Annexes

Les annexes de la Partie 1 sont applicables avec l'exception suivante.

Annexe C (normative)

Essai de vieillissement des moteurs

Modification:

La valeur de *p* dans le Tableau C.1 est de 2 000.

Bibliographie

La bibliographie de la Partie 1 est applicable avec les exceptions suivantes.

Addition:

IEC 60335-2-13, Household and similar electrical appliances – Safety – Part 2-13: Particular requirements for deep fat fryers, frying pans and similar appliances (disponible en anglais seulement)

IEC 60335-2-21, Appareils électrodomestiques et analogues – Sécurité – Partie 2-21: Règles particulières pour les chauffe-eau à accumulation

IEC 60335-2-35, Appareils électrodomestiques et analogues – Sécurité – Partie 2-35: Règles particulières pour les chauffe-eau instantanés

IEC 60335-2-54, Appareils électrodomestiques et analogues – Sécurité – Partie 2-54: Règles particulières pour les appareils de nettoyage des surfaces à usage domestique utilisant des liquides ou de la vapeur

IEC 60335-2-74, Appareils électrodomestiques et analogues – Sécurité – Partie 2-74: Règles particulières pour les thermoplongeurs mobiles

IEC 60335-2-75, Appareils électrodomestiques et analogues – Sécurité – Partie 2-75: Règles particulières pour les distributeurs commerciaux avec ou sans moyen de paiement

IEC 60335-2-98, Appareils électrodomestiques et analogues – Sécurité – Partie 2-98: Règles particulières pour les humidificateurs

This is a preview. Click here to purchase the full publication.



Edition 6.1 2016-04

FINAL VERSION

VERSION FINALE

Household and similar electrical appliances – Safety – Part 2-15: Particular requirements for appliances for heating liquids

Appareils électrodomestiques et analogues – Sécurité – Partie 2-15: Exigences particulières pour les appareils de chauffage des liquides



CONTENTS

FΟ	REWORD	3
INTRODUCTION		6
1	Scope	7
2	Normative references	8
3	Terms and definitions	8
4	General requirement	10
5	General conditions for the tests	10
6	Classification	10
7	Marking and instructions	11
8	Protection against access to live parts	13
9	Starting of motor-operated appliances	13
10	Power input and current	13
11	Heating	14
12	Void	16
13	Leakage current and electric strength at operating temperature	16
14	Transient overvoltages	16
15	Moisture resistance	16
16	Leakage current and electric strength	18
17	Overload protection of transformers and associated circuits	18
18	Endurance	18
19	Abnormal operation	18
20	Stability and mechanical hazards	21
21	Mechanical strength	22
22	Construction	22
23	Internal wiring	26
24	Components	26
25	Supply connection and external flexible cords	27
26	Terminals for external conductors	28
27	Provision for earthing	28
28	Screws and connections	28
29	Clearances, creepage distances and solid insulation	28
30	Resistance to heat and fire	28
31	Resistance to rusting	28
32	Radiation, toxicity and similar hazards	28
Anr	nexes	30
Annex C (normative) Ageing test on motors		30
Bib	liography	31
Fia	ure 101 – Schematic representation of the 30 ml spillage test	29

INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-15: Particular requirements for appliances for heating liquids

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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 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.

DISCLAIMER

This Consolidated version is not an official IEC Standard and has been prepared for user convenience. Only the current versions of the standard and its amendment(s) are to be considered the official documents.

This Consolidated version of IEC 60335-2-15 bears the edition number 6.1. It consists of the sixth edition (2012-11) [documents 61/4451/FDIS and 61/4504/RVD] and its amendment 1 (2016-04) [documents 61/5109/FDIS and 61/5131/RVD]. The technical content is identical to the base edition and its amendment.

This Final version does not show where the technical content is modified by amendment 1. A separate Redline version with all changes highlighted 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 fifth edition of IEC 60335-2-15 are as follows (minor changes are not listed):

- added requirements for soy milk makers;
- added requirements for dynamic pressure cookers;
- expanded requirements for cordless kettles to cover cordless appliances throughout document;
- reorganized 7.12 so that instructions related to generic types of appliances covered by this part are listed first;
- converted notes to normative (5.2, 7.12, 19.101, 22.7, 22.106, 24.1.5, 24.4, 25.101) text;
- deleted Note in 19.102.

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 appliances for heating liquids.

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.

IEC 60335-2-15:2012+AMD1:2016 CSV - 5 - © IEC 2016

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.

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.

- 19.101: The test is not applicable (Japan).
- 25.8: A supply cord having a cross-sectional area of 0,75 mm² is not allowed for appliances having a rated current exceeding 6 A (Japan).
- 25.8: Longer supply cords are allowed (Japan).

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.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-15: Particular requirements for appliances for heating liquids

1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of electrical appliances for heating liquids for household and similar purposes, their **rated voltage** being not more than 250 V.

NOTE 101 Some appliances can be used for heating food.

NOTE 102 Examples of appliances that are within the scope of this standard are

- coffee-makers;
- cooking pans;
- egg boilers;
- feeding-bottle heaters;
- kettles and other appliances for boiling water, having a rated capacity not exceeding 10 l;
- milk heaters
- pressure cookers having a rated cooking pressure not exceeding 140 kPa and a rated capacity not exceeding 10 l;
- rice cookers;
- slow cookers;
- steam cookers;
- soy milk makers;
- tea maker;
- wash boilers;
- yoghurt makers.

Appliances can have more than one function.

Appliances intended for normal household and similar use and that may also be used by laymen in shops, in light industry and on farms, are within the scope of this standard.

NOTE 103 Examples of such appliances are

- glue pots with a water jacket;
- livestock feed boilers;
- sterilizers.

If the appliance is intended to be used professionally to process food for commercial consumption, the appliance is not considered to be for household and similar use only.

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 104 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, the national water supply authorities and similar authorities.

NOTE 105 This standard does not apply to

- frying pans and deep fat fryers (IEC 60335-2-13);
- storage water heaters (IEC 60335-2-21);
- instantaneous water heaters (IEC 60335-2-35);
- surface-cleaning appliances employing liquids or steam (IEC 60335-2-54);
- portable immersion heaters (IEC 60335-2-74);
- commercial dispensing appliances and vending machines (IEC 60335-2-75);
- appliances for medical purposes (IEC 60601);
- appliances intended 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);
- appliances for high-frequency heating;
- pressure sterilizers;
- humidifiers for household and similar use (IEC 60335-2-98).

NOTE 106 Attention is drawn to the fact that in many countries requirements for pressure vessels are applied to pressure cookers.

2 Normative references

This clause of Part 1 is applicable.

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

3.1.9.101 Kettles, thermal pots, urns and other appliances for boiling water, cooking pans, glue pots, milk heaters, slow cookers, sterilizers, wash boilers and yoghurt makers are operated with their container filled with the **rated capacity** of water, any lid being closed. The quantity of water in slow cookers is maintained above 50 % of their **rated capacity**.

Coffee makers are operated in accordance with their instructions with the water container filled to its **rated capacity** and bean container, if any, filled with coffee beans. The warming plate and all other energy consuming functions, if any, are switched on.

Appliances with a heated surface intended to keep the liquid warm are operated with or without the container, whichever is the more unfavourable.

- **3.1.9.102** Egg boilers and **steam cookers** are operated with their containers filled with the maximum quantity of water specified in the instructions.
- 3.1.9.103 Feeding-bottle heaters are operated with a bottle of heat-resistant glass, round or hexagonal in shape, having a mass between 190 g and 200 g and a capacity of

This is a preview. Click here to purchase the full publication.