

# INTERNATIONAL STANDARD



**Household and similar electrical appliances – Safety –  
Part 2-8: Particular requirements for shavers, hair clippers and similar  
appliances**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

#### Part 2-8: Particular requirements for shavers, hair clippers and similar appliances

#### FOREWORD

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**This commented version (CMV) of the official standard IEC 60335-2-8:2022 edition 7.0 allows the user to identify the changes made to the previous IEC 60335-2-8:2012+AMD1:2015+AMD2:2018 CSV edition 6.2. Furthermore, comments from IEC TC 61 experts are provided to explain the reasons of the most relevant changes, or to clarify any part of the content.**

**A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text. Experts' comments are identified by a blue-background number. Mouse over a number to display a pop-up note with the comment.**

**This publication contains the CMV and the official standard. The full list of comments is available at the end of the CMV.**

IEC 60335-2-8 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances. It is an International Standard.

This seventh edition cancels and replaces the sixth edition published in 2012, Amendment 1:2015 and Amendment 2:2018. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) alignment with IEC 60335-1:2020;
- b) conversion of some notes to normative text (Clause 1, 3.1.9, 19.10, 20.1, 22.103);
- c) clarification of holding the appliance with negligible effect on normal operation (3.1.9);
- d) addition of requirements for detachable power supply parts (6.2, 21.102, 21.103, 24.2);
- e) allowance to waive instructions relating to hot blades on animal shearers and commercial animal clippers based on temperatures measured in Clause 11 (7.12);
- f) clarification and consolidation of requirements in 22.26 and 22.36;
- g) clarification of applicability of 30.2.2 and 30.2.3;
- h) clarification of requirements for interconnection cords for class III constructions.

The text of this International Standard is based on the following documents:

Draft	Report on voting
61/6674/FDIS	61/6750/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

A list of all parts of the IEC 60335 series, under the general title: *Household and similar electrical appliances – Safety*, can be found on the IEC website.

This part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments unless that edition precludes it; in that case, the latest edition that does not preclude it is used. It was established on the basis of the sixth edition (2020) of that standard.

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

This part 2 supplements or modifies the corresponding clauses in IEC 60335-1, so as to convert that publication into the IEC standard: Particular requirements for shavers, hair clippers and similar appliances.

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 2 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 3 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.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under [webstore.iec.ch](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

NOTE 4 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.

The following differences exist in the countries indicated below.

- 6.1: Class 0 appliances are allowed provided that their rated voltage does not exceed 150 V (Japan).
- 6.1, 22.36: Class 0 appliances are not allowed (Australia, New Zealand).

**IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.**



## 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.

Guidance documents concerning the application of the safety requirements for appliances can be accessed via TC 61 supporting documents on the IEC website

<https://www.iec.ch/tc61/supportingdocuments>

This information is given for the convenience of users of this International Standard and does not constitute a replacement for the normative text in this standard.

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~~ can 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.

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

NOTE 1 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 2 Horizontal ~~and generic standards~~ publications, basic safety publications and group safety publications 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.~~ **1**

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.

NOTE 3 Standards dealing with non-safety aspects of household appliances are:

- IEC standards published by TC 59 concerning methods of measuring performance;
- CISPR 11, CISPR 14-1 and relevant IEC 61000-3 series standards concerning electromagnetic emissions;
- CISPR 14-2 concerning electromagnetic immunity;
- IEC standards published by TC 111 concerning environmental matters. **2**

## HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

### Part 2-8: Particular requirements for shavers, hair clippers and similar appliances

#### 1 Scope

This clause of Part 1 is replaced by the following.

~~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.~~

This part of 60335 deals with the safety of electric shavers, hair clippers, epilators, appliances used for manicure and pedicure and similar appliances intended for household and similar purposes, their **rated voltage** being not more than 250 V, including direct current (DC) supplied appliances and **battery-operated appliances**. **3**

~~NOTE 101—Examples of similar appliances are epilators and those appliances used for manicure and pedicure.~~

Appliances not intended for normal household use, but which nevertheless ~~may be~~ possibly pose a source of danger to the public, such as appliances intended to be used by laymen in shops and on farms, are within the scope of this standard.

~~NOTE 102—Examples of such appliances are animal clippers, animal shearers and appliances for hairdressers.~~

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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 knowledgeprevents them from using the appliance safely without supervision or instruction;
- children playing with the appliance.

~~NOTE 103—Attention is drawn to the fact that~~

- for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements ~~may~~ can be necessary;
- in many countries additional requirements are specified by national health authorities, national authorities responsible for the protection of labour and similar authorities.

~~NOTE 104—This standard does not apply to~~

- 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);
- massage appliances (IEC 60335-2-32);
- beauty care appliances incorporating lasers and intense light sources (IEC 60335-2-113);
- skin beauty care appliances (IEC 60335-2-115);

– appliances for medical purposes (IEC 60601).

## 2 Normative references

This clause of Part 1 is applicable.

## 3 Terms and definitions

This clause of Part 1 is applicable except as follows.

### 3.1 Definitions relating to physical characteristics

#### 3.1.9 ~~Replacement~~ Addition: 4 normal operation

operation of the appliance under the following conditions:

The appliance is held by a clamp or other appropriate means so as to have negligible effect on blade movement, temperature and load 5. The appliance is held with its major axis and the major axis of the cutting head or other accessory positioned in a horizontal plane and operated without applying a load.

Appliances having adjustable shearing or clipping heads are operated with the blades adjusted so that the power input is 0,8 times **rated power input**, or 1,2 times the power input obtained after removing any **detachable parts** that could influence the load, whichever is the more unfavourable. No further adjustments are made.

~~NOTE 101—The clamp is selected so that there is negligible effect on the heat transfer from the appliance.~~

Note 1 to entry: It can be necessary to conduct a test under each loading condition to determine the more unfavourable condition.

### 3.5 Definitions relating to types of appliances

#### 3.5.101 animal shearer

appliance for commercial use for shearing the fleece of an animal such as a sheep

#### 3.5.102 animal clipper

appliance for commercial use in parlours or for household use for trimming the hair of an animal such as a dog

#### 3.5.103 washable shaver

shaver, the hand-held part of which can be cleaned under water

#### 3.5.104 wet shaver

shaver, the hand-held part of which ~~may~~ can be used in a bath or shower

#### 3.5.105 washable clipper

clipper, the hand-held part of which can be cleaned under water

#### 3.5.106 wet clipper

clipper, the hand-held part of which ~~may~~ can be used in a bath or shower

### 3.5.107

#### **washable epilator**

epilator, the hand-held part of which can be cleaned under water

### 3.5.108

#### **wet epilator**

epilator, the hand-held part of which ~~may~~ can be used in a bath or shower

## 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.

### 5.8.2 Addition:

*If an appliance is marked for use at two different **rated voltages**, and the instructions indicate that it is suitable for use at two different ranges of voltages, the appliance is assumed to have two **rated voltage ranges**.*

## 6 Classification

This clause of Part 1 is applicable except as follows.

### 6.1 Modification:

**Animal shearers** shall be **class I**, **class II** or **class III**.<sup>22</sup>

**Washable shavers, wet shavers, washable clippers, wet clippers, washable epilators and wet epilators** shall be **class II** or **class III**.

Other appliances having a **rated voltage** not exceeding 150 V shall be of **class 0**, **class I**, **class II** or **class III**.

Other appliances shall be **class II** or **class III**.

### 6.2 Addition:

**Washable shavers, wet shavers, washable clippers, wet clippers, washable epilators and wet epilators** shall be at least IPX7. However, parts that are intended to be fixed and ~~transformers~~ **detachable power supply parts** with pins for insertion into socket outlets shall be at least IPX4. This classification does not apply to parts of **class III construction**.

## 7 Marking and instructions

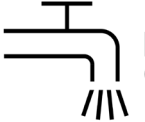

This clause of Part 1 is applicable except as follows.

### 7.1 Addition:

Hand-held parts of **washable shavers, washable clippers, and washable epilators** shall be marked with symbol IEC 60417-5574 (2002-10).

Hand-held parts of **wet shavers**, **wet clippers**, and **wet epilators** shall be marked with symbol IEC 60417-5582 (2002-10).

#### 7.6 Addition:

	[symbol IEC 60417-5574 (2002-10)]	suitable for cleaning under an open water tap
	[symbol IEC 60417-5582 (2002-10)]	suitable for use in a bath or shower

#### 7.12 Addition:

The instructions for **animal clippers** shall state that the appliance is intended for trimming purposes only.

If **animal clippers** and hair clippers are not intended for commercial use, the instructions shall state that they are for household use only, ~~this shall be stated.~~ **6**

If the temperature rise of the cutting blades exceeds the limit specified in Table 3 for handles held for short periods only, the instructions for **animal clippers** for commercial use and **animal shearers** shall include the substance of the following: **7**

WARNING: Cutting blades ~~may~~ can become hot after prolonged use.

If symbol IEC 60417-5574 (2002-10) or symbol IEC 60417-5582 (2002-10) is used, its meaning shall be explained.

The instructions for appliances, other than **washable shavers**, **wet shavers**, **washable clippers**, **wet clippers**, **washable epilators** or **wet epilators** shall include the substance of the following.

WARNING: Keep the appliance dry.

The instructions for **washable shavers**, **washable clippers**, and **washable epilators** with **detachable interconnection cords** shall include the substance of the following:

WARNING: Detach the hand-held part from the supply cord before cleaning it in water.

##### 7.12.1 Addition:

The instructions for **washable shavers**, **wet shavers**, **washable clippers**, **wet clippers**, **washable epilators** and **wet epilators**, other than those classified IPX7, shall state that the parts that have to be fixed must be installed so they cannot fall into water.

#### 7.14 Addition:

The height of symbol IEC 60417-5574 (2002-10) and symbol IEC 60417-5582 (2002-10) shall be at least 5 mm.

## 8 Protection against access to live parts

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

### 8.1.1 Modification: 8

Test probe 18 of IEC 61032 is not applied to:

- **animal clippers** for commercial use;
- **animal shearers**; and
- **hair clippers** for commercial use.

## 9 Starting of motor-operated appliances

This clause of Part 1 is not applicable.

## 10 Power input and current

This clause of Part 1 is applicable.

## 11 Heating

This clause of Part 1 is applicable except as follows.

### 11.7 ~~Replacement~~ Modification:

Appliances intended for household use only are operated continuously for 10 min.

**Animal shearers** are operated until steady conditions are established.

**Animal clippers** and other appliances are operated for 10 min followed by a rest period of 10 min. This cycle of operation is repeated until steady conditions are established.

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<https://standards.iteh.ai/> For appliances incorporating **integral batteries** or **separable batteries** not disconnected from the appliance for charging purposes: 9

- the **battery** that has been **fully discharged** is charged while the appliance is operated as specified for 1 h or the time specified, whichever comes first, if allowed by the construction of the appliance;
- the **battery** that has been **fully discharged** is charged, for a duration of 24 h or until it is **fully charged** whichever is shorter, without the **battery-operated appliance** performing its intended function.

### 11.8 Addition:

The temperature rise of parts that are in contact with skin in normal use, or are held in the hand, shall not exceed the limits specified for handles which are continuously held in normal use. The temperature rise of parts of hair clippers or trimmers that are in contact with hair in normal use, and ~~may~~ can contact the skin for short periods, shall not exceed the limits specified for handles which in normal use are held for short periods only. The temperature rise limit of cutting blades of animal clippers for commercial use and **animal shearers** that ~~may~~ can come in contact with the animal skin or hair in normal use is 50 K.

## 12 ~~Void~~ Charging of metal-ion batteries 10

This clause of Part 1 is applicable.