AS/NZS 3350.2.21:1999 (Incorporating Amendment Nos 1, 2, 3, 4 and 5)

Australian/New Zealand Standard<sup>™</sup>

Safety of household and similar electrical appliances

Part 2.21: Particular requirements— Storage water heaters (IEC 60335-2-21:1997, MOD)





#### AS/NZS 3350.2.21:1999

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 6 November 1998 and on behalf of the Council of Standards New Zealand on 18 January 1999.

This Standard was published on 5 March 1999.

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 Standards may also be withdrawn.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 98257.

AS/NZS 3350.2.21:1999 (Incorporating Amendment Nos 1, 2, 3, 4 and 5)

# Australian/New Zealand Standard™

# Safety of household and similar electrical appliances

## Part 2.21: Particular requirements— Storage water heaters (IEC 60335-2-21:1997, MOD)

Originated in Australia, in part, as AS C101—1937. Originated in New Zealand, in part, as NZS 683—1949. Previous edition AS/NZS 3350.2.9:1996. Second edition 1999. Reissued incorporating Amendment No. 1 (March 2001). Reissued incorporating Amendment No. 2 (May 2004). Reissued incorporating Amendment No. 3 (November 2005). Reissued incorporating Amendment No. 4 (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

## 2

## CONTENTS

| FOREWORD |  |    |
|----------|--|----|
| 1        | Scope  | .6 |
| 2        | Definitions  | .7 |
| 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 parts1                         | 1  |
| 9        | Starting of motor-operated appliances1                           | 1  |
| 10       | Power input and current1   | 1  |
| 11       | Heating1   | 1  |
| 12       | Void1  | 1  |
| 13       | Leakage current and electric strength at operating temperature1  | 1  |
| 14       | Void1  | 1  |
| 15       | Moisture resistance1   | 1  |
| 16       | Leakage current and electric strength1                           | 2  |
| 17       | Overload protection of transformers and associated circuits1     | 2  |
| 18       | Endurance1   | 2  |
| 19       | Abnormal operation1  | 2  |
| 20       | Stability and mechanical hazards1                                | 3  |
| 21       | Mechanical strength1   | 3  |
| 22       | Construction1  | 3  |
| 23       | Internal wiring1   | 6  |
| 24       | Components1  | 6  |
| 25       | Supply connection and external flexible cords1                   | 8  |
| 26       | Terminals for external conductors1                               | 8  |
| 27       | Provision for earthing1  | 8  |
| 28       | Screws and connections1  | 8  |
| 29       | Creepage distances, clearances and distances through insulation1 | 8  |
| 30       | Resistance to heat, fire and tracking1                           |    |
| 31       | Resistance to rusting1   | 9  |
| 32       | Radiation, toxicity and similar hazards1                         | 9  |

| Annex ZZ (informative) Variations to IEC 60335-2-21:1997 for application in Australia<br>and New Zealand            | 24 |
|---|----|
| Figure 101 – Examples of types of storage water heaters   | 20 |
| Figure 101 – Examples of types of storage water heaters (continued)   | 21 |
| Figure 102 – Position of thermocouples for the measurement of the maximum water temperature of closed water heaters | 22 |



This is a free preview. Purchase the entire publication at the link below:

**Product Page** 

S Looking for additional Standards? Visit Intertek Inform Infostore

> Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation