

Australian/New Zealand Standard™

Safety of household and similar electrical appliances

Part 2.45: Particular requirements— Portable heating tools and similar appliances (IEC 60335-2-45:1996, MOD)



AS/NZS 3350.2.45:1997

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 the Council of Standards Australia on 24 December 1996 and on behalf of the Council of Standards New Zealand on 20 December 1996.

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The following are represented on Committee EL-002:

Association of Certification Bodies
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Canterbury Manufacturers Association New Zealand
Consumer Electronic Suppliers Association, Australia
Electrical regulatory authorities, Australia
Electrical test laboratories
Electrical consultants
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Institution of Engineers Australia
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CONTENTS

FOREWORD.....	3
1 Scope	5
2 Definitions	6
3 General requirement.....	8
4 General conditions for the tests	8
5 Void	8
6 Classification.....	8
7 Marking and instructions	8
8 Protection against access to live parts	9
9 Starting of motor-operated appliances.....	10
10 Power input and current.....	10
11 Heating	10
12 Void	10
13 Leakage current and electric strength at operating temperature	10
14 Void	10
15 Moisture resistance	10
16 Leakage current and electric strength	11
17 Overload protection of transformers and associated circuits	11
18 Endurance.....	11
19 Abnormal operation	11
20 Stability and mechanical hazards	12
21 Mechanical strength	12
22 Construction.....	13
23 Internal wiring.....	14
24 Components	14
25 Supply connection and external flexible cords	15
26 Terminals for external conductors	15
27 Provision for earthing.....	16
28 Screws and connections	16
29 Creepage distances, clearances and distances through insulation	16
30 Resistance to heat, fire and tracking	16
31 Resistance to rusting	16
32 Radiation, toxicity and similar hazards	16
Annexes	17
Annex ZZ (informative) Variations to IEC 60335-2-45:1996 for application in Australia and New Zealand.....	18

AUSTRALIA/NEW ZEALAND STANDARD

SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –

Part 2.45: Particular requirements – Portable heating tools and similar appliances

FOREWORD

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 3114:1993, *Approval and test specification – Electric soldering irons*, two years from publication. During this period it is anticipated that regulatory authorities will approve appliances to either Standard.

This Standard incorporates Amendment No. 1 (December 1998), Amendment No. 2 (November 2001) and Amendment No. 3 (May 2007). The changes required by the amendments are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected. Where an application date other than immediate is applicable to an amendment the date of application (DOA) is indicated by the marginal bar against the part affected or by a footnote relating to the part affected.

The objective of this Standard is to provide manufacturers, designers, regulatory authorities, testing laboratories and similar organizations 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.

This Standard forms the first edition of AS/NZS 3350.2.45, *Safety of household and similar electrical appliances*, Part 2.45: *Particular requirements for portable heating tools and similar appliances*.

This Standard is an adoption with national modifications and contains the full text of the second edition of IEC 60335-2-45:1996, *Safety of Household and Similar Electrical Appliances – Part 2.45: Particular requirements – Portable heating tools and similar appliances* and has been varied as indicated to take account of Australian and New Zealand conditions. It is to be used in conjunction with the latest edition of AS/NZS 3350.1, *Safety of household and similar electrical appliances – Part 1: General requirements* and its Amendments. It was established on the basis of AS/NZS 3350.1:2002.

This part 2 supplements or modifies the corresponding clauses of AS/NZS 3350.1 (referred to as part 1 in this part 2) so as to convert it into the Australian/New Zealand Standard: Safety of portable heating tools and similar appliances.

NOTE 1 When "Part 1" is mentioned in this standard, it refers to AS/NZS 3350.1.

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 numbering of clauses, subclauses, notes, tables, figures and annexes follows that of IEC 60335-2-45:1996. To allow for the introduction of additional material by the IEC, the numbers 101 to 200 have been reserved. To allow for additional material to be introduced by Australia and New Zealand, the numbers 201 to 300 are used to number further clauses, subclauses, notes, tables and figures in part 1. The numbers 301 to 400 are used to number further clauses, subclauses, notes, tables and figures in this part 2. Additional annexes are lettered ZA, ZB and so on.

This scheme has been introduced to reduce the likelihood of the IEC and Australia and New Zealand using the same identifier for different purposes.

The use of the word VOID indicates that the IEC text is not used in Australia or New Zealand. The use of this word also avoids the need to renumber, clauses, notes, tables and figure if an earlier clause, note, table or figure is not used.

As this Standard is reproduced from an International Standard, the following applies:

- Its number does not appear on each page of text and its identity is shown on the cover and title page only.
- In the source text "this International Standard" should read "this Australian/New Zealand Standard".

A full point substitutes for a comma when referring to a decimal marker.

Variations to IEC 60335-2-45:1996 are indicated at the appropriate places throughout this standard. Strikethrough (~~example~~) identifies IEC tables, figures and passages of text which, for the purposes of this Australian/New Zealand standard are deleted. Where Australian/New Zealand tables, figures or passages of text are added, each is set in its proper place and identified by shading (~~example~~). Added figures are not themselves shaded, but are identified by a shaded border.

Variations made to IEC 60335-2-45:1996 form the Australian variations for the purposes of the IECCE scheme for recognition of testing to standards for safety of electrical equipment (the CB scheme). These variations have been incorporated in the body of the standard. They are listed in Annex ZZ for easy reference.

Australia/New Zealand Standard

SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES

Part 2.45: Particular requirements – Portable heating tools and similar appliances

1 Scope

This clause of part 1 is replaced by:

This standard deals with the safety of **portable electric heating tools** and similar appliances, their **rated voltage** being not more than 250 V.

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

Appliances which may be used when mounted on a support are within the scope of this standard.

NOTE 1 – Examples of appliances that are within the scope of this standard are:

- **soldering irons;**
- **desoldering irons;**
- **soldering guns;**
- **conduit soldering tools;**
- **thermoplastic conduit-welding tools;**
- **household film-welding appliances;**
- plastic-cutting tools;
- **branding tools;**
- **burning-in pens;**
- stripping pliers;
- glue guns;
- **dehorning tools;**
- **paint strippers;**
- **fire lighters;**
- **heat guns.**

So far as is practicable, this standard deals with the common hazards presented by appliances which are encountered by all persons in and around the home.

This standard does not in general take into account

- the use of appliances by young children or infirm persons without supervision;
- playing with the appliance by young children.

NOTES

2 Attention is drawn to the fact that:

- for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary;
- ~~for appliances intended to be used in tropical countries, special requirements may be necessary;~~
- for the purposes of this standard, Australia and New Zealand are not considered to be tropical;
- in many countries additional requirements are specified by the national health authorities, the national authorities responsible for the protection of labour and similar authorities.

3 This standard does not apply to:

- hand-held motor-operated electric tools (IEC 60745);
- transportable motor-operated electric tools (IEC 61029);
- 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);
- tools for high-frequency heating;
- arc welding equipment.

2 Definitions

This clause of part 1 is applicable except as follows:

2.2.9 *Replacement:*

normal operation: Operation of appliances under the following conditions:

Appliances having a stand are operated on the stand, unless otherwise specified.

Other appliances are operated in accordance with the instructions for use, unless otherwise specified.

Soldering guns and plastic-cutting tools incorporating a **biased-off switch** are operated in cycles in accordance with the instructions for use but they are switched on for at least 12 s with rest periods not exceeding 48 s. For **soldering guns**, the on-period is such that the temperature at the tip reaches at least 300 °C at the end of the first on-period.

Household film-welding appliances are operated in cycles in accordance with the instructions for use but they are switched on at least for the time necessary to weld together two sheets of plastic film with rest periods not exceeding 2 min. The plastic film is high pressure (low density) polyethylene, each sheet having a thickness of 50 µm.

Heat guns are operated with the hot air flow horizontal.

Fire lighters are operated to ignite charcoal placed in a tray having a diameter of 600 mm and a side 50 mm high. The pile of charcoal is 500 mm in diameter and 100 mm high at its centre.

Contact fire lighters are positioned with the heating element horizontal and inserted in the centre of the charcoal.