

SLOVENSKI STANDARD

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SIST EN 60335-2-25:2003/A1:2005

SIST EN 60335-2-25:2003/A11:2010

SIST EN 60335-2-25:2003/A2:2007

Gospodinjski in podobni električni aparati - Varnost - 2-25. del: Posebne zahteve za mikrovalovne pečice, vključno s kombiniranimi mikrovalovnimi pečicami (IEC 60335-2-25:2010, spremenjen)

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Household and similar electrical appliances - Safety - Part 2-25: Particular requirements for microwave ovens, including combination microwave ovens

[SIST EN 60335-2-25:2012](https://standards.iteh.ai/SIST/EN/60335-2-25:2012)

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-25: Besondere Anforderungen für Mikrowellenkochgeräte und kombinierte Mikrowellenkochgeräte

Appareils électrodomestiques et analogues - Sécurité - Partie 2-25: Règles particulières pour les fours à micro-ondes, y compris les fours à micro-ondes combinés

Ta slovenski standard je istoveten z: EN 60335-2-25:2012

ICS:

13.120	Varnost na domu	Domestic safety
97.040.20	Štedilniki, delovni pultji, pečice in podobni aparati	Cooking ranges, working tables, ovens and similar appliances

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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60335-2-25

March 2012

ICS 13.120; 97.040.20

Supersedes EN 60335-2-25:2002 + A1:2005 + A2:2006 + A11:2010

English version

**Household and similar electrical appliances -
Safety -
Part 2-25: Particular requirements for microwave ovens, including
combination microwave ovens
(IEC 60335-2-25:2010, modified)**

Appareils électrodomestiques et
analogues -
Sécurité -
Partie 2-25: Règles particulières pour les
fours à micro-ondes, y compris les fours à
micro-ondes combinés
(CEI 60335-2-25:2010, modifiée)

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke -
Teil 2-25: Besondere Anforderungen für
Mikrowellenkochgeräte und kombinierte
Mikrowellenkochgeräte
(IEC 60335-2-25:2010, modifiziert)

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This European Standard was approved by CENELEC on 2011-11-28. 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.

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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

This document (EN 60335-2-25:2012) consists of the text of IEC 60335-2-25:2010 prepared by IEC/SC 61B "Safety of microwave appliances for household and commercial use", together with the common modifications prepared by CLC/TC 61, "Safety of household and similar electrical appliances".

The following dates are fixed:

- latest date by which this document has to be implemented (dop) 2012-11-28
at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2014-11-28

This document supersedes EN 60335-2-25:2002 + A1:2005 + A2:2006 + A11:2010.

EN 60335-2-25:2012 includes the following significant technical changes with respect to EN 60335-2-25:2002:

- the scope is extended by microwave ovens on board ships and Annex BB contains requirements and test specifications for microwave ovens on board ships;
- the scope and the requirements for the instructions are modified for better separation between "household and similar use" and "commercial use";
- the scope is modified by so that this International Standard does not take into account persons whose capabilities or lack of experience and knowledge prevents them from using the appliance safely without supervision or instruction and children playing with the appliance;
- the intended use is defined for clarification;
- the door endurance test is rationalised;
- the replacement of 22.103, 22.104 and 22.105 allows interlock systems with at least one concealed door interlock as well as alternative interlock systems without concealed door interlock;
- the tests on electronic door interlock systems and similar are defined for clarification;
- the pollution degree of combination microwave ovens is defined for clarification;
- the thickness requirement for sheaths of visibly glowing heating elements of combination microwave ovens is defined for clarification;
- there is an editorial correction of Clause 19 of Annex AA.

This standard is to be used in conjunction with the latest edition of EN 60335-1 and its amendments. When "Part 1" is mentioned in this standard, it refers to EN 60335-1.

This part 2 supplements or modifies the corresponding clauses in EN 60335-1, so as to convert that publication into the European standard: *Particular requirements for microwave ovens, including combination microwave ovens*.

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 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.

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.

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 60335-2-25:2010 are prefixed “Z”.

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.

Endorsement notice

The text of the International Standard IEC 60335-2-25:2010 was approved by CENELEC as a European Standard with common modifications.

COMMON MODIFICATIONS

1 Scope

Replacement

This European Standard deals with the safety of **microwave ovens** for household and similar use, their **rated voltage** being not more than 250 V.

This European Standard also deals with **combination microwave ovens**, for which Annex AA is applicable.

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

As far as is practicable, this European Standard deals with the common hazards presented by appliances that are encountered by all persons in household and similar environments.

However, in general, it does not take into account:

- **children** playing with the appliance;
- the **use of the appliance** by **very young children**;
- the **use of the appliance** by **young children** without supervision.

It is recognized that **very vulnerable people** may have needs beyond the level addressed in this European Standard.

NOTE Z101 Examples of appliance for household environment are appliances for typical housekeeping functions used in the household environment that may also be used by non expert users for typical housekeeping functions:

- in shops and other similar working environments;
- in farm houses;
- by clients in hotels, motels and other residential type environments;
- in bed and breakfast type environments.

NOTE Z102 Household environments include the dwelling and its associated buildings, the garden, etc.

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 Z103 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 and similar authorities.

NOTE Z104 This standard does not apply to

- commercial **microwave ovens** (EN 60335-2-90)
- industrial microwave heating equipment (EN 60519-6)
- appliances for medical purposes (EN 60601)
- 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).

7 Marking and instructions

In the fifth dashed item after Note 101 replace "if smoke is observed" by "if smoke is emitted". :

11 Heating

11.8 *Replace the first paragraph by the following:*

During the test, the temperature rises are monitored continuously and shall not exceed the values shown in Table 3.

Modification

*Replace in Table 3 the row "External enclosure of **motor-operated appliances**, except handles held in normal use" and the corresponding footnotes by the following Table Z101.*

Add the following Table Z101.

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Table Z101 — Maximum temperature rises for external surfaces under normal operating conditions

Surface ^c	Temperature rise of external surfaces ^a K	
	Surfaces of appliances situated up to 850 mm above the floor after installation	Surfaces of appliances situated more than 850 mm above the floor after installation and portable appliances
Bare metal	40	45
Coated metal ^d	45	55
Glass and ceramic	55	60
Plastic and plastic coating > 0,3 mm ^b	60	65

^a When, for appliance covered by Annex AA, due to their construction or dimensional limitations, the required values cannot be met, the maximum temperature rise shall not be higher than twice the values indicated. In such cases, a warning shall be marked on the appliance.

^b The temperature rise limit applies also for plastic material having a metal finish of thickness less than 0,1 mm.

^c When the thickness of the plastic coating does not exceed 0,3 mm, the temperature rise limits of the coated metal or of glass and ceramic material apply.

^d Metal is considered coated when a coating having a minimum thickness of 80 µm made by enamel or non substantially plastic coating is used.

22 Construction

Add:

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22.105 In the 3rd paragraph replace “test probe B of IEC 61032” with “test probe B and test probe 18 of IEC 61032 in turn to all openings.”

Annex AA

[SIST EN 60335-2-25:2012](https://standards.iteh.ai/catalog/standards/sist/8ec36384-83e5-4e10-a2c5-cb0a354b8145/sist-en-60335-2-25-2012)

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Add:

AA.7.1 When the provisions of footnote a to Table Z101 apply, the appliance shall be marked with:

- the substance of “CAUTION: Hot surface”; or
- symbol IEC 60417-5041.

The warning shall be put on the surface of the appliance having the highest temperature and shall be visible during normal operation.

AA.7.6 Addition:



[symbol IEC 60417-5041]

Caution, hot surface

AA.7.12 Delete.

Add:

AA7.14 Addition:

The height of the warning “CAUTION. Hot surface” shall be at least 4 mm (measured on the capital letters).

NOTE Z101 For the evaluation of legibility and clarity of safety warnings guidance can be found on IEC 62079.

The height of the symbol IEC 60417-5041 shall be at least 12 mm.

In the Bibliography, **add** the following notes for the standards indicated:

IEC 60335-2-90 NOTE Harmonized as EN 60335-2-90.

IEC 60519-6 NOTE Harmonized as EN 60519-6.

ISO 13732-1 NOTE Harmonized as EN ISO 13732-1.

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Addition to the Annex ZA of EN 60335-1:

<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 60335-2-6	-	Household and similar electrical appliances - Safety - Part 2-6: Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances	EN 60335-2-6	-
IEC 60335-2-9	-	Household and similar electrical appliances - Safety - Part 2-9: Particular requirements for grills, toasters and similar portable cooking appliances		-

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Edition 6.0 2010-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Household and similar electrical appliances – Safety –
Part 2-25: Particular requirements for microwave ovens, including combination
microwave ovens

Appareils électrodomestiques et analogues – Sécurité –
Partie 2-25: Règles particulières pour les fours à micro-ondes, y compris les
fours à micro-ondes combinés

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY –**
**Part 2-25: Particular requirements for microwave ovens,
including combination microwave ovens**

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.
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This part of International Standard IEC 60335 has been prepared by subcommittee 61B: Safety of microwave ovens, of IEC technical committee 61: Safety of household and similar electrical appliances.

This sixth edition cancels and replaces the fifth edition published in 2002 including its Amendment 1 (2005) and Amendment 2 (2006). It constitutes a technical revision.

The principal changes with respect to the previous edition are as follows (minor changes are not listed):

- the scope is extended by microwave ovens on board ships and Annex BB contains requirements and test specifications for microwave ovens on board ships;
- the scope and the requirements for the instructions are modified for better separation between “household and similar use” and “commercial use”;