
Gospodinjski in podobni električni aparati - Varnost - 2-27. del: Posebne zahteve za aparate za nego kože z ultravijoličnim in infrardečim sevanjem - Dopolnilo A11

Household and similar electrical appliances - Safety - Part 2-27: Particular requirements for appliances for skin exposure to ultraviolet and infrared radiation

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-27: Besondere Anforderungen für Hautbestrahlungsgeräte mit Ultraviolett- und Infrarotstrahlung

Appareils électrodomestiques et analogues - Sécurité - Partie 2-27: Règles particulières pour les appareils d'exposition de la peau aux rayonnements ultraviolets et infrarouges

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ICS:

13.120	Varnost na domu	Domestic safety
97.170	Oprema za nego telesa	Body care equipment

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN IEC 60335-2-27:2020
prA11

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ICS

English Version

Household and similar electrical appliances - Safety - Part 2-27: Particular requirements for appliances for skin exposure to ultraviolet and infrared radiation

Appareils électrodomestiques et analogues - Sécurité -
Partie 2-27: Règles particulières pour les appareils
d'exposition de la peau aux rayonnements ultraviolets et
infrarouges

Sicherheit elektrischer Geräte für den Hausgebrauch und
ähnliche Zwecke - Teil 2-27: Besondere Anforderungen für
Hautbestrahlungsgeräte mit Ultraviolett- und
Infrarotstrahlung

This draft amendment prA11, if approved, will modify the European Standard prEN IEC 60335-2-27:2020; it is submitted to CENELEC members for enquiry.
Deadline for CENELEC: 2021-02-12.

It has been drawn up by CLC/TC 61.

If this draft becomes an amendment, 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.

This draft amendment was established by CENELEC 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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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

European foreword

This document (EN IEC 60335-2-27:2020/prA11:2020) consists of the text IEC 60335-2-27 prepared by CLC/TC 61 "Safety of household and similar electrical appliances".

This document is currently submitted to CENELEC Enquiry.

The following dates are proposed:

- latest date by which the existence of this document has to be announced at national level (doa) dor + 6 months
- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) dor + 12 months
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) dor + 36 months (to be confirmed or modified when voting)

This amendment will supersede EN 60335-2-27:2013+A1:2020+A2:2020.

This amendment supplements or modifies the corresponding clauses of the standards below:

- EN 60335-1:2012+A11:2014+ A13:2017+A1:2019+A14:2019+A2:2019 (Part 1)
- EN IEC 60335-2-27:2020 (Part 2)

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Secretary Note: This standard shall be read in conjunction with EN IEC 60335-2-27:2020.(PR=71382)

NOTE: This document includes the following significant technical changes:

- a) Different definition of children
- b) Classification and maximum irradiance based on decisions of the European commission
- c) Modification of warnings based on the outcome of an European working group in 2007

prEN IEC 60335-2-27:2020/prA11:2020**Rational Issue manager:**

Most common modifications are based on the outcome of an CLC TC61 working group in 2007 following mandate M397 from 2006. These include classification system, maximum irradiance, additional or modified warnings.

The European classification system is based on the spectral output of the appliances, while the IEC classification divides appliances in household use and commercial use appliances.

In clause 22.111 an example to calculate XY code ranges is modified, since the maximum X-code in Europe is much lower than in the IEC standard mentioned. To reduce uncertainty to users of the standard the example is recalculated for suitable lamps in the European market.

A mistake in the IEC text in paragraph 32.101 is corrected and the wrong link to the calculation of the yearly dose is deleted.

The numbering system for European clauses, subclauses, notes, tables, figures and annexes that are additional to those in the IEC standard are prefixed with the letter “Z”.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive. For the relationship with EU Directives see informative Annex ZZA and ZZB which are an integral part of this document.

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

IEC 60335-2-23	NOTE	Harmonized as EN 60335-2-23.
IEC 60335-2-53	NOTE	Harmonized as EN 60335-2-53.
IEC 60335-2-113	NOTE	Harmonized as EN 60335-2-113.

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TEXT of A11 of EN IEC 60335-2-27

1 Modification to the Introduction

Add after the last paragraph:

This standard covers appliances used for intentional tanning. Irradiance limit values are not to be used as safety guidelines for non-intentional UV-exposure.

2 Modification to the Scope

Replace fourth paragraph except Note 102 and Note 103 with the following:

This standard deals with the reasonably foreseeable hazards presented by appliances that are encountered by all persons in and around the installation place. However, in general, it does not take into account:

- **children** playing with the appliance;
- the use of the appliance by **children**;

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

Add as a new paragraph:

Additional requirements for appliances with moving parts are given in Annex ZE.

3 Modification to clause 3, "Terms and definitions"

Addition:

3.Z101

area open to the public

area in which the general public including children can enter

NOTE Z1 Examples are dining areas in restaurants, coffee shops, canteens,

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4 Modification to clause 6, "Classification"

Replace 6.101 by:

6.Z101 Appliances shall be one of the following types with respect to the type of ultraviolet radiation:

- **UV type 1 appliance**;
- **UV type 2 appliance**;
- **UV type 3 appliance**;
- **UV type 4 appliance**.

Compliance is checked by inspection and by the relevant tests.

NOTE Z101 **UV type 1 appliances** and **UV type 2 appliances** are intended to be used in tanning salons, beauty parlours and similar premises, under supervision of appropriately trained persons.

UV type 3 appliances are suitable for household and similar use and may be used by unskilled persons. They are also suitable for use in tanning salons, beauty parlours and similar premises

UV type 4 appliances are only to be used following medical advice and only intended to be used in tanning salons, beauty parlours and similar premises, under supervision of appropriately trained persons, and not for household use

NOTE Z102 The definitions of UV type 1,2,3 and 4 are present in Annex BB

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5 Modification to clause 7, "Marking and instructions"

7.1 *Replace the first paragraph by:*

Appliances having **UV emitters** shall be marked with the appropriate UV type number in the following form:

UV type X

NOTE Z101 X is replaced by the appropriate number **present in Annex BB**.

Add the following sentence as the first sentence of the warning before Note 102.

Not to be used by persons under the age of 18 years.

Add after Note 102:

UV type 4 appliances shall be marked with the substance of the following:

WARNING: Only to be used following medical advice.

7.6 *Delete the sub-clause*

7.12

Replace the fifth bullet point by:

- persons having more than 16 moles (2 mm or more in diameter) on the body;

Add after the tenth bullet point:

- persons having a first-degree relative with a history of melanoma;

Replace after the thirteenth dashed item the following:

- recommended schedule of exposure specifying duration and intervals (based on the **UV emitter** characteristics, distances and skin sensitivity), see Annex DD and Annex ZA;

In the fourth paragraph of EN 60335-1 delete the words "children aged from 8 years and above and".

Addition:

If appliances are not suitable for use in **areas open to the public** the instructions shall state the substance of the following:

WARNING: This appliance shall not be installed in areas where general public including children have access.

7.14 *Delete the sub-clause*

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6 Modification to clause 20, "Stability and mechanical hazards"**20.2**

Add after the second dashed item of part 1 in the compliance criteria the following:

However, test probe 18 of EN 61032 is not applied for commercial UV appliances, IR appliances and VIS appliances not intended to be used in **areas open to public**

7 Modification to clause 22, "Construction"**22.55 Modification**

Replace the first sentence of the fourth paragraph of Part 1 with the following:

For appliances intended to be used in **areas open to the public**, the devices used to stop operational functions, if any, shall be distinguished from other manual devices by means of shape, or size, or surface texture, or position, etc.

Replace in the NOTE Z2 "start/stop" by "stop" (in two places).

22.111

Replace the Note by:

NOTE An example of the equivalency code range calculation is as follows.

If the equivalency code of the lamp fitted in the appliance during type testing is

100-R-25/2,7

the equivalency code range that must be marked on the appliance is calculated as follows:

lower value of X range: $0,75 \times 25 = 18,75$

lower value of Y range: $0,75 \times 2,7 = 2,03$

upper value of Y range: $1,25 \times 2,7 = 3,38$

X is to be rounded to the nearest integer, Y is to be rounded to the nearest first decimal.

The fluorescent UV lamp equivalency code range is then:

100-R-(19-25)/(2,0-3,4)

8 Modification to clause 30, "Resistance to heat and fire"**30.2 Add the following note:**

NOTE Z1 The combination of a lampholder and a fluorescent lamp used for skin exposure to ultraviolet and infrared radiation is not considered to be a luminaire. EN 60598-1 is not the standard to be used in this case.

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9 Modification to clause 32, "Radiation, toxicity and similar hazards"

32.101

Replace the first paragraph by :

Appliances shall not present a toxic or similar hazard. Appliances having **UV emitters** shall not emit radiation having a total **effective irradiance** exceeding 0,3 W/m² weighted according to the erythema action spectrum of Figure 103.

Appliances shall comply with the values specified in Table BB.1.

Delete the paragraph starting with 'The appliance suitable for household use'.

Delete the paragraph starting with 'The appliance suitable for commercial use'.

Delete the text in brackets (except for the maximum yearly dose) in the next paragraph.

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10 Modification to the Annexes

The annexes of part 1 are applicable with following modifications and additions:

Annex BB (normative)

Detailed classification of UV appliances

Replace Annex BB by the following:

This annex provides details of a classification of UV appliances based on amounts of radiation in the ranges 250 nm to 320 nm and 320 nm to 400 nm.

BB.1 Definitions

For the purposes of this annex, the following definitions apply.

BB.1.1

UV type 1 appliance

appliance having a **UV emitter** such that the biological effect is caused by radiation having wavelengths longer than 320 nm and characterized by a relatively high irradiance in the range 320 nm to 400 nm

BB.1.2

UV type 2 appliance

appliance having a **UV emitter** such that the biological effect is caused by radiation having wavelengths both shorter and longer than 320 nm and characterized by a relatively high irradiance in the range of 320 nm to 400 nm

BB.1.3

UV type 3 appliance

appliance having a **UV emitter** such that the biological effect is caused by radiation having wavelengths both shorter and longer than 320 nm and characterized by a limited irradiance over the whole UV radiation band

BB.1.4

UV type 4 appliance

appliance having a **UV emitter** such that the biological effect is mainly caused by radiation having wavelengths shorter than 320 nm

BB.2 Classification

UV appliances can be classified as one of the following types:

- **UV type 1 appliance;**
- **UV type 2 appliance;**
- **UV type 3 appliance;**
- **UV type 4 appliance.**

NOTE 101 **UV type 1 appliances** and **UV type 2 appliances** are intended to be used in tanning salons, beauty parlours and similar premises, under supervision of appropriately trained persons. They are not intended for household use.

UV type 3 appliances are suitable for household and similar use and may be used by unskilled persons. They are also suitable for use in tanning salons, beauty parlours and similar premises.

UV type 4 appliances are only to be used following medical advice and only intended to be used in tanning salons, beauty parlours and similar premises, under supervision of appropriately trained persons, and not for household use

BB.3 Effective irradiance

The **effective irradiance** for each type of UV appliance, weighted according to the erythema action spectrum of Figure 103, is given in Table BB.1.