

COMMITTEE: EL-002

Safety of Household and Similar Electrical Appliances and Small Power Transformers

DR 25003 CP

DRAFT

COMBINED POSTAL BALLOT/ AUSTRALIAN / NEW ZEALAND STANDARD FOR COMMENT

LIABLE TO ALTERATION DO NOT USE AS A STANDARD

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AS/NZS 60335.2.24:202x

**Household and similar electrical appliances –
Safety**

**Part 2.24: Particular requirements for
refrigerating appliances, ice-cream appliances
and ice makers**



COMBINED DRAFT FOR COMMENT/POSTAL BALLOT
STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Committee EL-002, *Safety of household and similar electrical appliances and small power transformers*

DRAFT

Australian/New Zealand standard

Household and similar electrical appliances – Safety

Part 2.24: Particular requirements for refrigerating appliances, ice-cream appliances and ice makers

Please note that this document is currently being voted on by the committee and the results of the postal ballot will be contingent on public comments received.

Comments on the proposal are invited from persons and organisations concerned with this subject.

Attention is drawn to the fact that this document is a draft only and is liable to alteration in the light of comments received. It is not to be regarded as an Australian/New Zealand standard until it is issued as such by Standards Australia and Standards New Zealand.

NOTES OF THE SECRETARY:

THE INTRODUCTION OF ANY NATIONAL VARIATIONS TO BE INCLUDED IN THIS STANDARD WILL OCCUR AFTER PUBLIC COMMENTS HAVE BEEN CONSIDERED AND PRIOR TO THE PUBLICATION OF THE STANDARD.
THIS DOCUMENT MUST BE READ IN CONJUNCTION WITH IEC 60335-2-24, ED. 9.0, COPIES OF WHICH MAY BE VIEWED BY CONTACTING enquiries@standards.govt.nz.

This joint Australian/New Zealand standard was prepared by Joint Technical Committee EL-002, *Safety of household and similar electrical appliances and small power transformers*. It was approved on behalf of Standards Australia's Standards Development and Accreditation Committee on xxsasx and by the New Zealand Standards Approval Board on xxnzxx.

It was published on xxanzxx.

The following interests are represented on Committee EL-002:

Association of Accredited Certification Bodies

Australian Industry Group

Australian Retailers Association

Building Commission NSW

Business New Zealand

Consumer Electronic Suppliers Association, Australia

Consumers' Federation of Australia

Electrical consultants

Electrical Regulatory Authorities, Australia

Engineers Australia

International Accreditation New Zealand

JAS-ANZ

National Retailers Association (Australia)

New Zealand Electric Fence Energizer Manufacturers' Standards Group

WorkSafe, New Zealand

Keeping standards up-to-date

Standards are living documents, which reflect progress in science, technology and systems. To maintain their currency, all standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current standard, which should include any amendments which may have been published since the standard was purchased.

For more information about joint standards, visit www.standards.govt.nz or www.standards.org.au. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national standards organisation.

We also welcome suggestions for improvement in our standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comment to either the Chief Executive of Standards Australia or the New Zealand Standards Executive at the address shown on the title page.

This standard was issued in draft form for comment as DR 25003.

Australian/New Zealand Standard

Household and similar electrical appliances – Safety

Part 2.24: Particular requirements for refrigerating appliances, ice-cream appliances and ice makers

Superseding AS/NZS 60335.2.24:2021 on xx xxxx xxxx

Originated in Australia as C174-1966.

Originated in New Zealand as NZS 6324:1990.

Jointly revised and redesignated AS 3303-1990/NZS 6324:1990.

Second edition AS 3303-1995/NZS 6324:1995.

Jointly revised and redesignated AS/NZS 3350.2.24:1998.

Second edition AS/NZS 3350.2.24:2001.

Jointly revised and redesignated AS/NZS 60335.2.24:2003.

Jointly revised and redesignated AS/NZS 60335.2.24:2010.

Jointly revised and designated AS/NZS 60335.2.24:2021.

Jointly revised and designated AS/NZS 60335.2.24:202x.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

AS/NZS 60335.2.24:202x
HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY**Part 2.24: Particular requirements for refrigerating appliances, ice-cream appliances
and ice makers****Preface**

This standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-002, *Safety of household and similar electrical appliances and small power transformers* to supersede AS/NZS 60335.2.24:2021 3 years from the date of publication of this standard. During this period, AS/NZS 60335.2.24:2021 and its amendments will remain current. Regulatory authorities that reference this standard in regulation may apply these requirements at a different time. Users of this standard should consult these authorities to confirm their requirements.

The objective of this standard is to provide manufacturers, designers, regulatory authorities, testing laboratories, and similar organisations with safety requirements designed to give the user protection against hazards that might occur during normal operation and abnormal operation of the appliance and which may be used as the basis for approval for sale or for connection to the electricity supply mains in Australia and New Zealand.

The text of IEC 60335-2-24, Ed. 9.0, prepared by IEC Technical Committee SC 61C, was submitted to the Standards Australia/Standards New Zealand Combined Procedure (dual public comment and committee vote) for adoption of the IEC standard as a Standards Australia/Standards New Zealand joint standard.

The principal changes in this edition as compared with the 2021 edition of AS/NZS 60335.2.24 are as follows (minor changes are not listed):

- (a) Alignment with AS/NZS 60335.1:2022;
- (b) New probe 19 has been introduced (subclauses 8.1.1, 8.1.3, and 20.2);
- (c) New exception for components inside the thermal insulation has been introduced (22.117);
- (d) New requirement for mobile refrigerating appliances, appliances to be used in leisure accommodation vehicles like motor caravans and boats for leisure purposes, and appliances to be used on board ships has been introduced (clause 1, and subclauses 3.5.107, 3.5.108, 7.1, 7.6, 7.12, 7.14, 19.103, 21.101, and 24.3, and Annex FF);
- (e) Text in subclauses 3.1.9.101, 3.1.9.102, 3.1.9.103, and 3.1.9.104 has been cancelled and the text copied to 5.104;
- (f) New requirement for the evaluation of non-dangerous moving parts has been introduced (subclause 20.2);
- (g) New abnormal test has been introduced (subclause 19.106);
- (h) Reference to flammable refrigerant has been deleted (subclause 22.7);
- (i) New subclauses have been added (22.40, 22.49, and 22.51);
- (j) Requirement for the evaluation of motor-compressor has been updated (subclause 24.1);
- (k) Annex DD has been cancelled and the text copied to Annex A;
- (l) Design pressure has been changed in maximum allowable pressure (subclause 3.8.101).

This standard is an adoption with national modifications of the ninth edition of IEC 60335-2-24, *Household and similar electrical appliances – Safety – Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice makers*. It has been varied as indicated to take account of Australian and New Zealand conditions.

This part 2 has to be used in conjunction with the latest edition of AS/NZS 60335.1, *Household and similar electrical appliances – Safety – Part 1: General requirements* 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 AS/NZS 60335.1:2022.

This part 2 supplements or modifies the corresponding clauses of AS/NZS 60335.1 so as to convert it into the Australian/New Zealand standard: Safety requirements for refrigerating appliances, ice-cream appliances, and ice-makers.

When a particular subclause of AS/NZS 60335.1 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 of AS/NZS 60335.1 is to be adapted accordingly.

NOTE 1 The following numbering system is used:

- subclauses, tables, and figures that are numbered starting from 101 are additional to those in AS/NZS 60335.1;
- unless notes are in a new subclause or involve notes in AS/NZS 60335.1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, and so on;
- subclauses, notes, and annexes that are additional to those in the IEC standard are prefixed with the letters AZ.

NOTE 2 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 associated noun are also in bold.

p NOTE 3 In this document, p is used in the margin to indicate instructions for preparing a consolidated version.

The essential safety requirements in AS/NZS 3820¹ that could be applicable to requirements for refrigerating appliances, ice-cream appliances, and ice-makers are covered by this standard.

Where national variations listed in AS/NZS 60335.1 (adopting IEC 60335-1) affect IEC 60335-2-24, Ed. 9.0, these, along with the variations listed below, form the Australian and New Zealand national variations for purposes of the IECEE scheme for recognition of results of testing to standards for safety of electrical equipment (the CB scheme).

¹ AS/NZS 3820, *Essential safety requirements for electrical equipment*.

The text of the international standard IEC 60335-2-24, Ed. 9.0 was approved as a joint Australian/New Zealand standard, noting the effect of national variations in AS/NZS 60335.1:2022.

AUSTRALIAN NATIONAL VARIATIONS

The following national variations to this Part 2 are additional to those listed in the national variations of AS/NZS 60335.1:2022.

6 Classification

- p **6.1** *Add* the following text:

Appliances, other than **ice-cream appliances**, shall be classified as at least appliances for tropical climates.

22 Construction

- p **22.117** *Replace* the text of the addition *with* the following variation:

In **refrigerating appliances**, other than **ice-cream appliances**, thermal insulation shall be encased in and in contact with:

- metallic material having a thickness not less than 0.20 mm and having a melting point temperature of not less than 1 000 °C; or
- polymeric material classified as 5VA according to IEC 60695-11-20, provided that the test sample used for the classification was no thicker than the relevant part of the appliance.

Annexes

- p **Annex EE** *Replace* this annex with the following variation:

Annex EE Void

NEW ZEALAND NATIONAL VARIATIONS

The following national variations to this Part 2 are additional to those listed in the national variations of AS/NZS 60335.1:2022.

22 Construction

- p **22.117** *Replace* the text of the addition *with* the following variation:

In **refrigerating appliances**, other than **ice-cream appliances**, thermal insulation shall be encased in and in contact with:

- metallic material having a thickness not less than 0.20 mm and having a melting point temperature of not less than 1 000 °C; or
- polymeric material classified as 5VA according to IEC 60695-11-20, provided that the test sample used for the classification was no thicker than the relevant part of the appliance.

Annexes

- p **Annex EE** *Replace* this annex with the following variation:

Annex EE Void

Annex ANZ

(Normative)

Normative references to international publications with their corresponding joint Australia/New Zealand publications

The following referenced documents are indispensable for the application 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.

NOTE When an international publication has been modified by national variations, the relevant joint Australia/New Zealand publication applies if the national variations are needed to ensure the safety of the appliance for Australia/New Zealand conditions. These international publications are indicated by (MOD). If an international publication is not so indicated, then either it or the listed Australia/New Zealand publication may be used. Where there is no equivalent international publication listed, then the Australian/New Zealand publication applies.

Publication	Year	Title	AS/NZS	Year
IEC 60068-2-6	2007	<i>Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)</i>		
IEC 60068-2-11	2021	<i>Environmental testing – Part 2-11: Tests – Test Ka: Salt mist</i>		
IEC 60068-2-27	2008	<i>Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock</i>		
IEC 60068-2-52	2017	<i>Environmental testing – Part 2-6: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)</i>		
IEC 60079 (all parts)		<i>Explosive atmospheres</i>		
IEC 60079-1	2014	<i>Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures “d”</i>		
IEC 60079-7	2015	<i>Explosive atmospheres – Part 7: Equipment protection by increased safety “e”</i>		
IEC 60079-15	2017	<i>Explosive atmospheres – Part 15: Equipment protection by type of protection “n”</i>	60079.15	2020
IEC 60252-1 IEC 60252-1/AMD1	2010 2013	<i>Explosive atmospheres – Part 15: Equipment protection by type of protection “n”</i>	60079.15	2020
IEC 60335-2-34	2024	<i>Household and similar electrical appliances – Safety – Part 2-34: Particular requirements for motor-compressors</i>	60335.2.34	2021
IEC 60598-1	2020	<i>Luminaires – Part 1: General requirements and tests</i>		
IEC 60695-11-3	2012	<i>Fire hazard testing – Part 3-11: Test flames – 500 W flames – Apparatus and confirmational test methods</i>		
IEC 60695-11-20	2015	<i>Fire hazard testing – Part 11-20: Test flames – 500 W flame test method</i>		

IEC 60730-2-6 IEC 60730-2-6/AMD1 ¹	2015 2019	Automatic electrical controls – Part 2-6: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements		
IEC 60730 (all parts)		<i>Automatic electrical controls</i>		
IEC 60851-4	2016	<i>Winding wires – Test methods – Part 4: Chemical properties</i>		
ISO 209		<i>Aluminium and aluminium alloys – Chemical composition</i>		
ISO 817		Refrigerants – Designation and safety classification	817	
ISO 4126-2	2018	<i>Safety devices for protection against excessive pressure – Part 2: Bursting disc safety devices</i>		
ISO 7010	2019	<i>Graphical symbols – Safety colours and safety signs – Registered safety signs</i>		

¹ A consolidated version of this document exists, comprising IEC 60730-2-6:2015 and IEC 60730-2-6:2015/AMD1:2019.