: Posebne zahteve za grelnike nog in grelna pregrinjala (IEC 60335-2-81:2015)**

Household and similar electrical appliances - Safety -- Part 2-81: Particular requirements for foot warmers and heating mats (IEC 60335-2-81:2015)

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke -- Teil 2-81: Besondere Anforderungen an Fußwärmer und Heizmatten (IEC 60335-2-81:2015)

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Appareils électrodomestiques et analogues - Sécurité -- Partie 2-81: Règles particulières pour les chancelières et les carpettes chauffantes électriques (IEC 60335-2-81:2015)

**Ta slovenski standard je istoveten z: EN IEC 60335-2-81:2023**

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**ICS:**

13.120	Varnost na domu	Domestic safety
97.100.10	Električni grelniki	Electric heaters

**SIST EN IEC 60335-2-81:2023** en



EUROPEAN STANDARD

**EN IEC 60335-2-81**

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English Version

## Household and similar electrical appliances - Safety - Part 2-81: Particular requirements for foot warmers and heating mats (IEC 60335-2-81:2015)

Appareils électrodomestiques et analogues - Sécurité -  
Partie 2-81: Exigences particulières pour les chancelières et  
les carpettes chauffantes électriques  
(IEC 60335-2-81:2015)

Sicherheit elektrischer Geräte für den Hausgebrauch und  
ähnliche Zwecke - Teil 2-81: Besondere Anforderungen an  
Fußwärmer und Heizmatten  
(IEC 60335-2-81:2015)

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SIST EN IEC 60335-2-81:2023

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN IEC 60335-2-81:2023 (E)****European foreword**

This document (EN IEC 60335-2-81:2023) consists of the text of IEC 60335-2-81:2015 prepared by IEC/TC 61 "Safety of household and similar electrical appliances".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2023-11-12
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2026-05-12

This document supersedes EN 60335-2-81:2003, and all its amendments/corrigenda (if any).

This document is read in conjunction with EN IEC 60335-2-81:2023/A1:2023 and EN IEC 60335-2-81:2023/A2:2023.

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IEC 60335-2-81

Edition 3.0 2015-04

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Household and similar electrical appliances – Safety –  
Part 2-81: Particular requirements for foot warmers and heating mats**

**Appareils électrodomestiques et analogues – Sécurité –  
Partie 2-81: Exigences particulières pour les chancelières et les carpettes  
chauffantes électriques**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –  
SAFETY –****Part 2-81: Particular requirements for  
foot warmers and heating mats**

## 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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- 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.

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

This third edition cancels and replaces the second edition published in 2002, its Amendment 1 (2007) and its Amendment 2 (2011). It constitutes a technical revision.

The principal changes in this edition as compared with the second edition of IEC 60335-2-81 are as follows (minor changes are not listed):

- Requirements for washable appliances (5.3, 7.1, 7.6, 7.12);
- Requirements for controls in flexible cords (15.1.1, 24.2);
- Requirements for appliance inlets (22.105, 24.1.5, 29.1.3).



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

FDIS	Report on voting
61/4841/FDIS	61/4896/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 foot warmers and heating mats.

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 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.

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 following differences exist in the countries indicated below.

- 3.1.9: Normal operation is different (USA)
- 6.1: Class 0 appliances are allowed if their rated voltage does not exceed 150 V (Japan)
- 6.1: Class 0 and class I appliances are allowed (USA)
- 7.6: Symbols not permitted to replace required text (USA)
- 11.8: Temperature limit is different (USA)
- 13.2: Method and limit is different (USA)
- 19.2: The test is different (USA)
- 21.101: The test is different (USA)
- 22.101: The tests are different (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.