IEC 60335-2-118

Edition 1.0 2020-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Household and similar electrical appliances – Safety –
Part 2-118: Particular requirements for professional ice-cream makers

Appareils électrodomestiques et analogues – Sécurité –
Partie 2-118: Exigences particulières pour les fabriques de crème glacée à usage professionnel

IEC 60335-2-118:2020-03(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

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FOREWORD

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International Standard IEC 60335-2-118 has been prepared by subcommittee 61C: Safety of refrigeration appliances for household and commercial use, of IEC technical committee 61: Safety of household and similar electrical appliances.

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

CDV	Report on voting
61C/798/CDV	61C/823A/RVC

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

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

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. It was established on the basis of the fifth edition (2010) 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: Safety requirements for professional ice-cream makers.

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 "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.

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.

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 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 2-118: Particular requirements for professional ice-cream makers

1 Scope

This clause of Part 1 is replaced by the following.

This part of IEC 60335 deals with the safety of appliances for making ice cream and artisan gelato.

Appliances taken into account are those intended for commercial use and similar appliances not intended for normal household use but which may nevertheless be a source of danger to the public, such as appliances intended to be used by laymen in shops, stores, by artisans or on farms, which rated voltage is not more than 250 V for single-phase appliances and 480 V for other appliances.

Appliances covered by this standard are provided with a refrigerant condensing unit which is usually incorporated, but for some appliances may be remote.

This standard also applies to following types of appliances:

- mixers to make ice cream and similar pastry products in which, for the preparation of the product, an heating process is made within the appliance before the cooling process;
- appliances for storing whipping cream mix in a refrigerated tank and for whipping the cream for the delivery process.

NOTE 101 Attention is drawn to the fact that:

– for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements can 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.

This standard does not apply to:

– appliances with a refrigerating system operating with flammable refrigerant;

– ice cream appliances for household use (IEC 60335-2-24);

– 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).

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60335-2-34:2012, *Household and similar electrical appliances – Safety – Part 2-34: Particular requirements for motor-compressors*
IEC 60335-2-34:2012/AMD1:2015
IEC 60335-2-34:2012/AMD2:2016

IEC 60598-1:2014, *Luminaires – Part 1: General requirements and tests*
IEC 60598-1:2014/AMD1:2017

IEC 60947-5-1, *Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices*

IEC 61770, *Electric appliances connected to the water mains – Avoidance of backsiphonage and failure of hose-sets*

ISO 817:2014, *Refrigerants – Designation and safety classification*

3 Terms and definitions

This clause of Part 1 is applicable except as follows.

3.1.9 *Addition:*

3.1.9.101
normal operation for ice cream making appliances
ice cream making appliances operated under the following conditions:

The appliance uses the maximum quantity of the mixture of ingredients indicated in the instructions which gives the most unfavourable results, the mixture being at an initial temperature of 23 °C ± 2 °C.

Appliances are operated the time necessary to reach steady state conditions.

For appliances connected to a water supply, the water other than cooling water, is at a temperature of 15 °C ± 2 °C and at and the most unfavourable pressure specified in the instructions. The cooling water is at the temperature specified in 5.7.

For appliances with a separate **refrigerant unit**, the **refrigerant unit** is connected to the cabinet in accordance with the manufacturer's instructions.

3.1.9.102
normal operation for pasteurising ice cream making appliances
pasteurising ice cream making appliances operated under the following conditions:

Appliances are operated at ambient temperature as indicated in 5.7.

The appliance is filled using the maximum quantity of the mixture of ingredients indicated in the instructions which gives the most unfavourable results, the mixture being at an initial temperature of 23 °C ± 2 °C.

The appliance shall be operated for the time necessary for the mix to reach the maximum pasteurisation temperature and then, for the cooling process, for the number of cycles needed to reach steady state conditions.

3.1.9.103
normal operation for cream whipping appliances
cream whipping appliances operated under the following conditions:

Appliances are operated at an ambient temperature as indicated in 5.7.

The appliance is filled with liquid cream being kept at preservation temperature of 4 °C ± 1 °C in the maximum quantity prescribed by the instructions and shall be operated the time necessary to reach steady state conditions.

The appliance is operated in continuous or cyclic mode, following the instructions for user.

3.101
compression-type appliance
appliance in which refrigeration is effected by the vaporisation at low pressure in a heat exchanger (**evaporator**) of a liquid refrigerant, the vapour thus formed being restored to the liquid state by mechanical compression at a higher pressure and subsequent cooling in another heat exchanger (**condenser**)

3.102
condenser
heat exchanger in which, after compression, vaporised refrigerant is liquefied by rejecting heat to an external cooling medium