

Australian/New Zealand Standard™

**Safety of household and similar
electrical appliances**

**Part 2.13: Particular requirements for
deep fat fryers, frying pans and similar
appliances
(IEC 60335-2-13:1993, MOD)**



AS/NZS 3350.2.13:2001

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 2 October 2001 and on behalf of the Council of Standards New Zealand on 12 October 2001.

This Standard was published on 12 November 2001.

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
Electricity Supply Association of Australia
Institution of Engineers Australia
Metal Trades Industries Association of Australia
Ministry of Consumer Affairs, 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 Standards may also be withdrawn.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.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.standards.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. 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 organization.

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 comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 01905.

Australian/New Zealand Standard™

Safety of household and similar electrical appliances

Part 2.13: Particular requirements for deep fat fryers, frying pans and similar appliances (IEC 60335-2-13:1993, MOD)

Originated in Australia in part as part of C105—1937.
Final Australian edition AS 3172—1990.
Originated in New Zealand as part of NZS/AS 3172:1990.
Final New Zealand edition NZS/AS 3172:1990.
AS 3172—1990 and NZS/AS 3172:1990 jointly revised and
redesignated AS/NZS 3172:1993.
Eighth edition 1996.
Jointly revised and redesignated in part as AS/NZS 3350.2.13:1997.
Second edition AS/NZS 3350.2.13:2001.
Reissued incorporating Amendment No. 1 (May 2007).

COPYRIGHT

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Jointly published by Standards Australia, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

CONTENTS

	Page
PREFACE	3
Clause	
1 Scope	5
2 Definitions	5
3 General requirement	6
4 General conditions for the tests	6
5 Void	6
6 Classification	6
7 Marking and instructions	6
8 Protection against accessibility to live parts	7
9 Starting of motor-operated appliances	7
10 Power input and current	7
11 Heating	7
12 Void	8
13 Leakage current and electric strength at operating temperature	8
14 Void	8
15 Moisture resistance	8
16 Leakage current and electric strength	9
17 Overload protection of transformers and associated circuits	9
18 Endurance	9
19 Abnormal operation	9
20 Stability and mechanical hazards	10
21 Mechanical strength	10
22 Construction	10
23 Internal wiring	10
24 Components	10
25 Supply connection and external flexible cords	11
26 Terminals for external conductors	11
27 Provision for earthing	11
28 Screws and connections	11
29 Creepage distances, clearances and distances through insulation	11
30 Resistance to heat, fire and tracking	12
31 Resistance to rusting	12
32 Radiation, toxicity and similar hazards	12
Annexes	13
Annex ZZ (informative) Variations to IEC 60335-2-13:1993 for application in Australia and New Zealand	13

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 3350.2.13:1997 and its amendment 1 (1998), amendment 2 (2001) and amendment 3 (2001) on publication.

This Standard incorporates Amendment No. 1 (May 2007). The changes required by the amendment 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 minimum safety requirements designed to give 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 was revised to incorporate Amendment Nos. 1, 2 and 3 and to effect changes to clauses 2.2.9 and 22.101 and Annex ZZ that were issued in draft form for comment as document DR 01905. It forms the second edition of AS/NZS 3350.2.13 *Safety of household and similar electrical appliances, Part 2.13: Particular requirements for deep fat fryers, frying pans and similar appliances*.

This Standard is an adoption with national modifications and contains the full text of the fourth edition of IEC 60335-2-13:1993, *Safety of household and similar electrical appliances, Part 2-13: Particular requirements for deep fat fryers, frying pans and similar appliances* including its amendments 1 and 2 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 deep fat fryers, frying pans and similar appliances.

Where a particular subclause of part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. Where this Standard states "addition", "modification" or "replacement", the relevant text in part 1 is to be adapted accordingly.

NOTE 1 Subclauses, notes, tables and figures which are additional to those in part 1 are numbered starting from 101. Annexes, which are additional to those in part 1 are lettered AA, BB, etc.

NOTE 2 In this Standard the following print types are used:

- requirements: in arial type;
- *test specifications: in italic type;*
- notes: in small arial type;

Words in **bold** in the text are defined in clause 2. When a definition of part 1 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 60335-2-13:1993. 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:

- (a) Its number does not appear on each page of text and its identity is shown on the cover and title page only.
- (b) 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 60335-2-13:1993 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 60335-2-13:1993 form the Australian variations for the purposes of the IECEE 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 2.13: Particular requirements for deep fat fryers, frying pans and similar appliances (IEC 60335-2-13:1993, MOD)

1 Scope

This clause of part 1 is replaced by:

~~This standard deals with the safety of electric deep fat fryers, frying pans and other appliances intended for household use only in which oil is used for cooking, their **rated voltage** being not more than 250 V.~~

This standard deals with the safety of electric deep fat fryers, frying pans, woks and other appliances intended for household use only in which oil may be used for cooking, their **rated voltage** being not more than 250 V.

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.

NOTE 1 – 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.

NOTE 2 – This standard does not apply to:

- deep fat fryers having a recommended maximum quantity of oil exceeding 4 l (IEC 60335-2-37);
- other similar appliances designed for commercial catering (IEC 60335-2-39).
- 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 Definitions

This clause of part 1 is applicable except as follows:

2.2.9 Replacement:

normal operation:

~~Deep fat fryers are operated with frying oil at room temperature and filled to the minimum oil level marked on the appliance, the **thermostat** being at the highest setting.~~

Deep fat fryers are operated with peanut oil at room temperature and filled to the minimum oil level marked on the appliance, the thermostat being at the highest setting.