

Safety of household and similar electrical appliances —

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

The European Standard EN 60335-2-47:1997 with the incorporation of amendments A1:1998 and A2:1999 has the status of a British Standard

ICS 97.040.20

National foreword

This British Standard is the official English language version of EN 60335-2-47:1997 including amendments A1:1998 and A2:1999. It is identical with IEC 60335-2-47:1995 including amendments 1:1996 and 2:1998. It supersedes BS EN 60335-2-47:1992 which will be withdrawn on 1999-12-01.

The UK participation in its preparation was entrusted by Technical Committee CPL/61, Safety of electrical appliances, to Subcommittee CPL/61/5, Commercial catering equipment, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 21 and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

Sidelining in this document indicates the most recent changes by amendment.

This British Standard, having been prepared under the direction of the Electrotechnical Sector Committee, was published under the authority of the Standards Committee and comes into effect on 15 June 1997

© BSI 03-2001

ISBN 0 580 27593 0

Amendments issued since publication

Amd. No.	Date	Comments
10340	September 1999	
12048	March 2001	Indicated by a sideline

Descriptors: Household electrical appliances, boiling pans, appliance for commercial use, safety requirements, protection against electric shock, fire protection, protection against mechanical hazard

English version

Safety of household and similar electrical appliances — Part 2-47: Particular requirements for commercial electric boiling pans

(includes amendments A1:1998 and A2:1999)
(IEC 60335-2-47:1995 + A1:1996 + A2:1998)

Sécurité des appareils électrodomestiques et
analogues

Partie 2-47: Règles particulières pour les
marmites électriques à usage collectif
(inclut les amendements A1:1998 et A2:1999)
(CEI 60335-2-47:1995 + A1:1996 + A2:1998)

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke

Teil 2-47: Besondere Anforderungen für
elektrische Kochkessel für den gewerblichen
Gebrauch
(enthält Änderungen A1:1998 und A2:1999)
(IEC 60335-2-47:1995 + A1:1996 + A2:1998)

This European Standard was approved by CENELEC on 1997-03-11. 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B-1050 Brussels

Foreword

The proposal to endorse IEC 335-2-47:1995, document CLC/TC 61 (SEC) 1015, was circulated under the enquiry procedure in June 1995. This proposal was discussed during the Copenhagen meeting in May 1996, when it was decided to submit a draft for EN 60335-2-47 to the formal vote.

This draft was circulated in September 1996 and was ratified by CENELEC as EN 60335-2-47 on 1997-03-11.

The European Standard has been prepared by the secretariat of CENELEC Technical Committee TC 61.

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) 1997-12-01
- date on which national standards conflicting with the EN have to be withdrawn (dow) 1999-12-01

For products which have complied with EN 60335-2-47:1990 including its amendment A1:1992 and A52:1992 before 1999-12-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2004-12-01.

This standard has to be used in conjunction with EN 60335-1, Safety of household and similar electrical appliances, Part 1: General requirements. It was established on the basis of the 1994 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.

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

Subclauses and figures which are additional to those in Part 1 are numbered starting with **101**.

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.

NOTE 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 2. When a definition of Part 1 concerns an adjective, the adjective and the associated noun are also in bold.

Endorsement notice

The text of the International Standard IEC 335-2-47:1995 was approved by CENELEC as an European Standard without any modification.

Foreword to amendment A1

The proposal to endorse amendment 1:1996 to IEC 60335-2-47:1995, document CLC/TC 61 (SEC) 1092, was circulated under the enquiry procedure in November 1996. This proposal was discussed during the Fehrltorf meeting in October 1997, when it was decided to submit a draft for an amendment to EN 60335-2-47 to the formal vote.

This draft was circulated as prAA in March 1998 and was ratified by CENELEC as amendment A1 on 1998-08-01.

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) 1999-07-01
- date on which national standards conflicting with the amendment have to be withdrawn (dow) 2005-10-01

This amendment supplements or modifies the corresponding clauses of EN 60335-2-47:1997.

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 1:1996 to the International Standard IEC 60335-2-47:1995 was approved by CENELEC as an amendment to the European Standard without any modification.

Foreword to amendment A2

The text of document 61E/279/FDIS, future amendment to IEC 60335-2-47:1995 prepared by SC 61E of the Technical Committee 61, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A2 to EN 60335-2-47 on 1999-01-01.

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) 1999-10-01
- date on which national standards conflicting with the amendment have to be withdrawn (dow) 2001-10-01

This amendment supplements or modifies the corresponding clauses of EN 60335-2-47:1997.

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

National deviations from this amendment are listed in annex ZB and are in addition to those in EN 60335-1.

Introduction

An investigation by CENELEC TC 61 has concluded that all risks from products within the scope of this standard are fully covered by the Low Voltage Directive, 73/23/EEC. If the product has mechanical moving parts, a risk assessment in accordance with the Machinery Directive, 89/392/EEC, has shown that the risks are mainly of electrical origin and consequently this directive is not applicable. However, the relevant essential safety requirements of the Machinery Directive are covered by this standard together with the principal objectives of the Low Voltage Directive.

Endorsement notice

The text of amendment 2:1998 to the International Standard IEC 60335-2-47:1995 was approved by CENELEC as an amendment to the European Standard without any modification.

CONTENTS

	Page
Clause	
1 Scope	5
2 Definitions.....	5
3 General requirement	7
4 General conditions for the tests	7
5 Void	7
6 Classification	7
7 Marking and instructions	8
8 Protection against access to live parts.....	9
9 Starting of motor-operated appliances	9
10 Power input and current	10
11 Heating	10
12 Void	11
13 Leakage current and electric strength at operating temperature	11
14 Void	11
15 Moisture resistance	11
16 Leakage current and electric strength.....	13
17 Overload protection of transformers and associated circuits	13
18 Endurance	13
19 Abnormal operation	13
20 Stability and mechanical hazards.....	14
21 Mechanical strength	14
22 Construction	15
23 Internal wiring	17
24 Components	18
25 Supply connection and external flexible cords.....	18
26 Terminals for external conductors	19
27 Provision for earthing	19
28 Screws and connections.....	19
29 Creepage distances, clearances and distances through insulation	19
30 Resistance to heat, fire and tracking.....	19
31 Resistance to rusting.....	19
32 Radiation, toxicity and similar hazards	20
Annexes	21
Figure 101 – Splash apparatus	20

SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –

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

1 Scope

This clause of part 1 is replaced by:

This standard deals with the safety of electrically operated commercial **boiling pans** not intended for household use, their **rated voltage** being not more than 250 V for single-phase appliances connected between one phase and neutral, and 480 V for other appliances.

NOTE 1 These appliances are used, for example, in kitchens such as in restaurants, canteens, hospitals and commercial enterprises such as bakeries, butcheries, etc.

The electrical part of appliances making use of other forms of energy is also within the scope of this standard.

So far as is practicable, this standard deals with the common hazards presented by these types of appliances.

NOTE 2 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;
- for appliances intended to be used in tropical countries, special 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;
- in many countries additional requirements are specified for pressure appliances.

This standard does not apply to

- 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);
- continuous process appliances for the mass production of food;
- appliances with electrode heaters.

2 Definitions

This clause of part 1 is applicable except as follows.

2.2.4 Addition:

NOTE The **rated power input** is the sum of the power inputs of all the individual elements in the appliance which can be on at one time; where there are several such combinations possible, that giving the highest power input is used in determining the **rated power input**.

2.2.9 Replacement:

normal operation: Operation of the appliance under the following conditions:

The appliance is filled with water at $15\text{ °C} \pm 5\text{ °C}$ to the **indicated level**.

Appliances with more than one programme are operated with the most severe programme. In addition, any control intended to be operated by the user is set at maximum until the water boils or the operating temperature is reached. The control is then adjusted to the lowest setting that maintains boiling or the operating temperature. Lids and covers are in position and closed.

Motors incorporated in the appliance are operated in the intended manner under the most severe conditions which can be expected in normal use, taking into account the manufacturer's instructions.

2.2.101

boiling pan

an appliance in which liquids contained in a vessel are heated to boiling-point as part of a cooking process. The pressure within the vessel can exceed atmospheric pressure. The vessel may be fixed or tilting

2.2.102

atmospheric boiling pan

a **boiling pan** in which the pressure within the vessel does not differ significantly from atmospheric pressure

2.2.103

jacketed boiling pan

an appliance having a double-walled vessel, the space between the inner and outer walls containing a heat transfer medium which is heated by heating elements

2.2.104

dual purpose boiling pan

an appliance incorporating two vessels, the inner one being removable. The appliance may be used with or without the removable vessel

2.2.105

unjacketed boiling pan

an appliance in which heating of the contents of the vessel is achieved by means other than via a heat transfer jacket

2.2.106

rated pressure

the maximum working pressure assigned by the manufacturer to the pressurized parts of the appliance

2.2.107

indicated level

a mark on the appliance to indicate the maximum liquid level for correct operation

2.2.108

installation wall

a special fixed construction containing supply facilities for appliances installed in conjunction with it