



BSI Standards Publication

Household and similar electrical appliances - Safety

Part 2-47: Particular requirements for commercial electric boiling pans

National foreword

This British Standard is the UK implementation of EN 60335-2-47:2003+A2:2019, incorporating corrigendum September 2007. It is derived from IEC 60335-2-47:2002, incorporating amendments 1:2008 and 2:2017. It supersedes BS EN 60335-2-47:2003+A11:2012, which will be withdrawn on 8 October 2022.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to IEC text carry the number of the IEC amendment. For example, text altered by IEC amendment 1 is indicated by A1 A1.

Text altered by CENELEC amendment A11 is indicated by A11 A11.

The UK participation in its preparation was entrusted to Technical Committee CPL/61, Safety of household and similar electrical appliances.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Published by BSI Standards Limited 2020

ISBN 978 0 580 94313 3

ICS 97.040.20; 35.100.05; 25.040.40

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 16 June 2003.

Amendments/corrigenda issued since publication

Date	Text affected
31 January 2008	Last paragraph of EN foreword replaced. Addition to Annex ZB deleted. Implementation of CENELEC corrigendum September 2007
28 February 2009	Implementation of IEC amendment 1:2008 with CENELEC endorsement A1:2008
31 May 2012	Implementation of CENELEC amendment A11:2012
31 January 2020	Implementation of IEC amendment 1:2017 with CENELEC endorsement A2:2019

English Version

**Household and similar electrical appliances - Safety - Part 2-47:
Particular requirements for commercial electric boiling pans
(IEC 60335-2-47:2002)**

Appareils électrodomestiques et analogues - Sécurité -
Partie 2-47: Règles particulières pour les marmites
électriques à usage collectif
(IEC 60335-2-47:2002)

Sicherheit elektrischer Geräte für den Hausgebrauch und
ähnliche Zwecke - Teil 2-47: Besondere Anforderungen für
elektrische Kochkessel für den gewerblichen Gebrauch
(IEC 60335-2-47:2002)

This European Standard was approved by CENELEC on 2000-04-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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

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Ref. No. EN 60335-2-47:2003/A2:2019 E

European foreword

The text of document 61E/403/FDIS, future fourth edition of IEC 60335-2-47, prepared by SC 61E of the IEC Technical Committee 61, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60335-2-47 on 2003-02-01.

This European Standard replaces EN 60335-2-47:2000.

The following dates are applicable:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2003-11-01
- date on which national standards
conflicting with the EN have to be withdrawn (dow) 2006-02-01

This part 2 has to be used in conjunction with EN 60335-1, Household and similar electrical appliances – Safety – Part 1: General requirements. It was established on the basis of the 2002 edition of that standard. Amendments and revisions of Part 1 have also to be taken into account and the dates when such changes become applicable will be stated in the relevant amendment or revision of Part 1.

This part 2 supplements or modifies the corresponding clauses of EN 60335-1, so as to convert it into the European Standard: Safety requirements for commercial electric boiling pans.

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.

NOTE 1 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.;
- subclauses, notes and annexes that are additional to those in the IEC standard are prefixed with the letter Z.

NOTE 2 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.

There are no special national conditions causing a deviation from this European Standard, other than those listed in Annex ZA to EN 60335-1.

There are no national deviations from this European Standard, other than those listed in Annex ZB to EN 60335-1.

Introduction

The principle objectives of Low Voltage Directive, 2006/95/EC, are covered in this standard. The essential safety requirements of the Machinery Directive 2006/42/EC have also been taken into account for appliances covered by this part.

Endorsement notice

The text of the International Standard IEC 60335-2-47:2002 was approved by CENELEC as a European Standard without any modification.

Foreword to amendment A1

The text of document 61E/586/FDIS, future amendment 1 to IEC 60335-2-47:2002, prepared by SC 61E of the IEC Technical Committee 61, Safety of household and similar electrical appliances, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60335-2-47:2003 on 2008-06-01.

The following dates are applicable:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2009-03-01
- date on which national standards conflicting with the amendment have to be withdrawn (dow) 2011-06-01

This amendment supplements or modifies the corresponding clauses of EN 60335-2-47:2003.

There are no special national conditions causing a deviation from this amendment.

There are no national deviations from this amendment.

Endorsement notice

The text of amendment 1:2008 to the International Standard IEC 60335-2-47:2002 was approved by CENELEC as an amendment to the European Standard without any modification.

Foreword to amendment A11

This document (EN 60335-2-47:2003/A11:2012) has been prepared by CLC/TC 61, "Safety of household and similar electrical appliances".

The following dates are fixed:

- latest date by which the amendment has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2012-12-21
- latest date by which the national standards conflicting
with the amendment have to be withdrawn (dow) 2014-12-21

This amendment supplements or modifies the corresponding clauses of EN 60335-1:2012, EN 60335-2-47:2003 and EN 60335-2-47:2003/A1:2008.

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 document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

Foreword to amendment A2

The text of document 61/5326/FDIS, future IEC 60335-2-47/A2, prepared by IEC/TC 61 "Safety of household and similar electrical appliances" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60335-2-47:2003/A2:2019.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2020-07-08
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-10-08

This amendment supplements or modifies the corresponding clauses of the standards below:

- EN 60335-1:2012+A11:2014+ A13:2017+A1:2019+A14:2019+A2:2019 (Part 1)
- EN IEC 60335-2-47:2012+A1:2008+A11:2012(Part 2)

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

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex(es) ZZ, which is(are) an integral part(s) of this document.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2014/35/EU).

Endorsement notice

The text of the International Standard IEC 60335-2-47:2002/A2:2017 was approved by CENELEC as a European Standard without any modification.

Bibliography

The Bibliography of part 1 is applicable, except that the following notes to be added:

IEC 60335-2-15	NOTE	Harmonized as EN 60335-2-15.
IEC 60335-2-21	NOTE	Harmonized as EN 60335-2-21.
IEC 60335-2-75	NOTE	Harmonized as EN 60335-2-75.

Annex ZC

(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

The annex ZC of part 1 is applicable, with the following additions:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60584-1	-	Thermocouples - Part 1: EMF specifications and tolerances	EN 60584-1	-
ISO 898-1	-	Mechanical properties of fasteners made of carbon steel and alloy steel - Part 1: Bolts, screws and studs with specified property classes - Coarse thread and fine pitch thread	-	-
ISO 3506-1	-	Mechanical properties of corrosion-resistant stainless steel fasteners - Part 1: Bolts, screws and studs	EN ISO 3506-1	-
ISO 3506-2	-	Mechanical properties of corrosion-resistant stainless steel fasteners - Part 2: Nuts	EN ISO 3506-2	-
ISO 3506-3	-	Mechanical properties of corrosion-resistant stainless steel fasteners - Part 3: Set screws and similar fasteners not under tensile stress	EN ISO 3506-3	-
ISO 3506-4	-	Mechanical properties of corrosion-resistant stainless steel fasteners - Part 4: Tapping screws	EN ISO 3506-4	-
IEC 60335-2-5	2012	Household and similar electrical appliances – Safety – Part 2-5: Particular requirements for dishwashers	EN 60335-2-5	2015

Annex ZE (normative)

Specific additional requirements for appliances and machines with power driven moving parts and intended for commercial use

The following modifications to this standard are applicable for appliances and machines with power driven moving parts and intended for commercial use.

NOTE The additional paragraphs to Annex ZE of Part 1 are numbered starting with ZE.101.

Introduction

Replacement:

For the verification of compliance of appliances or machines intended for commercial use with the Essential Health and Safety Requirements (EHSR) of the Directive 2006/42/EC, the requirements in this Annex ZE shall apply.

1 Scope

This annex deals with additional requirements concerning appliances and machines intended to be used by experts or trained users for example in restaurants, canteens, hospitals and commercial enterprises such as bakeries, butcheries, etc and appliances and machines which are declared to be for commercial use by lay persons.

Products covered by this standard do not create a noise hazard, therefore no specific provisions concerning noise are given.

2 Normative references

Add the following normative reference

EN ISO 14159:2008, Safety of machinery - Hygiene requirements for the design of machinery (ISO 14159:2002)

3 Definitions

This clause of Annex ZE of Part 1 is applicable.

4 General requirement

This clause of Annex ZE of Part 1 is applicable.

7 Marking and instructions

This clause of Annex ZE of Part 1 is applicable except as follows:

7.12 Modification

Add following dashed items:

- the intended use of the appliance as covered by the scope of this standard;
- instructions regarding user maintenance and operation of the appliance and, if necessary, instructions for the training of operators;
- instructions designed to enable adjustment and maintenance to be carried out safely, including the protective measures that should be taken during these operations;
- the conditions under which the appliance is stable during use, dismantling when out of use, testing or foreseeable breakdowns;
- the operating method to be followed in the event of accident or breakdown to prevent unsafe actions;
- information regarding the use of personal protection equipment in case of spreading hot food stuff;
- warning concerning possible slippery floor adjacent to the appliance.

7.12.Z1 *Replace the sixth dashed item by the following:*

- on airborne noise emissions, the A-weighted sound pressure level is below 70 dB(A).

Add the following subclause:

7.12.ZE.101 The instructions shall include the possible reasonably foreseeable misuse and, whenever relevant, a warning against the effects it may have on the safe use of the appliance. At least, it shall include the substance of the following.

WARNING: Appliances must be disconnected from their power supply during cleaning or maintenance and when replacing parts.

21 Mechanical strength

This clause of Annex ZE of Part 1 is applicable.

22 Construction

This clause of Annex ZE of Part 1 is applicable except as follows:

22.ZE.1

This clause of Annex ZE of Part 1 is not applicable.

22.ZE.5

Replace the second paragraph of the test specification by:

*The **guard** is opened at the extent needed to cause the interlocking to operate and is then closed. This operation is carried out for 5 000 cycles at a rate of 5 cycles per min.*

Replace the following subclauses by the following:

22.109 Hinged lids shall be constructed so that they cannot close accidentally.

Compliance is checked by inspection and by manual test.

NOTE This requirement may be met, if the hinge incorporates a click stop, the lid is counter balanced or the lid can be opened through an angle of at least 100°.

22.110 Appliances with tilting vessels or lifting baskets shall be provided with a mechanism that prevents accidental tilting or lifting from any position.

If the vessel is tilted or the basket lifted by means of an electric motor, it shall only be possible for this motor to function if the pressure is maintained on the control buttons or switches. The buttons or switches shall be located and protected in such a way that they cannot be operated accidentally.

If the vessel is tilted manually, it shall not be possible to adversely influence the tilting action other than by the intended means.

Compliance is checked by inspection and by applying a force of 340 N at any point to the pan. The pan shall not move, the play of the gear is disregarded.

22.ZE.101

Controls shall be

- clearly visible and identifiable,
- positioned within easy reach of the operator's hand,
- secured against accidental actuation, if their actuation could result in a hazard.

Compliance is checked by inspection and by manual test if necessary.

22.ZE.102

Lids shall be equipped with at least one handle. Handles shall be placed in such a way that scalding by steam is prevented when the lid is opened.

Compliance is checked by functional test.

22.ZE.103

Appliances for permanent connected water supply shall withstand an allowable inlet water pressure of at least 600 kPa.

Compliance is checked as follows:

The appliance is subjected to a static pressure equal to twice the allowable inlet water pressure up to at least 1 200 kPa (12 bar), for a period of 5 min.

During the test, there shall be no leakage from any part of the appliance, including the inlet water hose.

22.ZE.104

Filling and draining taps shall be designed and constructed so that it is not possible to inadvertently open them.

Compliance is checked by inspection and by manual test.

NOTE For example, this requirement is met when the valve handle is such that, when released, it returns automatically to the closed position or is of the wheel type or is placed in a recess.

22.ZE.105 Appliances shall comply with the hygiene requirements.

Compliance is checked by inspection and by the requirements of EN ISO 14159.

Compliance is checked by inspection.

22.ZE.106 Appliances shall meet ergonomic principles.

Compliance is checked by inspection

NOTE Guidance may be found in EN 614-1 and EN 614-2.

Annex ZZ
(informative)

Coverage of Essential Requirements of EU Directives

This European Standard has been prepared under a mandate given to CENELEC by the European Union and the European Free Trade Association and within its scope the standard covers all relevant essential requirements as given in Annex I of the EU Directive 2006/42/EC.

Compliance with this standard, including the requirements of Annex ZE, provides one means of conformity with the specified essential requirements of the Directive concerned.

WARNING: Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard.

Annex ZZA

(informative)

Relationship between this European Standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European Standard has been prepared under a Commission's standardization request relating to harmonized standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

Compliance with this Part 2 when used together with the Part 1 provides one means of conformity with the safety objectives.

Table ZZA.1 – Correspondence between this European Standard and Annex I of Directive 2014/35/EU [2014 OJ L96]

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks/ Notes
1 a)	Clauses 4, 7	None
1 b)	Clauses 4, 7	None
1 c)	Clauses 4, 7	None
2 a)	Clauses 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	None
2 b)	Clauses 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	None
2 c)	Clauses 6, 7, 11, 15, 17, 18, 19, 20, 21, 22, 24, 25, 30, 32	None
2 d)	Clauses 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	None
3 a)	Clauses 6, 7, 11, 17, 18, 19, 20, 21, 22	None
3 b)	Clauses 7, 11, 15, 19, 22, 25, 32	None
3 c)	Clauses 6, 7, 9, 10, 11, 14, 17, 18, 19, 21, 22	None

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.