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**Gospodinjski in podobni električni aparati - Varnost - 2-21. del: Posebne zahteve za akumulacijske grelnike vode - Dopnilo A1**

Household and similar electrical appliances - Safety - Part 2-21: Particular requirements for storage water heaters

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-21: Besondere Anforderungen für Wassererwärmer (Warmwasserspeicher und Warmwasserboiler)

Appareils électrodomestiques et analogues - Sécurité - Partie 2-21: Règles particulières pour les chauffe-eau à accumulation

[SIST EN 60335-2-21:2022/A1:2022](https://standards.iteh.ai/catalog/standards/sist/811ee13b-4082-4886-90c7-3e1eb722bd12/sist-en-60335-2-21-2022-a1-2022)

Ta slovenski standard je istoveten z: **EN 60335-2-21:2021/A1:2021**

[2022-a1-2022](https://standards.iteh.ai/catalog/standards/sist/811ee13b-4082-4886-90c7-3e1eb722bd12/sist-en-60335-2-21-2022-a1-2022)

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**ICS:**

13.120	Varnost na domu	Domestic safety
91.140.65	Oprema za ogrevanje vode	Water heating equipment

**SIST EN 60335-2-21:2022/A1:2022**      **en**

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EUROPEAN STANDARD

EN 60335-2-21:2021/A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2021

ICS 13.120; 91.140.65

English Version

Household and similar electrical appliances - Safety - Part 2-21:  
Particular requirements for storage water heaters  
(IEC 60335-2-21:2012/A1:2018)

Appareils électrodomestiques et analogues - Sécurité -  
Partie 2-21: Règles particulières pour les chauffe-eau à  
accumulation  
(IEC 60335-2-21:2012/A1:2018)

Sicherheit elektrischer Geräte für den Hausgebrauch und  
ähnliche Zwecke - Teil 2-21: Besondere Anforderungen für  
Wassererwärmer (Warmwasserspeicher und  
Warmwasserboiler)  
(IEC 60335-2-21:2012/A1:2018)

This amendment A1 modifies the European Standard EN 60335-2-21:2021; it was approved by CENELEC on 2021-10-04. 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.

[SIST EN 60335-2-21:2022/A1:2022](https://standards.iteh.ai/SIST/EN/60335-2-21:2022/A1:2022)

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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 60335-2-21:2021/A1:2021 (E)****European foreword**

This document (EN 60335-2-21:2021/A1:2021) consists of the text of IEC 60335-2-21:2012/A1:2018 prepared by IEC/TC 61 “Safety of household and similar electrical appliances”.

The following dates is fixed:

- latest date by which this document has to be implemented at (dop) 2022-10-04 national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with this (dow) 2024-10-04 document have to be withdrawn

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.

This European Amendment A1 supplements or modifies the corresponding clauses of the standards below:

- EN 60335-1:2012+A11:2014+ A13:2017+A1:2019+A14:2019+A2:2019+A15:2021 (Part 1)
- EN 60335-2-21:2021(Part 2)

This document has been prepared under a Standardization Request given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZZA, which is an integral part of this document.

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.

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## 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 Where 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](http://www.cenelec.eu).

*The Annex ZC of part 1 is applicable, with the following addition:*

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60584-1	2013	Thermocouples – Part 1: EMF specifications and tolerances	EN 60584-1	2013

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## EN 60335-2-21:2021/A1:2021 (E)

Replace the Annex ZZA in Part 2 by the following:

## Annex ZZA (informative)

### Relationship between this European Standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European Standard has been prepared under a Commission's standardization request relating to harmonized standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

Compliance with this Part 2 when used together with the Part 1 provides one means of conformity with the safety objectives.

**Table ZZA.1 – Correspondence between this European Standard  
and Annex I of Directive 2014/35/EU [2014 OJ L96]**

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks/ Notes
1 a)	Clauses 4, 7	None
1 b)	Clauses 4, 7	None
1 c)	Clauses 4, 7	None
2 a)	Clauses 6, 7, 8, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	None
2 b)	Clauses 6, 7, 8, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	None
2 c)	Clauses 6, 7, 11, 15, 17, 19, 20, 21, 22, 24, 25, 30, 32	None
2 d)	Clauses 6, 7, 8, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	None
3 a)	Clauses 6, 7, 11, 17, 19, 20, 21, 22	None
3 b)	Clauses 7, 11, 15, 19, 22, 25, 32	None
3 c)	Clauses 6, 7, 10, 11, 14, 17, 19, 21, 22	None

**WARNING 1** — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

**WARNING 2** — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.



IEC 60335-2-21

Edition 6.0 2018-08

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

AMENDMENT 1  
AMENDEMENT 1

iTeh STANDARD

Household and similar electrical appliances – Safety –  
Part 2-21: Particular requirements for storage water heaters

(standards.iteh.ai)

Appareils électrodomestiques et analogues – Sécurité –  
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## FOREWORD

This amendment has been prepared by 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
61/5563/CDV	61/5650A/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 amendment and the base 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.

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.

<https://standards.iTech.ar/catalog/standards/sist/811ee13b-4682-4886-96c7-3e1eb722bdf2/sist-en-60335-2-21-2022-a1-2022>

## 2 Normative references

*Replace the existing text by the following:*

This clause of Part 1 is applicable except as follows:

*Addition:*

IEC 60584-1:2013, *Thermocouples – Part 1: EMF specifications and tolerances*

## 11 Heating

*Add the following new subclause:*

### 11.3 Addition:

*Where the external **accessible surfaces** are suitably flat and access permits, then the test probe of Figure 103 may be used to measure the temperature rises of external **accessible***



**surfaces** specified in Table 101. 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. The measurement is performed after a contact period of 30 s.

The probe may be held in place using a laboratory stand clamp or similar device. Any measuring instrument giving the same results as the probe may be used.

Add the following new subclause:

#### 11.8 Modification:

During the test, the temperature rises are monitored continuously and shall not exceed the values shown in Table 3 and Table 101.

Add, before Clause 12, the following new table:

**Table 101 – Maximum temperature rises of external accessible surfaces under normal operating conditions**

Surface <sup>a</sup>	Temperature rise K
Bare metal	42
Coated metal <sup>b</sup>	49
Glass and ceramic	56
Plastic and plastic coating > 0,4 mm <sup>c,d</sup>	62

<sup>a</sup> Temperature rises are not measured on:

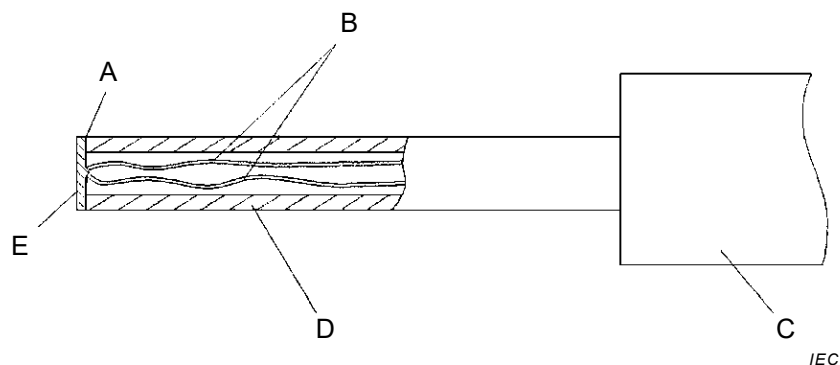
- tapping connections, pipes, hoses, plumbing fittings, pressure relief valves and sight gauges;
- appliances intended for installation on the roof;
- surfaces not accessible to the 75 mm diameter probe having a hemispherical end.

<sup>b</sup> Metal is considered coated when a coating, having a minimum thickness of 90 µm made by enamel or non-substantially plastic coating is used.

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

<sup>d</sup> When the thickness of the plastic coating does not exceed 0,4 mm, the temperature rise limits of the coated metal or of glass and ceramic material apply.

Add the following new Figure 103:



#### Key

- A adhesive
- B thermocouple wires 0,3 mm diameter to IEC 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 with a flat contact face

**Figure 103 – Probe for measuring surface temperatures**

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