

# INTERNATIONAL STANDARD

## AMENDMENT 2

**Household and similar electrical appliances – Safety –  
Part 2-12: Particular requirements for warming plates and similar appliances**

(<https://standards.iteh.ai>)  
Document Preview

[IEC 60335-2-12:2002/AMD2:2017](https://standards.iteh.ai/catalog/standards/iec/8f1201fd-64ba-4b32-86df-b0eec9dbe489/iec-60335-2-12-2002-amd2-2017)

<https://standards.iteh.ai/catalog/standards/iec/8f1201fd-64ba-4b32-86df-b0eec9dbe489/iec-60335-2-12-2002-amd2-2017>





## THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2017 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
Fax: +41 22 919 03 00  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

### About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

### About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

#### IEC Catalogue - [webstore.iec.ch/catalogue](http://webstore.iec.ch/catalogue)

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

#### IEC publications search - [www.iec.ch/searchpub](http://www.iec.ch/searchpub)

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

#### IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

#### Electropedia - [www.electropedia.org](http://www.electropedia.org)

The world's leading online dictionary of electronic and electrical terms containing 20 000 terms and definitions in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

#### IEC Glossary - [std.iec.ch/glossary](http://std.iec.ch/glossary)

65 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

#### IEC Customer Service Centre - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: [csc@iec.ch](mailto:csc@iec.ch).

<https://standards.iteh.ai/catalog/standards/iec/8f1201fd-64ba-4f32-86df-b0eec9dbe489/iec-60335-2-12-2002-amd2-2017>

<https://standards.iteh.ai/catalog/standards/iec/8f1201fd-64ba-4f32-86df-b0eec9dbe489/iec-60335-2-12-2002-amd2-2017>



IEC 60335-2-12

Edition 5.0 2017-10

# INTERNATIONAL STANDARD

AMENDMENT 2

---

**Household and similar electrical appliances – Safety –  
Part 2-12: Particular requirements for warming plates and similar appliances**

Document Preview

[IEC 60335-2-12:2002/AMD2:2017](https://standards.iteh.ai/catalog/standards/iec/8f1201fd-64ba-4b32-86df-b0eec9dbe489/iec-60335-2-12-2002-amd2-2017)

<https://standards.iteh.ai/catalog/standards/iec/8f1201fd-64ba-4b32-86df-b0eec9dbe489/iec-60335-2-12-2002-amd2-2017>

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

---

ICS 13.120; 97.040.50

ISBN 978-2-8322-4833-1

**Warning! Make sure that you obtained this publication from an authorized distributor.**

## 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:

CDV	Report on voting
61/5313/CDV	61/5434A/RVC

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 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.

A bilingual version of this publication may be issued at a later date.

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.

## 2 Normative references

*Replace the existing text by the following:*

This clause of Part 1 is applicable except as follows.

*Addition:*

IEC 60584-1, *Thermocouples – Part 1: EMF specifications and tolerances*

## 3 Definitions

*Add the following new definition:*

### 3.6.101

#### **hot functional surface**

surface that is intentionally heated by an internal heat source and that has to be hot to carry out the intended function of the appliance

## 7 Marking and instructions

### 7.1 Add the following:

When the provisions of footnote b to Table 101 apply, the appliance shall be marked with:

- the substance of “CAUTION: Hot surface”, or
- symbol IEC 60417-5041 (2002-10).

Add the following new subclause:

### 7.6 Addition:



[symbol IEC 60417-5041 (2002-10)]      caution, hot surface

### 7.12 Add the following:

If symbol IEC 60417-5041 (2002-10) is marked on appliances, its meaning shall be explained and location of areas where the limits are exceeded shall be stated or shown by a drawing.

Add the following new subclauses:

### 7.14 Addition:

The height of the triangle in symbol IEC 60417-5041 (2002-10) shall be at least 10 mm.

*Compliance is checked by measurement.*

### 7.15 Addition:

The marking specified for hot surfaces shall be clearly visible when the appliance is operated as in normal use, including when actuating any switch, adjusting any control or opening a lid or door. It shall not be placed on a **hot functional surface** or on surfaces that are exempted from the limits of Table 101.

## 11 Heating

Add the following new subclause:

### 11.3 Addition:

Where the external **accessible surfaces** are suitably flat and access permits, then the test probe of Figure 101 is used to measure the temperature rises of external **accessible surfaces** specified in Table 101. The probe is applied with a force of  $4\text{ N} \pm 1\text{ N}$  to the surface in such a way that the best possible contact between the probe and the surface is ensured. The measurement is performed after a contact period of 30 s.

*The probe may be held in place using a laboratory stand clamp or similar device. Any measuring instrument giving the same results as the probe may be used.*

**11.8** Add the following new paragraph:

*Addition:*

*During the test, the temperature rises are monitored continuously and shall not exceed the values shown in Table 101.*

**Table 101 – Maximum temperature rises of external accessible surfaces under normal operating conditions**

Surface	Temperature rise of external accessible surfaces <sup>a</sup>	
	K	
	Appliances and parts situated not more than 850 mm above the floor after installation <sup>b</sup>	Appliances and parts situated more than 850 mm above the floor after installation <sup>b</sup>
Bare metal	38	42
Coated metal <sup>c</sup>	42	49
Glass and ceramic	51	56
Plastic and plastic coating > 0,4 mm <sup>d, e</sup>	58	62

<sup>a</sup> The following surfaces or elements shall not be taken into consideration:

- **hot functional surfaces;**
- 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;
- surfaces within 5 mm of touch controls regardless of their shape;
- surfaces within 25 mm of the outline of the hot functional surfaces;
- underside surfaces that are not accessible to a 75 mm diameter probe having a hemispherical end;
- lids and covers.

<sup>b</sup> When the required values are not met, the maximum temperature rise shall not be higher than two times the values indicated.

<sup>c</sup> Metal is considered coated when a coating having a minimum thickness of 90 µm made by enamel, powder or non-substantially plastic coating is used.

<sup>d</sup> The temperature rise limit of plastic also applies for plastic material having a metal finish of thickness less than 0,1 mm.

<sup>e</sup> When the thickness of the plastic coating does not exceed 0,4 mm, the temperature rise limits of the coated metal or of glass and ceramic material apply.