
Gospodinski in podobni električni aparati - Varnost - 2-90. del: Posebne zahteve za komercialne mikrovalovne pečice - Dodatek A1 (IEC 60335-2-90:2006/A1:2010)

Household and similar electrical appliances - Safety - Part 2-90: Particular requirements for commercial microwave ovens

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-90: Besondere Anforderungen für gewerbliche Mikrowellenkochgeräte

Appareils électrodomestiques et analogues - Sécurité - Partie 2-90: Règles particulières pour les fours à micro-ondes à usage commercial

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Ta slovenski standard je istoveten z: EN 60335-2-90:2006/A1:2010

ICS:

97.040.20	Štedilniki, delovni pulti, pečice in podobni aparati	Cooking ranges, working tables, ovens and similar appliances
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SIST EN 60335-2-90:2006/A1:2011 **en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60335-2-90/A1

September 2010

ICS 97.040.20

English version

**Household and similar electrical appliances -
Safety -
Part 2-90: Particular requirements for commercial microwave ovens
(IEC 60335-2-90:2006/A1:2010)**

Appareils électrodomestiques
et analogues -
Sécurité -
Partie 2-90: Règles particulières pour les
fours à micro-ondes à usage commercial
(CEI 60335-2-90:2006/A1:2010)

Sicherheit elektrischer Geräte
für den Hausgebrauch
und ähnliche Zwecke -
Teil 2-90: Besondere Anforderungen
für gewerbliche Mikrowellenkochgeräte
(IEC 60335-2-90:2006/A1:2010)

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This amendment A1 modifies the European Standard EN 60335-2-90:2006; it was approved by CENELEC on 2010-09-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 61B/416/FDIS, future amendment 1 to IEC 60335-2-90:2006, prepared by SC 61B 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 60335-2-90:2006 on 2010-09-01.

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

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) 2011-06-01
- date on which national standards conflicting with the amendment have to be withdrawn (dow) 2013-09-01

This amendment supplements or modifies the corresponding clauses of EN 60335-2-90:2006.

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

There are no national deviations from this amendment.

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Endorsement notice

The text of amendment 1:2010 to the International Standard IEC 60335-2-90:2006 was approved by CENELEC as an amendment to the European Standard without any modification.

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Annex ZC (normative)

Normative references to international publications with their corresponding European publications

Addition:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-6	-	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	-
IEC 60068-2-27	-	Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock	EN 60068-2-27	-
IEC 60068-2-52	-	Environmental testing - Part 2: Tests - Test Kb: Salt mist, cyclic (sodium chloride solution)	EN 60068-2-52	-



IEC 60335-2-90

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

Household and similar electrical appliances – Safety –
Part 2-90: Particular requirements for commercial microwave ovens

Appareils électrodomestiques et analogues – Sécurité –
Partie 2-90: Règles particulières pour les fours à micro-ondes à usage
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FOREWORD

This amendment has been prepared by subcommittee 61B: Safety of microwave ovens, of IEC technical committee 61: Safety of household and similar electrical appliances.

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

FDIS	Report on voting
61B/416/FDIS	61B/424/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.

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.

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.

<http://standards.iec.ch/catalog/standards/sist/3c6c4712-c56a-46c-abb9-800bb119a9b8/sist-en-60335-2-90-2006-a1-2011>

INTRODUCTION

Replace the fifth paragraph by the following:

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.

1 Scope

Add before Note 101:

This standard also deals with **microwave ovens** intended to be used on board ships, for which Annex EE is applicable.

2 Normative references

Replace the existing text by the following:

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60068-2-6, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60068-2-27, *Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock*

IEC 60068-2-52, *Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)*

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7 Marking and instructions

7.1 Add the following text to the addition:

<https://standards.iteh.ai/catalog/standards/sist/3c8e4712-c30a-4f8e-abd9-31b114706335-2-90:2006/A1:2011>

If appliances have **accessible metal surfaces**, other than working surfaces, that have a temperature rise exceeding 90 K during the test of Clause 11, they shall be marked with symbol IEC 60417-5041(2002-10) or with the substance of the following:

CAUTION: Hot surface.

7.6 Add the following to the addition:



[symbol IEC 60417-5041 (2002-10)]

Caution, hot surface

7.14 Add the following paragraph to the addition:

The height of the triangle used with symbol IEC 60417-5041 (2002-10) shall be at least 12 mm.

18 Endurance

Replace the existing text by the following:

This clause of Part 1 is replaced by the following.

The door system, including hinges, microwave seals and other associated parts, shall be constructed to withstand wear that may be expected in normal use.

Compliance is checked by the following test.

*The door system is subjected to 100 000 cycles of operation with the appliance supplied at **rated voltage** and containing an appropriate microwave-absorbing load. It is then subjected to 100 000 cycles of operation without microwave generation.*

The door is opened and closed as in normal use. It is opened from the closed position to a position approximately 10° before fully open. The rate of operation is 6 cycles per minute. With the agreement of the manufacturer the rate of operation without microwave generation can be increased to 12 cycles per minute.

After the test, the microwave leakage shall not exceed the limit specified in Clause 32 and the door system shall still function.

NOTE 101 Controls may be rendered inoperative in order to carry out the test.

NOTE 102 Components, the deterioration of which does not impair compliance with this standard, may be replaced in order to complete the test.

NOTE 103 Bricks or additional water of maximum 1 000 g may be added if necessary to avoid stopping of the test due to overheating.

22 Construction

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Add the following new subclause:

22.119 If **electronic circuits** are used to provide protection against microwave leakage they shall be designed so that a fault condition will not affect protection against microwave leakage.

Compliance is checked by applying the tests in Clause 19 in conjunction with the requirements and test specifications in 22.105, 22.106, 22.107 and 22.108.

Annexes

Add the following new Annex EE:

Annex EE (normative)

Microwave ovens intended to be used on board ships

The following modifications to this standard are applicable for **microwave ovens** intended to be used on board ships.

3 Terms and definitions

3.EE.101

open deck

area which is exposed to marine environment

3.EE.102

dayroom

area which may be exposed to marine environment from time to time

6 Classification

6.2 Addition:

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Appliances for **open deck** use shall be IPX6.

7 Marking and instructions

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7.12 Addition:

The instructions for use shall also include the substance of the following.

- usage on board ships;
- installation place (**open deck** protective enclosure, **dayrooms**);
- fastening means.

22 Construction

22.EE.101 Appliances shall withstand the pulses to which they may be subjected.

Compliance is checked by carrying out the half-sine pulse tests specified in IEC 60068-2-27 under the following conditions.

The appliance is fastened in its normal position of use to a shock-testing machine by means of straps around the enclosure.

The type of pulse is a half-sine pulse and the severity is as follows.

- application of the half-sine pulse is in all 3 axes;
- peak acceleration: 250 m/s²,
- duration of each half-sine pulse: 6 ms;
- number of half-sine pulses in each direction: 1 000 ± 10.