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Responsible committee: CPL/61 Safety of household and similar electrical appliances

Interested committees:

Title: Draft BS IEC 60335-2-115 Household and Similar Electrical Appliances – Safety. Part 2-115: Particular requirements for beauty care appliances.

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

- i) has any issues related to 3rd party IPR, patent or copyright
- ii) affects other national standard(s)
- iii) requires additional national guidance or information

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Information on the co-operating organizations represented on the committees referenced above may be obtained from <https://standardsdevelopment.bsigroup.com/>.

Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



61/5881/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER:

IEC 60335-2-115 ED1

DATE OF CIRCULATION:

2019-07-05

CLOSING DATE FOR COMMENTS:

2019-08-30

SUPERSEDES DOCUMENTS:

61/5788/CD,61/5834A/CC

IEC TC 61 : SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES

SECRETARIAT:

United States of America

SECRETARY:

Ms Randi Myers

OF INTEREST TO THE FOLLOWING COMMITTEES:

TC 87

PROPOSED HORIZONTAL STANDARD:

☐

Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.

FUNCTIONS CONCERNED:

☐ EMC

☐ ENVIRONMENT

☐ QUALITY ASSURANCE

☒ SAFETY

This document is still under study and subject to change. It should not be used for reference purposes.

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

TITLE:

Household and Similar Electrical Appliances – Safety – Part 2-115: Particular requirements for beauty care appliances

NOTE FROM TC/SC OFFICERS:

This document is circulated according to the decisions taken at the meetings of TC 61 in Vladivostok – 61/5578/RM, Busan – see 61/5737/RM, and Bled - see 61/5848/RM.

Refer to 61/5485/NP and 61/5550/RVN in 61/5578/RM, item 9

Refer to 61/5698/CD and 61/5724A/CC in 61/5737/RM, item 34

Refer to 61/5788/CD and 61/5834A/CC in 61/5848/RM, item 26

The decision of the TC during its meeting in Bled was to proceed to a third CD for discussion in Shanghai in October 2019.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –**Part 2-115: Particular requirements for beauty care appliances****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 IEC technical committee 61: Safety of household and similar electrical appliances.

The text of this standard is based on the following documents:

FDIS	Report on voting
61/xxxx/FDIS	61/xxxx/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments. It was established on the basis of the fifth edition (2010) of that standard.

110 NOTE 1 When "Part 1" is mentioned in this standard, it refers to IEC 60335-1.

111 This part 2 supplements or modifies the corresponding clauses in IEC 60335-1, so as to
112 convert that publication into the IEC standard: Safety requirements for beauty care appliances.

113 When a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies
114 as far as is reasonable. When this standard states "addition", "modification" or "replacement",
115 the relevant text in Part 1 is to be adapted accordingly.

116 NOTE 2 The following numbering system is used:

- 117 – subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- 118 – unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including
119 those in a replaced clause or subclause;
- 120 – additional annexes are lettered AA, BB, etc.

121 NOTE 3 The following print types are used:

- 122 – requirements: in roman type;
- 123 – *test specifications: in italic type;*
- 124 – notes: in small roman type.

125 Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the
126 associated noun are also in bold.

127 The committee has decided that the contents of this publication will remain unchanged until
128 the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data
129 related to the specific publication. At this date, the publication will be

- 130 • reconfirmed,
- 131 • withdrawn,
- 132 • replaced by a revised edition, or
- 133 • amended.

134 NOTE 4 The attention of National Committees is drawn to the fact that equipment manufacturers and testing
135 organizations may need a transitional period following publication of a new, amended or revised IEC publication in
136 which to make products in accordance with the new requirements and to equip themselves for conducting new or
137 revised tests.

138 It is the recommendation of the committee that the content of the publication be adopted for implementation
139 nationally not earlier than 12 months or later than 36 months from the date of publication.

140

INTRODUCTION

It has been assumed in the drafting of this International Standard that the execution of its provisions is entrusted to appropriately qualified and experienced persons.

This standard recognizes the internationally accepted level of protection against hazards such as electrical, mechanical, thermal, fire and radiation of appliances when operated as in normal use taking into account the manufacturer's instructions. It also covers abnormal situations that can be expected in practice and takes into account the way in which electromagnetic phenomena can affect the safe operation of appliances.

This standard takes into account the requirements of IEC 60364 as far as possible so that there is compatibility with the wiring rules when the appliance is connected to the supply mains. However, national wiring rules may differ.

If an appliance within the scope of this standard also incorporates functions that are covered by another part 2 of IEC 60335, the relevant part 2 is applied to each function separately, as far as is reasonable. If applicable, the influence of one function on the other is taken into account.

NOTE 1 For example, if appliances within the scope of this Part 2 include an ion generator, then IEC 60335-2-65 is applicable as far as is reasonable.

When a part 2 standard does not include additional requirements to cover hazards dealt with in Part 1, Part 1 applies.

NOTE 2 This means that the technical committees responsible for the part 2 standards have determined that it is not necessary to specify particular requirements for the appliance in question over and above the general requirements.

This standard is a product family standard dealing with the safety of appliances and takes precedence over horizontal and generic standards covering the same subject.

NOTE 3 Horizontal and generic standards covering a hazard are not applicable since they have been taken into consideration when developing the general and particular requirements for the IEC 60335 series of standards. For example, in the case of temperature requirements for surfaces on many appliances, generic standards, such as ISO 13732-1 for hot surfaces, are not applicable in addition to Part 1 or part 2 standards.

An appliance that complies with the text of this standard will not necessarily be considered to comply with the safety principles of the standard if, when examined and tested, it is found to have other features that impair the level of safety covered by these requirements.

An appliance employing materials or having forms of construction differing from those detailed in the requirements of this standard may be examined and tested according to the intent of the requirements and, if found to be substantially equivalent, may be considered to comply with the standard.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-115: Particular requirements for beauty care appliances

1 Scope

This clause of Part 1 is replaced by the following.

This part of IEC 60335 deals with the safety of electric appliances for beauty care of persons and intended for household, commercial and similar purposes, their **rated voltage** being not more than 250 V.

NOTE 101 **Battery-operated appliances** and other d.c. supplied appliances are within the scope of this standard. Dual supply appliances, either mains-supplied or battery-operated, are regarded as **battery-operated appliances** when operated in the battery mode.

NOTE 102 Examples of appliances that are within the scope of this standard are

- Appliances with high frequency outputs including equipment for heat-producing effects on the skin;
- Appliances with medium frequency outputs including interferential outputs, for skin stimulation or muscle stimulation;
- Appliances with low frequency outputs (e.g. faradic currents) for application such as skin stimulation or muscle stimulation;
- Appliances using electro-magnetic fields (radio frequencies).
- Appliances with extra-low voltage DC. outputs(e.g. galvanic currents),such as electro-epilation(hair removal);
- Beauty care appliances with ultrasonic outputs;
- Appliances having vacuum-pressure functions;
- Beauty care appliances for melting wax;
- Appliances intended to produce surface cooling effect on the skin;
- Facial cleaning appliances for commercial use;
- Micro-needling appliances;
- Plasma pens.

NOTE 103 Appliances covered by this standard may incorporate steam-producing or spray-producing devices.

This standard deals with the common hazards presented by appliances that are encountered by all persons. However, in general, it does not take into account

- persons (including children) whose
 - physical, sensory or mental capabilities; or
 - lack of experience and knowledgeprevents them from using the appliance safely without supervision or instruction;
- children playing with the appliance.

NOTE 104 Attention is drawn to the fact that

- it is recognized that persons having very extensive and complex disabilities can have needs beyond the level addressed in this standard.
- 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 105 This standard does not apply to

- 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);

- 225 – shavers, hair clippers and similar appliances (IEC 60335-2-8);
- 226 – blankets, pads, clothing and similar flexible heating appliances (IEC 60335-2-17);
- 227 – appliances for skin or hair care such as facial saunas (IEC 60335-2-23)
- 228 – spray tanning appliances
- 229 – appliances for skin exposure to optical radiation (IEC 60335-2-27);
- 230 – sauna heating appliances and infrared cabins (IEC 60335-2-53);
- 231 – cosmetic and beauty care appliances incorporating lasers and intense light sources (IEC 60335-2-113)
- 232 – appliances intended for medical purposes (IEC 60601);
- 233 – **radio frequency appliances** without galvanic contact to the skin.

234 **2 Normative references**

235 This clause of Part 1 is applicable except as follows:

236 *Addition:*

237 IEC Guide 117:2010, *Electrotechnical equipment – Temperatures of touchable hot surfaces*

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

239 IEC 60601-2-5:2009, *Medical electrical equipment - Part 2-5: Particular requirements for the*
240 *basic safety and essential performance of ultrasonic physiotherapy equipment*

241 IEC 61689:2013, *Ultrasonics—Physiotherapy systems Field Specifications and methods of*
242 *measurement in the frequency range 0.5 MHz to 5 MHz*

243 IEC 62127-1, *Ultrasonics - Hydrophones - Part 1: Measurement and characterization of*
244 *medical ultrasonic fields up to 40 MHz*

245 ISO 7000:2004, *Graphical symbols for use on equipment –Index and synopsis*

246 ISO 7010:2011, *Graphical symbols – Safety colours and safety signs – Registered safety*
247 *signs*

248 ISO 14155:2011, *Clinical investigation of medical devices for human subjects – Good clinical*
249 *practice*

250 **3 Terms and definitions**

251 This clause of Part 1 is applicable except as follows.

252 **3.1 Definitions relating to physical characteristics**

253 **3.1.9 Replacement:**

254 **normal operation**

255 conditions under which the appliance is operated as in normal use in accordance with the
256 manufacturer's instructions

257 Appliances also producing vapour are operated in the normal position of use and filled with
258 liquid. Liquid is added, when necessary, to maintain the vapour output.

3.1.101**specific absorption rate (SAR)**

amount of radio frequency power absorbed by the tissue divided by the mass of the tissue (unit: W/kg)

3.1.102**local specific absorption rate (local SAR)**

specific absorption rate of cubical tissue with a mass of 10 g (unit: W/kg)

3.2 Definitions relating to means of connection**3.2.101****swivel connection**

means for connecting the **supply cord** so that the appliance can be rotated continuously without twisting the cord

3.5 Definitions relating to types of appliances**3.5.101****electrical stimulator**

appliance intended to stimulate skin or muscle by using current going through skin surface

3.5.102**pressurised appliance**

appliance in which vapour or liquid is produced at a pressure exceeding 50 kPa and in which the pressure does not drop to atmospheric pressure when the vapour or liquid is not supplied

3.5.103**radio frequency appliance**

appliance intended to produce and apply radiofrequency current, electric fields, magnetic fields, or electromagnetic fields to the human body

3.5.104**ultrasound appliance**

appliances intended to produce and apply ultrasound to the human body

3.5.105**plasma pen**

appliance intended to target the upper skin layer tissue by an electrical discharge without skin contact

3.5.106**micro-needling appliance**

appliance with an array of needles intended to penetrate the skin in a stamping motion

3.6 Definitions relating to parts of an appliance**3.6.101****applied part**

part of the appliance that in normal use necessarily comes into physical contact with the skin to perform its function

3.6.102**biased-off switch**

switch that automatically returns to the off position when its actuating member is released

4 General requirement

This clause of Part 1 is applicable.

5 General conditions for the tests

This clause of Part 1 is applicable except as follows.

5.2 Addition:

*The additional test of 25.14 for **hand-held appliances** is carried out on a separate appliance.*

5.10 Addition:

The manufacturer or responsible agent shall provide details of the load to be used for the tests of 10.101 and 10.102.

5.101 *Unless otherwise specified, beauty care appliances are tested as **motor-operated appliances**, except wax-melting appliances and appliances with a liquid heating function.*

5.102 *Where a test specification requires testing on artificial skin, the artificial skin shall mimic the target area in softness, specific heat capacity, electrical resistivity or ultrasound properties of human skin relevant to where the appliance will be applied.*

For ultrasound appliances, the artificial skin used shall be based on Table BB.1 in IEC 60601-2-5. For other appliances 10 mm thick agar shall be used for the artificial skin.

6 Classification

This clause of Part 1 is applicable except as follows.

6.1 Modification:

Hand-held appliances and appliances that are washable according to the instructions shall be **class II** or **class III**.

6.2 Modification:

Appliances that are washable according to the instructions shall be at least IPX7. However, parts that are intended to be fixed, and transformers with pins for insertion into socket-outlets, shall be at least IPX4.

This classification does not apply to parts of **class III construction**.

6.101 Appliances shall be one of the following types:

- appliances suitable for household use;
- appliances for use in beauty parlours only.

NOTE 1 Appliances for household use may also be used in beauty parlours and similar premises.

Compliance is checked by inspection and by the relevant tests.