



SLOVENSKI STANDARD

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Gospodinjiski in podobni električni aparati - Varnost - 2-15. del: Posebne zahteve za aparate za gretje tekočin

Household and similar electrical appliances - Safety - Part 2-15: Particular requirements for appliances for heating liquids

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[SIST EN 60335-2-15:2016](https://standards.iteh.ai/catalog/standards/sist/ad406d0e-44fa-4bd3-93ee-781d527a2c0c/sist-en-60335-2-15-2016)

Appareils électrodomestiques et analogues - Sécurité - Partie 2-15: Règles particulières pour les appareils de chauffage des liquides

Ta slovenski standard je istoveten z: EN 60335-2-15:2016

ICS:

13.120	Varnost na domu	Domestic safety
97.040.50	Majhni gospodinjiski aparati	Small kitchen appliances

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en

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EUROPEAN STANDARD

EN 60335-2-15

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2016

ICS 13.120; 97.040.50

Supersedes EN 60335-2-15:2002

English Version

Household and similar electrical appliances - Safety - Part 2-15:
Particular requirements for appliances for heating liquids
(IEC 60335-2-15:2012 , modified)

Appareils électrodomestiques et analogues - Sécurité -
Partie 2-15: Exigences particulières pour les appareils de
chauffage des liquides
(IEC 60335-2-15:2012 , modifiée)

Sicherheit elektrischer Geräte für den Hausgebrauch und
ähnliche Zwecke - Teil 2-15: Besondere Anforderungen für
Geräte zur Flüssigkeitserhitzung
(IEC 60335-2-15:2012 , modifiziert)

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

EN 60335-2-15:2016 (E)

European foreword

This document (EN 60335-2-15:2016) consists of the text of IEC 60335-2-15:2012 prepared by IEC/TC 61 "Safety of household and similar electrical appliances", 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) 2016-10-12
at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting (dow) 2018-10-12
with this document have to be withdrawn

This document supersedes EN 60335-2-15:2002.

This Part 2-15 is to be used in conjunction with EN 60335-1:2012 and its amendments.

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 60335-2-15:2012 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.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

SIST EN 60335-2-15:2016

<https://standards.iteh.ai/catalog/standards/sist/en-60335-2-15-2016/781d329fa3c8/sist-en-60335-2-15-2016>

Endorsement notice

The text of the International Standard IEC 60335-2-15:2012 was approved by CENELEC as a European Standard with agreed common modifications.

COMMON MODIFICATIONS

1 Scope

Replacement

This clause of Part 1 is replaced by the following.

This European Standard deals with the safety of electrical appliances for heating liquids for household and similar purposes, their **rated voltage** being not more than 250 V.

NOTE Z101 Some appliances may be used for heating food.

NOTE Z102 Examples of appliances that are within the scope of this standard are

- coffee-makers,
- cooking pans,
- egg boilers,
- **feeding-bottle heaters**,
- kettles and other appliances for boiling water, having a **rated capacity** not exceeding 10 l,
- milk heaters,
- pressure cookers having a **rated cooking pressure** not exceeding 140 kPa and a **rated capacity** not exceeding 10 l,
- **rice cookers**,
- slow cookers,
- **steam cookers**,
- **soy milk makers**,
- tea makers,
- wash boilers,
- yoghurt makers.

Appliances intended to be used by laymen in shops and other premises for normal housekeeping purposes, are within the scope of this standard.

NOTE Z103 Examples of such appliances are

- glue pots with a water jacket,
- livestock feed boilers,
- sterilizers.

If the appliance is intended to be used professionally to process food for commercial consumption, that appliance is not considered to be for household or similar use only.

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NOTE Z104 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 Z105 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 household and similar environments.

However, in general, it does not take into account **children** playing with appliances and their **use** by **very young children**.

It does not take into account the **use** of the following appliances by **children**:

- pressure cookers;
- glue pots with a water jacket;
- livestock feed boilers;
- sterilizers;
- **soy milk makers**;
- wash boilers.

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It does not take into account the **use** of the following appliances by **young children** without supervision:

- cooking pans;
- slow cookers;
- **steam cookers**;
- tea makers;
- **rice cookers**;
- coffee makers;
- kettles;
- egg boilers;
- milk heaters.

NOTE Z106 **Feeding bottle heaters** and yoghurt makers may be used by **young children**.

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

NOTE Z107 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, the national water supply authorities and similar authorities.

NOTE Z108 This standard does not apply to

- frying pans and deep fat fryers (EN 60335-2-13),
- storage water heaters (EN 60335-2-21),
- instantaneous water heaters (EN 60335-2-35),
- surface-cleaning appliances employing liquids or steam (EN 60335-2-54),
- portable immersion heaters (EN 60335-2-74),
- commercial dispensing appliances and vending machines (EN 60335-2-75),
- appliances for medical purposes (EN 60601),
- appliances intended 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),
- appliances for high-frequency heating,
- pressure sterilizers,
- humidifiers for household and similar use (EN 60335-2-98).

NOTE Z109 Attention is drawn to the fact that in many countries requirements for pressure vessels are applied to pressure cookers.

7 Marking and instructions

This clause of Part 1 is applicable except as follows:

7.1 Add the following:

When the provisions of footnote b 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 use.

7.6 Add the following::

[symbol IEC 60417-5041]

Caution, hot surface

7.10 Replace the text beginning by "Devices used to start/stop operational..." and ending in the paragraph starting with "An ON/OFF switch, if any,..." included NOTE Z1 and NOTE Z2 by the following:

The accessible switch required by 22.40 shall be distinguished from other manual devices by means of shape, or size, or surface texture, or position, etc.

An indication that the device has been operated shall be given by:

- a tactile feedback, or
- an audible and visual feedback.

NOTE Z1 The sound of the motor or sound of an actuator switching ON/OFF is regarded as audible feedback. The stopping of the typical function (e.g. stopping of the vibration on the body of the appliance or of a part of it) is regarded as tactile means.

NOTE Z2 Devices used to start/stop operational functions mean devices that are operated by the user to start/stop the intended function of the appliance.

A selector switch with an off-position clearly identifiable is allowed.

An ON/OFF switch, if any, is considered a suitable device to stop operational functions. A plug is not considered a suitable device to stop operational functions, as it can be difficult to be reached by vulnerable persons.

7.12 Replace the third and fourth paragraph of Part 1 with the following:

The instructions for pressure cookers, glue pots with a water jacket, livestock feed boilers, sterilizers, soy milk makers, wash boilers shall include the substance of the following:

This appliance shall not be used by children. Keep the appliance and its cord out of reach of children.

The instructions for cooking pans, slow cookers, **steam cookers**, **rice cookers**, coffee-makers, kettles, egg boilers, milk heaters, tea makers shall include the substance of the following:

This appliance can be used by children aged from 8 years and above if they have been given supervision or instruction concerning use of the appliance in a safe way and if they understand the hazards involved. Cleaning and user maintenance shall not be made by children unless they are older than 8 and supervised. Keep the appliance and its cord out of reach of children aged less than 8 years.

The instructions for feeding bottle heaters, yoghurt makers shall include the substance of the following:

This appliance can be used by children aged from 3 years and above if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Cleaning and user maintenance shall not be made by children unless they are aged from 8 years and above and supervised. Keep the appliance and its cord out of reach of children aged less than 3 years.

The instructions shall also include the substance of the following:

Appliances can be used by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

Children shall not play with the appliance.

If symbol IEC 60417-5041 is marked on the appliance, the instructions shall state that surfaces are liable to get hot during use.

Add the following after 7.12:

7.14 Addition:

The height of symbol IEC 60417-5041 shall be at least 8 mm.

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

11 Heating

[SIST EN 60335-2-15:2016](https://standards.iteh.ai/catalog/standards/sist/ad406d0e-44fa-4bd3-93ee-781d329fa3c8/sist-en-60335-2-15-2016)

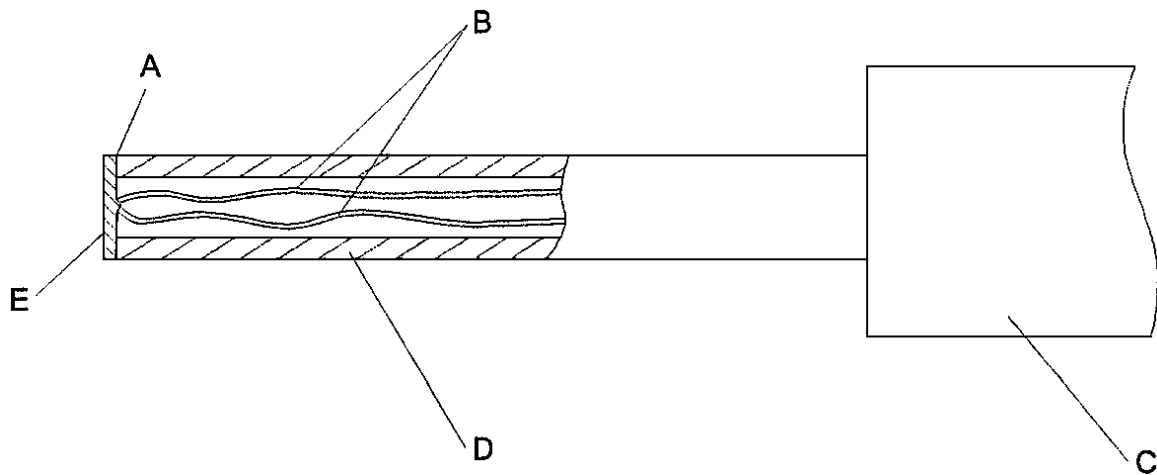
11.3 Addition:

<https://standards.iteh.ai/catalog/standards/sist/ad406d0e-44fa-4bd3-93ee-781d329fa3c8/sist-en-60335-2-15-2016>

For flat surfaces, temperature rises of the accessible front surface are measured using the probe of Figure Z101. The probe is applied with a force of $4\text{ N} \pm 1\text{ N}$ to the surface in such a way that the best possible contact between the probe and the surface is ensured.

NOTE Z101 Any measuring instrument giving the same results as the probe may be used.

Add the following Figure Z101:



Key

- A adhesive
- B thermocouple wires 0,3 mm diameter to EN 60584-1 Type K (chrome alumel)
- C handle arrangement permitting a contact force of $4\text{ N} \pm 1\text{ N}$
- D polycarbonate tube: inside diameter 3 mm, outside diameter 5 mm
- E tinned copper disc: 5 mm diameter, 0,5 mm thick

NOTE The contact face of the disc is to be flat.

Figure Z101 – Probe for measuring flat surface temperatures

11.8 Modification:

[SIST EN 60335-2-15:2016](https://standards.iteh.ai/catalog/standards/sist/ad406d0e-44fa-4bd3-93ee-3391e87e-1011)

<https://standards.iteh.ai/catalog/standards/sist/ad406d0e-44fa-4bd3-93ee-3391e87e-1011>

Replace the first paragraph of **Part 1** by the following 2-1: “During the test, the temperature rises measured with thermocouples are monitored continuously and shall not exceed the values shown in Table 3 and the temperature rises measured with the probe of Figure Z101 or thermocouples shall not exceed the values of Table Z101 in accordance with 11.Z101 and 11.Z102”.

In Table 3, **delete** the row “External enclosure of **motor-operated appliances**, except handles held in normal use” and the corresponding footnotes.

Add the following Table Z101:

Table Z101 – Maximum temperature rises of external enclosures under normal operating conditions

Surface^d	Temperature rise^{a, b} K
<i>Bare metal</i>	45
<i>Coated metal^e</i>	55
<i>Glass and ceramic</i>	60
<i>Plastic and plastic coating > 0,3 mm^c</i>	65

^a In addition to surfaces described under 11.Z101 the following surfaces or elements shall not be taken into consideration:

- hot functional surface: surface which is intentionally heated by an internal heat source and which has to be hot to carry out the function for which the equipment is intended to be used;
- vessels that contain hot liquids and that become hot through conduction by a heated part of the appliance (e.g. coffee pots in percolator type coffee makers and kettles);
- handles or control knobs including keypads, keyboards and the like;
- surfaces of heated cavities or surfaces adjacent to the functional areas inside the compartment.

^b When, due to the construction or dimensional limitations of the appliance, 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.

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

^d 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.

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

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Add the following new subclauses:

11.Z101 For coffee makers, milk heaters, egg boilers, cooking pans, slow cookers, steam cookers, pressure cookers, wash boilers, rice cookers, glue pots with a water jacket, livestock feed boilers, sterilizers, **soy milk makers**, tea makers, kettles and other appliances for boiling water, having a rated capacity not exceeding 10 l, the temperature rise limits in Table Z101 apply.

The appliance is supplied at **rated voltage** and operated under **normal operation**.

Temperature rises are not measured on

- the lids,
- surfaces within 25 mm from
 - the edge of the lid,
 - the ventilation openings,
 - the edge of the hot functional surface,
- enclosure at a distance within 25 mm from the heating element,
- underside surfaces that are not accessible with probe 41 of EN 61032. The probe is applied without appreciable force.

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11.Z102 For **feeding-bottle heaters** and yoghurt makers the temperature rise limits in Table Z101 apply.

The appliance is supplied at **rated voltage** and operated under **normal operation**.

22 Construction

Add the following:

22.40 Addition:

Appliances except eggs boilers, **feeding bottle heaters**, yogurt makers and slow cookers shall be fitted with an accessible switch or other means to stop operational functions of the appliance.

Bibliography

The bibliography of part 1 is applicable except as follows:

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

IEC 60335-2-13	NOTE Harmonized as EN 60335-2-13.
IEC 60335-2-21	NOTE Harmonized as EN 60335-2-21.
IEC 60335-2-35	NOTE Harmonized as EN 60335-2-35.
IEC 60335-2-54	NOTE Harmonized as EN 60335-2-54.
IEC 60335-2-74	NOTE Harmonized as EN 60335-2-74.
IEC 60335-2-75	NOTE Harmonized as EN 60335-2-75.
IEC 60335-2-98	NOTE Harmonized as EN 60335-2-98.



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NORME INTERNATIONALE

**Household and similar electrical appliances – Safety –
Part 2-15: Particular requirements for appliances for heating liquids**

**Appareils électrodomestiques et analogues – Sécurité –
Partie 2-15: Exigences particulières pour les appareils de chauffage des liquides**

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