IEC 60335-2-118

Edition 2.0 2025-04
EXTENDED VERSION

INTERNATIONAL STANDARD

This full version of IEC 60335-2-118:2025 includes the content of the references made to IEC 60335-1:2020

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

INTERNATIONAL
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COMMISSION

ICS 97.040.99; 13.120

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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IEC 60335-1
Edition 6.0 2020-09

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 1: General requirements

INTERPRETATION SHEET 1

This interpretation sheet has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

The text of this Interpretation Sheet is based on the following documents:

Draft	Report on voting
61/5999/DISH	61/6009/RVDISH

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

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INTRODUCTION

Edition 6 of IEC 60335-1:2020 defines and introduces requirements for a detachable power supply part of an appliance. In the document, 24.2 prohibits the use of a power supply in a flexible cord.

QUESTION:

Does Subclause 24.2 prohibit the use of a detachable power supply part?

ANSWER

No, a "detachable power supply part" is a defined term and is not captured by the term "power supply" as used in Subclause 24.2.

NOTE A detachable power supply part is captured by the defined term when the output of the power supply part is detachable from the class III construction part of the appliance at:

– the power supply part, or

– the class III construction part of the appliance.

However, the supply cord (if any) does not have to be detachable from the detachable power supply part.

IEC 60335-1:2020-09/ISH1:2021-11(en)

ICS 13.120; 97.030

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

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

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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3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
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8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at https://patents.iec.ch. IEC shall not be held responsible for identifying any or all such patent rights.

This extended version (EXV) of the official IEC Standard provides the user with the full content of the Standard.

IEC 60335-2-118:2025 EXV includes the content of IEC 60335-2-118:2025, and the references made to IEC 60335-1:2020.

The specific content of IEC 60335-2-118:2025 is displayed on a blue background.

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. It is an International Standard.

This second edition cancels and replaces the first edition published in 2020. This edition constitutes a technical revision.

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

a) the text has been aligned with IEC 60335-1:2020;

b) scope has been revised (Clause 1);

c) requirements for appliances employing R-744 system have been added (7.1, 7.12.1, 22.7, 22.111);

d) additional requirements for appliances employing flammable refrigerant have been added (7.1, 7.6, 7.12, 7.15, 21.105, 22.110, 22.112, 22.113, 22.114, 22.115, 22.116, 22.117, 22.118, 22.119, 22.120, 22.121, 22.122, 22.123, Annex CC);

e) definition of hermetically sealed system has been revised (3.6.113);

f) reference to flammable refrigerant has been deleted (22.7);

g) new subclauses have been added (22.40, 22.49, 22.51);

h) compatibility tests for winding insulation of motor-compressors used with different types of refrigerants and oils have been introduced (22.9);

i) Annex AA has been modified to cover motors that are supplied at a voltage that is different from the rated voltage of the appliance;

j) Annex BB has been updated to align with the latest edition of IEC 60079-15;

k) text in 3.1.9.101, 3.1.9.102 and 3.1.9.103 has been cancelled and the text copied in 5.102;

l) new informative tightness routine test has been added (Annex A).

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

Draft	Report on voting
61C/928/FDIS	61C/932/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. The main document types developed by IEC are described in greater detail at www.iec.ch/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 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION to IEC 60335-1:2020

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 –

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 differ.

If the functions of an appliance are covered by different parts 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.

Throughout this publication, when "part 2" is mentioned, it refers to the relevant part of IEC 60335.

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 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.

Individual countries may wish to consider the application of this standard, as far as is reasonable, to appliances not mentioned in a part 2, and to appliances designed on new principles. In this case, consideration should be given to defining normal operation, specifying the classification of the appliance according to Clause 6 and specifying whether the appliance is operated attended or unattended. Consideration should also be given to particular categories of likely users and to related specific risks such as access to live parts, hot surfaces or hazardous moving parts.

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

INTRODUCTION to IEC 60335-2-118:2025

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 and SC 61C supporting documents on the IEC websites.

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

https://www.iec.ch/sc61c/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 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 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.

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

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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 part of IEC 60335 deals with the safety of appliances for making ice cream and artisan gelato exclusively operated by professional users.

Ice cream makers intended for professional use are employed in commercial environments, such as restaurants, hotels, supermarkets, shops, as well as in preparation areas of bars, bakeries, ice cream shops, institutional catering, and other similar professional settings.

Appliances taken into account are those intended for commercial use and similar appliances not intended for normal household use but which can 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 can be remote.

As far as is practicable, this standard deals with the common hazards presented by these types of appliances including those that use **flammable refrigerants** and appliances employing R-744 refrigerant.

This standard is not applicable to appliances with a mass of **flammable refrigerant** exceeding the limits specified in 22.112 or to appliances with that use refrigerants with a toxicity classification of B according to ISO 817.

It does not cover those features of construction and operation of refrigerating appliances that are dealt with in ISO standards.

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, 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;
– freezers designed to produce soft ice cream and dispense it directly into containers;
– machines for soft-serve ice cream;
– batch dispensing freezers.

Attention is drawn to the fact that:

– countries can have additional requirements for appliances incorporating pressure vessels;
– 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;
– for appliances or parts of appliances intended to be used outdoors, additional requirements can be necessary.

This standard does not apply to:

– split systems having a **refrigerant charge** of **flammable refrigerant** exceeding 150 g in any **refrigerating circuit**;
– 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

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.

IEC 60034-1, *Rotating electrical machines – Part 1: Rating and performance*

IEC 60061-1, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 1: Lamp caps*

IEC 60065:2014, *Audio, video and similar electronic apparatus – Safety requirements*

IEC 60068-2-2, *Environmental testing – Part 2-2: Tests – Test B: Dry heat*

IEC 60068-2-31, *Environmental testing – Part 2-31: Tests – Test Ec: Rough handling shocks, primarily for equipment-type specimens*

IEC 60068-2-75, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60068-2-78, *Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state*

IEC 60079 (all parts), *Explosive atmospheres*

IEC 60079-1:2014, *Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures "d"*

IEC 60079-7:2015, *Explosive atmospheres – Part 7: Equipment protection by increased safety "e"*

IEC 60079-15:2017, *Explosive atmospheres – Part 15: Equipment protection by type of protection "n"*

IEC 60079-29-1:2016, *Explosive atmospheres – Part 29-1: Gas detectors – Performance requirements of detectors for flammable gases*
IEC 60079-29-1:2016/AMD1:2020

IEC TR 60083, *Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC*

IEC 60085:2007, *Electrical insulation – Thermal evaluation and designation*

IEC 60112:2003, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*
IEC 60112:2003/AMD1:2009[1]

IEC 60127 (all parts), *Miniature fuses*

IEC 60227 (all parts), *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V*

IEC 60227-5:2011, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 5: Flexible cables (cords)*

IEC 60238, *Edison screw lampholders*

IEC 60245 (all parts), *Rubber insulated cables – Rated voltages up to and including 450/750 V*

IEC 60252-1:2010, *AC motor capacitors – Part 1: General – Performance, testing and rating – Safety requirements – Guidance for installation and operation*
IEC 60252-1:2010/AMD1:2013[2]

IEC 60309-2, *Plugs, socket-outlets and couplers for industrial purposes – Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories*

IEC 60320 (all parts), *Appliance couplers for household and similar general purposes*

IEC 60320-1, *Appliance couplers for household and similar general purposes – Part 1: General requirements*

IEC 60320-2-3, *Appliance couplers for household and similar general purposes – Part 2-3: Appliance couplers with a degree of protection higher than IPX0*

IEC 60320-3, *Appliance couplers for household and similar general purposes – Part 3: Standard sheets and gauges*

IEC 60335-2-34:2024, *Household and similar electrical appliances – Safety – Part 2-34: Particular requirements for motor-compressors*

IEC 60335-2-40:2024, *Household and similar electrical appliances – Safety – Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers*

IEC 60384-14:2013, *Fixed capacitors for use in electronic equipment – Part 14: Sectional specification – Fixed capacitors for electromagnetic interference suppression and connection to the supply mains*
IEC 60384-14:2013/AMD1:2016[3]

IEC 60417, *Graphical symbols for use on equipment*

IEC 60445:2017, *Basic and safety principles for man-machine interface, marking and identification – Identification of equipment terminals, conductor terminations and conductors*

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1 There exists a consolidated edition 4.1:2009 that includes edition 4 and its Amendment 1.

2 There exists a consolidated edition 2.1:2013 that includes edition 2 and its Amendment 1.

3 There exists a consolidated edition 4.1:2016 that includes edition 4 and its Amendment 1.

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*
IEC 60529:1989/AMD1:1999
IEC 60529:1989/AMD2:2013[4]

IEC 60598-1:2020, *Luminaires – Part 1: General requirements and tests*

IEC 60603-11, *Connectors for frequencies below 3 MHz for use with printed boards – Part 11: Detail specification for concentric connectors (dimensions for free connectors and fixed connectors)*

IEC 60664-1:2007, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 60664-3:2016, *Insulation coordination for equipment within low-voltage systems – Part 3: Use of coating, potting or moulding for protection against pollution*

IEC 60664-4:2005, *Insulation coordination for equipment within low-voltage systems – Part 4: Consideration of high-frequency voltage stress*

IEC 60691, *Thermal-links – Requirements and application guide*

IEC 60695-2-11:2014, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products (GWEPT)*

IEC 60695-2-12, *Fire hazard testing – Part 2-12: Glowing/hot-wire based test methods – Glow-wire flammability index (GWFI) test method for materials*

IEC 60695-2-13, *Fire hazard testing – Part 2-13: Glowing/hot-wire based test methods – Glow-wire ignition temperature (GWIT) test method for materials*

IEC 60695-10-2, *Fire hazard testing – Part 10-2: Abnormal heat – Ball pressure test*

IEC 60695-11-5:2016, *Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance*

IEC 60695-11-10, *Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods*

IEC 60730 (all parts), *Automatic electrical controls*

IEC 60730-1:2013, *Automatic electrical controls – Part 1: General requirements*
IEC 60730-1:2013/AMD1:2015[5]

IEC 60730-2-6:2015, *Automatic electrical controls – Part 2-6: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements*
IEC 60730-2-6:2015/AMD1:2019

IEC 60730-2-8:2018, *Automatic electrical controls – Part 2-8: Particular requirements for electrically operated water valves, including mechanical requirements*

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4 There exists a consolidated edition 2.2:2013 that includes edition 2 and its Amendment 1 and Amendment 2.

5 There exists a consolidated edition 5.1:2015 that includes edition 5 and its Amendment 1.

IEC 60730-2-9:2015, *Automatic electrical controls – Part 2-9: Particular requirements for temperature sensing controls*
IEC 60730-2-9:2015/AMD1:2018[6]

IEC 60730-2-10, *Automatic electrical controls for household and similar use – Part 2-10: Particular requirements for motor-starting relays*

IEC 60738-1, *Thermistors – Directly heated positive temperature coefficient – Part 1: Generic specification*

IEC 60799, *Electrical accessories – Cord sets and interconnection cord sets*

IEC 60851-4, *Winding wires – Test methods – Part 4: Chemical properties*

IEC 60906-1, *IEC system of plugs and socket-outlets for household and similar purposes – Part 1: Plugs and socket-outlets 16 A 250 V a.c.*

IEC 60934, *Circuit-breakers for equipment (CBE)*

IEC 60947-5-1:2024, *Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices*

IEC 60990:2016, *Methods of measurement of touch current and protective conductor current*

IEC 60999-1:1999, *Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units – Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm^2 up to 35 mm^2 (included)*

IEC 61000-4-2, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61000-4-3, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*

IEC 61000-4-4, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test*

IEC 61000-4-5, *Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test*

IEC 61000-4-6, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 61000-4-11:2020, *Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current up to 16 A per phase*

IEC 61000-4-13:2002, *Electromagnetic compatibility (EMC) – Part 4-13: Testing and measurement techniques – Harmonics and interharmonics including mains signalling at a.c. power port, low frequency immunity tests*

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6 There exists a consolidated edition 4.1:2018 that includes edition 4 and its Amendment 1.

IEC 61000-4-13:2002/AMD1:2009
IEC 61000-4-13:2002/AMD2:2015[7]

IEC 61000-4-34:2005, *Electromagnetic compatibility (EMC) – Part 4-34: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current more than 16 A per phase*
IEC 61000-4-34:2005/AMD1:2009[8]

IEC 61032:1997, *Protection of persons and equipment by enclosures – Probes for verification*

IEC 61058-1:2016, *Switches for appliances – Part 1: General requirements*

IEC 61058-1-1:2016, *Switches for appliances – Part 1-1: Requirements for mechanical switches*

IEC 61058-1-2:2016, *Switches for appliances – Part 1-2: Requirements for electronic switches*

IEC 61180, *High-voltage test techniques for low-voltage equipment – Definitions, test and procedure requirements, test equipment*

IEC 61210, *Connecting devices – Flat quick-connect terminations for electrical copper conductors – Safety requirements*

IEC 61558-1:2017, *Safety of transformers, reactors, power supply units and combinations thereof – Part 1: General requirements and tests*

IEC 61558-2-6:2009, *Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V – Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers*

IEC 61558-2-16:2009, *Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V – Part 2-16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units*
IEC 61558-2-16:2009/AMD1:2013[9]

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

IEC 62133-1:2017, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications – Part 1: Nickel systems*

IEC 62133-2:2017, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications – Part 2: Lithium systems*

IEC 62151, *Safety of equipment electrically connected to a telecommunication network*

IEC 62471:2006, *Photobiological safety of lamps and lamp systems*

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7 There exists a consolidated edition 1.2:2015 that includes edition 1 and its Amendment 1 and Amendment 2.

8 There exists a consolidated edition 1.1:2009 that includes edition 1 and its Amendment 1.

9 There exists a consolidated edition 1.1:2013 that includes edition 1 and its Amendment 1.

IEC 62477-1, *Safety requirements for power electronic converter systems and equipment – Part 1: General*

IEC 62821 (all parts), *Electric cables – Halogen-free, low smoke, thermoplastic insulated and sheathed cables of rated voltages up to and including 450/750 V*

ISO 178, *Plastics – Determination of flexural properties*

ISO 179-1, *Plastics – Determination of Charpy impact properties – Part 1: Non-instrumented impact test*

ISO 180, *Plastics – Determination of Izod impact strength*

ISO 527 (all parts), *Plastics – Determination of tensile properties*

ISO 817, *Refrigerants – Designation and safety classification*

ISO 1463, *Metallic and oxide coatings – Measurement of coating thickness – Microscopical method*

ISO 2178, *Non-magnetic coatings on magnetic substrates – Measurement of coating thickness – Magnetic method*

ISO 2768-1, *General tolerances – Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

ISO 4126-2:2018, *Safety devices for protection against excessive pressure – Part 2: Bursting disc safety devices*

ISO 4892-1:2016, *Plastics – Methods of exposure to laboratory light sources – Part 1: General guidance*

ISO 4892-2: 2013, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps*

ISO 5149-1, *Refrigerating systems and heat pumps – Safety and environmental requirements – Part 1: Definitions, classification and selection criteria*

ISO 7000, *Graphical symbols for use on equipment – Registered symbols*

ISO 7010:2019, *Graphical symbols – Safety colours and safety signs – Registered safety signs*

ISO 8256, *Plastics – Determination of tensile-impact strength*

ISO 9772, *Cellular plastics – Determination of horizontal burning characteristics of small specimens subjected to a small flame*

ISO 9773, *Plastics – Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source*

ISO 14903, *Refrigerating systems and heat pumps – Qualification of tightness of components and joints*

IEC 60335-2-118

Edition 2.0 2025-03

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 commercial

IEC 60335-2-118:2025-03(en-fr)

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

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

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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7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at https://patents.iec.ch. IEC shall not be held responsible for identifying any or all such patent rights.

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. It is an International Standard.

This second edition cancels and replaces the first edition published in 2020. This edition constitutes a technical revision.

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

a) the text has been aligned with IEC 60335-1:2020;
b) scope has been revised (Clause 1);
c) requirements for appliances employing R-744 system have been added (7.1, 7.12.1, 22.7, 22.111);
d) additional requirements for appliances employing flammable refrigerant have been added (7.1, 7.6, 7.12, 7.15, 21.105, 22.110, 22.112, 22.113, 22.114, 22.115, 22.116, 22.117, 22.118, 22.119, 22.120, 22.121, 22.122, 22.123, Annex CC);
e) definition of hermetically sealed system has been revised (3.6.113);
f) reference to flammable refrigerant has been deleted (22.7);
g) new subclauses have been added (22.40, 22.49, 22.51);
h) compatibility tests for winding insulation of motor-compressors used with different types of refrigerants and oils have been introduced (22.9);
i) Annex AA has been modified to cover motors that are supplied at a voltage that is different from the rated voltage of the appliance;
j) Annex BB has been updated to align with the latest edition of IEC 60079-15;
k) text in 3.1.9.101, 3.1.9.102 and 3.1.9.103 has been cancelled and the text copied in 5.102;
l) new informative tightness routine test has been added (Annex A).

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

Draft	Report on voting
61C/928/FDIS	61C/932/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. The main document types developed by IEC are described in greater detail at www.iec.ch/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 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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 and SC 61C supporting documents on the IEC websites.

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

https://www.iec.ch/sc61c/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 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 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.

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.

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 exclusively operated by professional users.

Ice cream makers intended for professional use are employed in commercial environments, such as restaurants, hotels, supermarkets, shops, as well as in preparation areas of bars, bakeries, ice cream shops, institutional catering, and other similar professional settings.

Appliances taken into account are those intended for commercial use and similar appliances not intended for normal household use but which can 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 can be remote.

As far as is practicable, this standard deals with the common hazards presented by these types of appliances including those that use **flammable refrigerants** and appliances employing R-744 refrigerant.

This standard is not applicable to appliances with a mass of **flammable refrigerant** exceeding the limits specified in 22.112 or to appliances with that use refrigerants with a toxicity classification of B according to ISO 817.

It does not cover those features of construction and operation of refrigerating appliances that are dealt with in ISO standards.

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, 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;
– freezers designed to produce soft ice cream and dispense it directly into containers;
– machines for soft-serve ice cream;
– batch dispensing freezers.

Attention is drawn to the fact that:

– countries can have additional requirements for appliances incorporating pressure vessels;
– 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;
– for appliances or parts of appliances intended to be used outdoors, additional requirements can be necessary.

This standard does not apply to:

– split systems having a **refrigerant charge** of **flammable refrigerant** exceeding 150 g in any **refrigerating circuit**;
– 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 60079 (all parts), *Explosive atmospheres*

IEC 60079-1:2014, *Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures "d"*

IEC 60079-7:2015, *Explosive atmospheres – Part 7: Equipment protection by increased safety "e"*

IEC 60079-15:2017, *Explosive atmospheres – Part 15: Equipment protection by type of protection "n"*

IEC 60079-29-1:2016, *Explosive atmospheres – Part 29-1: Gas detectors – Performance requirements of detectors for flammable gases*
IEC 60079-29-1:2016/AMD1:2020

IEC 60335-2-34:2024, *Household and similar electrical appliances – Safety – Part 2-34: Particular requirements for motor-compressors*

IEC 60335-2-40:2024, *Household and similar electrical appliances – Safety – Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers*

IEC 60730-2-6:2015, *Automatic electrical controls – Part 2-6: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements*
IEC 60730-2-6:2015/AMD1:2019

IEC 60730 (all parts), *Automatic electrical controls*

IEC 60851-4, *Winding wires – Test methods – Part 4: Chemical properties*

IEC 60947-5-1:2024, *Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices*

ISO 817, *Refrigerants – Designation and safety classification*

ISO 4126-2:2018, *Safety devices for protection against excessive pressure – Part 2: Bursting disc safety devices*

ISO 5149-1, *Refrigerating systems and heat pumps – Safety and environmental requirements – Part 1: Definitions, classification and selection criteria*

ISO 7010:2019, *Graphical symbols – Safety colours and safety signs – Registered safety signs*

ISO 14903, *Refrigerating systems and heat pumps – Qualification of tightness of components and joints*

Modification:

Replace

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

with

IEC 60598-1:2020, *Luminaires – Part 1: General requirements and tests*

SOMMAIRE

COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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APPAREILS ÉLECTRODOMESTIQUES ET ANALOGUES – SÉCURITÉ –

Partie 2-118: Exigences particulières pour les fabriques de crème glacée à usage commercial

AVANT-PROPOS

1) La Commission Électrotechnique Internationale (IEC) est une organisation mondiale de normalisation composée de l'ensemble des comités électrotechniques nationaux (Comités nationaux de l'IEC). L'IEC a pour objet de favoriser la coopération internationale pour toutes les questions de normalisation dans les domaines de l'électricité et de l'électronique. À cet effet, l'IEC – entre autres activités – publie des Normes internationales, des Spécifications techniques, des Rapports techniques, des Spécifications accessibles au public (PAS) et des Guides (ci-après dénommés "Publication(s) de l'IEC"). Leur élaboration est confiée à des comités d'études, aux travaux desquels tout Comité national intéressé par le sujet traité peut participer. Les organisations internationales, gouvernementales et non gouvernementales, en liaison avec l'IEC, participent également aux travaux. L'IEC collabore étroitement avec l'Organisation Internationale de Normalisation (ISO), selon des conditions fixées par accord entre les deux organisations.
2) Les décisions ou accords officiels de l'IEC concernant les questions techniques représentent, dans la mesure du possible, un accord international sur les sujets étudiés, étant donné que les Comités nationaux de l'IEC intéressés sont représentés dans chaque comité d'études.
3) Les Publications de l'IEC se présentent sous la forme de recommandations internationales et sont agréées comme telles par les Comités nationaux de l'IEC. Tous les efforts raisonnables sont entrepris afin que l'IEC s'assure de l'exactitude du contenu technique de ses publications; l'IEC ne peut pas être tenue responsable de l'éventuelle mauvaise utilisation ou interprétation qui en est faite par un quelconque utilisateur final.
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6) Tous les utilisateurs doivent s'assurer qu'ils sont en possession de la dernière édition de cette publication.
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8) L'attention est attirée sur les références normatives citées dans cette publication. L'utilisation de publications référencées est obligatoire pour une application correcte de la présente publication.
9) L'IEC attire l'attention sur le fait que la mise en application du présent document peut entraîner l'utilisation d'un ou de plusieurs brevets. L'IEC ne prend pas position quant à la preuve, à la validité et à l'applicabilité de tout droit de brevet revendiqué à cet égard. À la date de publication du présent document, l'IEC n'avait pas reçu notification qu'un ou plusieurs brevets pouvaient être nécessaires à sa mise en application. Toutefois, il y a lieu d'avertir les responsables de la mise en application du présent document que des informations plus récentes sont susceptibles de figurer dans la base de données de brevets, disponible à l'adresse https://patents.iec.ch. L'IEC ne saurait être tenue pour responsable de ne pas avoir identifié de tels droits de brevets.

L'IEC 60335-2-118 a été établie par le sous-comité 61C: Sécurité des appareils de réfrigération à usage domestique et commercial, du comité d'études 61 de l'IEC: Sécurité des appareils électrodomestiques et analogues. Il s'agit d'une Norme internationale.

Cette deuxième édition annule et remplace la première édition parue en 2020. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) le texte a été aligné sur l'IEC 60335-1:2020;
b) le domaine d'application a été révisé (Article 1);
c) des exigences ont été ajoutées pour les appareils qui utilisent un système au R-744 (7.1, 7.12.1, 22.7, 22.111);
d) des exigences supplémentaires pour les appareils qui utilisent des fluides frigorigènes inflammables ont été ajoutées (7.1, 7.6, 7.12, 7.15, 21.105, 22.110, 22.112, 22.113, 22.114, 22.115, 22.116, 22.117, 22.118, 22.119, 22.120, 22.121, 22.122, 22.123, Annexe CC);
e) la définition du système hermétiquement étanche a été révisée (3.6.113);
f) la référence au fluide frigorigène inflammable a été supprimée (22.7);
g) de nouveaux paragraphes ont été ajoutés (22.40, 22.49, 22.51);
h) des essais de compatibilité pour l'isolation des enroulements des motocompresseurs utilisés avec différents types de fluides frigorigènes et d'huiles ont été introduits (22.9);
i) l'Annexe AA a été modifiée pour couvrir les moteurs qui sont alimentés à une tension différente de la tension assignée de l'appareil;
j) l'Annexe BB a été mise à jour pour s'aligner sur la dernière édition de l'IEC 60079-15;
k) le texte des 3.1.9.101, 3.1.9.102 et 3.1.9.103 a été supprimé et copié au 5.102;
l) un nouvel essai d'étanchéité de série informatif a été ajouté (Annexe A).

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
61C/928/FDIS	61C/932/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/publications.

Une liste de toutes les parties de la série IEC 60335, publiées sous le titre général *Appareils électrodomestiques et analogues – Sécurité*, se trouve sur le site web de l'IEC.

La présente partie 2 doit être utilisée conjointement avec la dernière édition de l'IEC 60335-1 et ses amendements sauf si cette édition l'exclut. Dans ce cas, la dernière édition qui n'exclut pas la présente partie 2 est utilisée. Elle a été établie sur la base de la sixième édition (2020) de cette norme.

NOTE 1 L'expression "la Partie 1" utilisée dans la présente norme fait référence à l'IEC 60335-1.

La présente partie 2 complète ou modifie les articles correspondants de l'IEC 60335-1, de façon à transformer cette publication en norme IEC: Exigences particulières pour les fabriques de crème glacée à usage commercial.

Lorsqu'un paragraphe particulier de la Partie 1 n'est pas mentionné dans cette partie 2, ce paragraphe s'applique pour autant que cela soit raisonnable. Lorsque la présente norme mentionne "addition", "modification" ou "remplacement", le texte correspondant de la Partie 1 doit être adapté en conséquence.

NOTE 2 Le système de numérotation suivant est utilisé:

– les paragraphes, tableaux et figures qui s'ajoutent à ceux de la Partie 1 sont numérotés à partir de 101;

– à l'exception de celles qui sont dans un nouveau paragraphe ou de celles qui concernent des notes de la Partie 1, les notes sont numérotées à partir de 101, y compris celles des articles ou paragraphes qui sont remplacés;

– les annexes qui sont ajoutées sont désignées AA, BB, etc.

NOTE 3 Les caractères d'imprimerie suivants sont utilisés:

– exigences: caractères romains;

– *modalités d'essais: caractères italiques*;

– notes: petits caractères romains.

Les termes en **gras** dans le texte sont définis à l'Article 3. Lorsqu'une définition concerne un adjectif, l'adjectif et le nom associé figurent également en gras.

Le comité a décidé que le contenu de ce document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous webstore.iec.ch dans les données relatives au document recherché. À cette date, le document sera

- reconduit,
- supprimé, ou
- révisé.

INTRODUCTION

Il a été admis par hypothèse, en établissant la présente Norme internationale, que l'exécution de ses dispositions était confiée à des personnes expérimentées et ayant une qualification appropriée.

Les documents de recommandations concernant l'application des exigences de sécurité des appareils peuvent être obtenus par le biais des documents d'accompagnement du comité d'études 61 et du sous-comité 61C sur les sites web de l'IEC.

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

https://www.iec.ch/sc61c/supportingdocuments

Cette information est donnée à l'intention des utilisateurs de la présente Norme internationale et ne constitue nullement un remplacement du texte normatif de la présente norme.

La présente norme reconnaît le niveau de protection internationalement accepté contre les dangers électriques, mécaniques, thermiques, liés au feu et au rayonnement des appareils, lorsqu'ils fonctionnent comme en usage normal en tenant compte des instructions du fabricant. Elle couvre également les situations anormales auxquelles on peut s'attendre dans la pratique et elle tient compte de la façon dont les phénomènes électromagnétiques peuvent affecter le fonctionnement sûr des appareils.

La présente norme tient compte autant que possible des exigences de l'IEC 60364, de façon à rester compatible avec les règles d'installation quand l'appareil est raccordé au réseau d'alimentation. Cependant, des règles d'installation nationales peuvent être différentes.

Si un appareil relevant du domaine d'application de la présente norme comporte également des fonctions couvertes par une autre partie 2 de l'IEC 60335, la partie 2 correspondante est appliquée à chaque fonction séparément, dans la limite du raisonnable. Si cela s'applique, l'influence d'une fonction sur les autres fonctions est prise en compte.

Lorsqu'une partie 2 ne comporte pas d'exigences complémentaires pour couvrir les risques traités dans la Partie 1, la Partie 1 s'applique.

NOTE 1 Cela signifie que les comités d'études responsables pour les parties 2 ont déterminé qu'il n'était pas nécessaire de spécifier des exigences particulières pour l'appareil en question en plus des exigences générales.

La présente norme est une norme de famille de produits traitant de la sécurité d'appareils et a préséance sur les normes horizontales et génériques couvrant le même sujet.

NOTE 2 Les publications horizontales, les publications fondamentales de sécurité et les publications groupées de sécurité couvrant un danger ne s'appliquent pas, parce qu'elles ont été prises en considération lorsque les exigences générales et particulières ont été étudiées pour la série de normes IEC 60335.

NOTE 3 Les normes traitant des aspects non relatifs à la sécurité des appareils électrodomestiques sont:

- les normes IEC publiées par le comité d'études 59 concernant les méthodes de mesure de l'aptitude à la fonction;
- les normes CISPR 11 et CISPR 14-1 et les normes applicables de la série IEC 61000-3 concernant les émissions électromagnétiques;
- la norme CISPR 14-2 concernant l'immunité électromagnétique;
- les normes IEC publiées par le comité d'études 111 concernant l'environnement.

Un appareil conforme au texte de la présente norme ne sera pas nécessairement jugé conforme aux principes de sécurité de la norme si, lorsqu'il est examiné et soumis aux essais, il apparaît qu'il présente d'autres caractéristiques qui compromettent le niveau de sécurité visé par ces exigences.

Un appareil utilisant des matériaux ou présentant des modes de construction différents de ceux décrits dans les exigences de la présente norme peut être examiné et soumis aux essais en fonction de l'objectif poursuivi par ces exigences et, s'il est jugé pratiquement équivalent, il peut être estimé conforme aux principes de sécurité de la présente norme.

APPAREILS ÉLECTRODOMESTIQUES ET ANALOGUES – SÉCURITÉ –

Partie 2-118: Exigences particulières pour les fabriques de crème glacée à usage commercial

1 Domaine d'application

L'article de la Partie 1 est remplacé par le texte suivant.

La présente partie de l'IEC 60335 traite de la sécurité des appareils qui permettent de fabriquer de la crème glacée et des glaces artisanales et qui sont exclusivement utilisés par des professionnels.

Les fabriques de crème glacée à usage commercial sont utilisées dans des environnements commerciaux, tels que des restaurants, hôtels, supermarchés ou magasins, ainsi que dans les espaces de préparation des bars, boulangeries, glaciers, unités de restauration collective et autres environnements professionnels analogues.

Les appareils dont il est question sont ceux destinés à un usage commercial et analogues non destinés à un usage domestique normal, mais qui peuvent néanmoins constituer une source de danger pour le public, tels que les appareils destinés à être utilisés par des personnes inexpérimentées dans les ateliers ou les magasins, par les artisans ou sur des exploitations agricoles, dont la **tension assignée** ne dépasse pas 250 V pour les appareils monophasés et 480 V pour les autres appareils.

Les appareils couverts par la présente norme sont équipés d'un groupe de condensation frigorifique qui est habituellement incorporé, mais cela peut ne pas être le cas pour certains appareils.

Dans la mesure du possible, la présente norme traite des dangers courants que présentent ces types d'appareils, y compris ceux qui utilisent des **fluides frigorigènes inflammables** et ceux qui utilisent le fluide frigorigène R-744.

La présente norme ne s'applique pas aux appareils dont la masse de **fluide frigorigène inflammable** dépasse les limites spécifiées au 22.112 ni aux appareils qui utilisent des fluides frigorigènes de classification de toxicité B selon l'ISO 817.

Elle ne traite pas des caractéristiques de construction et de fonctionnement d'appareils de réfrigération qui font l'objet de normes ISO.

La présente norme s'applique également aux types d'appareils suivants:

– les mélangeurs pour la fabrication de crème glacée et de produits pâtissiers similaires dans lesquels, pour la préparation du produit, un procédé de chauffage est appliqué dans l'appareil avant le procédé de refroidissement;
– les appareils pour le stockage du mélange de crème à fouetter dans un réservoir réfrigéré et pour le fouettage de la crème avant le procédé de livraison;
– les congélateurs conçus pour produire de la crème glacée molle et la distribuer directement dans des récipients;
– les machines à glace à l'italienne;
– les congélateurs distributeurs par lots.

L'attention est attirée sur le fait que:

– des pays peuvent avoir des exigences supplémentaires pour les appareils qui comportent des récipients sous pression;
– dans de nombreux pays, des exigences supplémentaires sont spécifiées par les organismes nationaux de la santé, par les organismes nationaux responsables de la protection des travailleurs, par les organismes nationaux responsables de l'alimentation en eau et par des organismes similaires;
– pour les appareils ou parties d'appareils destinés à être utilisés en extérieur, des exigences supplémentaires peuvent être nécessaires.

La présente norme ne s'applique pas:

– aux systèmes biblocs dont la **charge de fluide frigorigène inflammable** dépasse 150 g dans un quelconque **circuit de réfrigération**;
– aux sorbetières destinées à un usage domestique (IEC 60335-2-24);
– aux appareils prévus exclusivement pour des usages industriels;
– aux appareils destinés à être utilisés dans des locaux qui présentent des conditions particulières, telles que la présence d'une atmosphère corrosive ou explosive (poussière, vapeur ou gaz).

2 Références normatives

L'article de la Partie 1 s'applique, avec les exceptions suivantes.

Addition:

IEC 60079 (toutes les parties), *Atmosphères explosives*

IEC 60079-1:2014, *Atmosphères explosives – Partie 1: Protection du matériel par enveloppes antidéflagrantes "d"*

IEC 60079-7:2015, *Atmosphères explosives – Partie 7: Protection du matériel par sécurité augmentée "e"*

IEC 60079-15:2017, *Atmosphères explosives – Partie 15: Protection du matériel par mode de protection "n"*

IEC 60079-29-1:2016, *Atmosphères explosives – Partie 29-1: Détecteurs de gaz – Exigences d'aptitude à la fonction des détecteurs de gaz inflammables*
IEC 60079-29-1:2016/AMD1:2020

IEC 60335-2-34:2024, *Appareils électrodomestiques et analogues – Sécurité – Partie 2-34: Exigences particulières pour les motocompresseurs*

IEC 60335-2-40:2024, *Appareils électrodomestiques et analogues – Sécurité – Partie 2-40: Exigences particulières pour les pompes à chaleur électriques, les climatiseurs et les déshumidificateurs*

IEC 60730-2-6:2015, *Dispositifs de commande électrique automatiques – Partie 2-6: Exigences particulières pour les dispositifs de commande électrique automatiques sensibles à la pression y compris les exigences mécaniques*
IEC 60730-2-6:2015/AMD1:2019

IEC 60730 (toutes les parties), *Dispositifs de commande électrique automatiques*

IEC 60851-4, *Fils de bobinage – Méthodes d'essai – Partie 4: Propriétés chimiques*

IEC 60947-5-1:2024, *Appareillage à basse tension – Partie 5-1: Appareils et éléments de commutation pour circuits de commande – Appareils électromécaniques pour circuits de commande*

ISO 817, *Fluides frigorigènes – Désignation et classification de sécurité*

ISO 4126-2:2018, *Dispositifs de sécurité pour protection contre les pressions excessives – Partie 2: Dispositifs de sûreté à disque de rupture*

ISO 5149-1, *Systèmes frigorifiques et pompes à chaleur – Exigences de sécurité et d'environnement – Partie 1: Définitions, classification et critères de choix*

ISO 7010:2019, *Symboles graphiques – Couleurs de sécurité et signaux de sécurité – Signaux de sécurité enregistrés*

ISO 14903, *Systèmes de réfrigération et pompes à chaleur – Qualification de l'étanchéité des composants et des joints*

Modification:

Remplacer

IEC 60598-1:2014, *Luminaires – Partie 1: Exigences générales et essais*
IEC 60598-1:2014/AMD1:2017

par

IEC 60598-1:2020, *Luminaires – Partie 1: Exigences générales et essais*