
Gospodinjski in podobni električni aparati - Varnost - 2-90. del: Posebne zahteve za mikrovalovne pečice za komercialno uporabo - Dopolnilo A1

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

iTeh STANDARD
PREVIEW

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

Ta slovenski standard je istoveten z: ~~60335-2-90:2021/A1:2021~~ EN IEC 60335-2-90:2021/A1:2021

<https://standards.iteh.ai/catalog/standards/sist/21ee3df6-c3f8-4813-a56b-9b8481d0ad40/sist-en-iec-60335-2-90-2021-a1-2022>

ICS:

97.040.20	Štedilniki, delovni pulti, pečice in podobni aparati	Cooking ranges, working tables, ovens and similar appliances
-----------	--	--

SIST EN IEC 60335-2-90:2021/A1:2022 en

**iTeh STANDARD
PREVIEW
(standards.iteh.ai)**

SIST EN IEC 60335-2-90:2021/A1:2022

<https://standards.iteh.ai/catalog/standards/sist/21ee3df6-c3f8-4813-a56b-9b8481d0ad40/sist-en-iec-60335-2-90-2021-a1-2022>

EUROPEAN STANDARD

EN IEC 60335-2-90:2021/A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2021

ICS 97.040.20

English Version

Household and similar electrical appliances - Safety - Part 2-90: Particular requirements for commercial microwave ovens (IEC 60335-2-90:2015/A1:2019)

Appareils électrodomestiques et analogues - Sécurité -
Partie 2-90: Exigences particulières pour les fours à micro-
ondes à usage commercial
(IEC 60335-2-90:2015/A1:2019)

Elektrische Geräte für den Hausgebrauch und ähnliche
Zwecke - Sicherheit - Teil 2-90: Besondere Anforderungen
für gewerbliche Mikrowellenkochgeräte
(IEC 60335-2-90:2015/A1:2019)

This amendment A1 modifies the European Standard EN IEC 60335-2-90:2021; it was approved by CENELEC on 2021-09-27. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the 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

EN IEC 60335-2-90:2021/A1:2021 (E)**European foreword**

This document EN IEC 60335-2-90:2021/A1:2021 consists of the text of IEC 60335-2-90:2015/A1:2019 prepared by IEC/TC 61 "Safety of household and similar electrical appliances".

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) 2022-09-27
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-09-27

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.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

This standard is read in conjunction with IEC 60335-1:2010+A1:2013+A2:2016.

iTeh STANDARD
Endorsement notice
PREVIEW

The text of the International Standard IEC 60335-2-90:2015/A1:2019 was approved by CENELEC as a European Standard without any modifications.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

<https://standards.iteh.ai/catalog/standards/sist/21ee3df6-c3f8-4813-a56b-9b8481d0ad40/sist-en-iec-60335-2-90-2021-a1-2022>

Delete the following references:

IEC 60335-2-36	NOTE	Harmonized as EN 60335-2-36
IEC 60335-2-42	NOTE	Harmonized as EN 60335-2-42
IEC 60335-2-49	NOTE	Harmonized as EN 60335-2-49
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 When 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.

Addition

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60335-2-36	-	Household and similar electrical appliances - FprEN 60335-2-36+ Safety - Part 2-36: Particular requirements A11 for commercial electric cooking ranges, ovens, hobs and hob elements		2021 2021
IEC 60335-2-42	-	Household and similar electrical appliances -EN 60335-2-42+ Safety - Part 2-42: Particular requirementsA1+ for commercial electric forced convectionA11 ovens, steam cookers and steam-convection ovens		2003 2008 2012
IEC 60335-2-49	-	Household and similar electrical appliances -EN 60335-2-49+ Safety - Part 2-49: Particular requirementsA1+ for commercial electric hot cupboards	A11+ A2	2003 2008 2012 2019
IEC 60335-2-75	-	Household and similar electrical appliances -EN IEC 60335-2-75+ Safety - Part 2-75: Particular requirementsA1+ for commercial dispensing appliances andA2+ vending machines	A11	2021 2021 2021 2021

<https://standards.iteh.ai/catalog/standards/sist/21ee3d16-c3f8-4813-a56b-9b8481d0ad40/sist-en-iec-60335-2-90-2021-a1-2022>

**iTeh STANDARD
PREVIEW
(standards.iteh.ai)**

SIST EN IEC 60335-2-90:2021/A1:2022

<https://standards.iteh.ai/catalog/standards/sist/21ee3df6-c3f8-4813-a56b-9b8481d0ad40/sist-en-iec-60335-2-90-2021-a1-2022>



IEC 60335-2-90

Edition 4.0 2019-11

INTERNATIONAL STANDARD

AMENDMENT 1

iTeh STANDARD**Household and similar electrical appliances – Safety –
Part 2-90: Particular requirements for commercial microwave ovens****(standards.iteh.ai)**SIST EN IEC 60335-2-90:2021/A1:2022

<https://standards.iteh.ai/catalog/standards/sist/21ee3df6-c3f8-4813-a56b-9b8481d0ad40/sist-en-iec-60335-2-90-2021-a1-2022>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 97.040.20

ISBN 978-2-8322-7578-8

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

FOREWORD

This amendment has been prepared by subcommittee 61B: Safety of microwave appliances for household and commercial use, of 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
61B/618/CDV	61B/631/RVC
61B/619/CDV	61B/632/RVC
61B/617/CDV	61B/633/RVC
61B/616/CDV	61B/634/RVC
61B/612/CDV	61B/635/RVC
61B/620/CDV	61B/636/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 publication will remain unchanged until the stability date indicated on the IEC website 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.

SIST EN IEC 60335-2-90:2021/A1:2022
<https://standards.iteh.ai/catalog/standards/sist/21ee3df6-c3f8-4813-a56b-9b8481d0ad40/sist-en-iec-60335-2-90-2021-a1-2022>

NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations can 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 bilingual version of this publication may be issued at a later date.

1 Scope

Replacement:

Replace the first dashed item of NOTE 105 with the following:

- for appliances intended to be used in vehicles or on trains, on board ships or board aircraft, additional requirements may be necessary;

2 Normative references

Add the following references to the existing list:

IEC 60335-2-36, *Household and similar electrical appliances – Safety – Part 2-36: Particular requirements for commercial electric cooking ranges, ovens, hobs and hob elements*

IEC 60335-2-42, *Household and similar electrical appliances – Safety – Part 2-42: Particular requirements for commercial electric forced convection ovens, steam cookers and steam-convection ovens*

IEC 60335-2-49, *Household and similar electrical appliances – Safety – Part 2-49: Particular requirements for commercial electric hot cupboards*

IEC 60335-2-75, *Household and similar electrical appliances – Safety – Part 2-75: Particular requirements for commercial dispensing appliances and vending machines*

3 Definitions

Replace the title of this clause, not the numbering, with “**Terms and definitions**”.

3.113 microwave enclosure

Renumber Note 2 with Note 1 and Note 3 with Note 2.

11 Heating

11.7 Add the following text after the first sentence:

The last cycle does not include a rest period of 1 min.

15 Moisture resistance

15.2 Replace the text of the addition with the following:

A quantity of 0,5 l of the same spillage solution is poured steadily over the **shelf** over a period of 1 min. If the **shelf** can collect spilled liquid, it is filled with the solution and a further 0,5 l is then added over a period of 1 min.

15.101 Replace the first and second paragraph of the compliance criterion with the following:

The probe is completely immersed in water containing approximately 1 % NaCl and having a temperature of 20 °C ± 5 °C. The solution is heated to the boiling point in approximately 15 min. The probe is then removed from the boiling solution and immersed in the solution having a temperature of 20 °C ± 5 °C for 30 min.

This procedure is carried out five times, after which the probe is removed from the solution. All traces of liquid are then removed from the surface.

Replace the Note with the following:

NOTE **Detachable temperature-sensing probes** are not connected to the appliance for this test. **Non-detachable temperature-sensing probes** are tested in the **cavity**, the probe being immersed as much as possible.

19 Abnormal operation

19.13 Replace the first sentence of the first paragraph with the following.

During the tests, the temperature of windings shall not exceed the values shown in Table 8.

19.101 Add the following text after the last paragraph:

If microwave leakage exceeds 100 W/m², the following alternative measurement method shall be applied, which modifies the microwave leakage limit of 19.13.

In order to identify and mark all spots where peak values of microwave leakage exceed 100 W/m², the instrument antenna is moved again over the external surface of the appliance, particular attention being given to the door and its seals.

NOTE 1 A peak hold function of the measurement instrument, if any, can be activated for identification of spots where peak values of microwave leakage exceeds 100 W/m².

The leakage values of each such spot shall be recorded and the averaged leakage value of any spot over the most onerous 20 s shall not exceed 100 W/m². Furthermore, the peak value shall not exceed 500 W/m².

NOTE 2 Since the stirrer and/or turntable revolution time and the number of microwave stirrer blades determine the frequency and duration of actual peak leakage values, instruments with appropriate specifications (like minimum sampling time, capability to measure peak values of power flux density, capability to average these values) can be used.

19.102 Replace the current NOTE with the same normative text and add the following text:

These short-circuits are applied one at a time.

19.104 Replace Table 101 with the following new table:

Table 101 – Number of potatoes

Rated microwave power output <i>W</i>	Volume of the cavity <i>l</i>	Number of potatoes
<600	≥14 and <28	2
≥600 and <1 000	≥28 and <42	4
≥1 000 and <2 000	≥42 and <56	6
≥2 000	≥56	6 + N ^a

NOTE The rated microwave power output or the volume of the cavity applies, whichever results in the higher number of potatoes.

^a N is 2 for each 500 W increase in power output or for each 14 l increase in volume.

20 Stability and mechanical hazards

20.101 Replace the fifth paragraph with the following:

For appliances normally used on a table, the mass is

- 7 kg for **stationary appliances**;
- 3,5 kg for **portable appliances**.