AS 3731.1—1995

IEC 623:1990

IEC 623:1990/Amd.1:1992 IEC 623:1990/Amd.2:1992

Australian Standard®

Stationary batteries— Nickel-cadmium

Part 1: Vented type

This Australian Standard was prepared by Committee EL/5, Secondary Batteries. It was approved on behalf of the Council of Standards Australia on 28 June 1995 and published on 5 October 1995.

The following interests are represented on Committee EL/5:

Australian Automobile Aftermarket Association

Australian Automobile Association

Australian Chamber of Commerce and Industry

Australian Electrical and Electronic Manufacturers Association

Australian Lead Development Association

Department of Defence, Australia

Electrical Development Association of New Zealand

Electricity Supply Association of Australia

Federal Chamber of Automotive Industries, Australia

Institution of Engineers, Australia

Telstra (Australia)

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

Australian Standard®

Stationary batteries— Nickel-cadmium

Part 1: Vented type

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL/5 on Secondary Batteries to supersede AS 3731.1—1989, *Stationary batteries—Nickel-cadmium*, Part 1: *Vented type*.

This Standard is the result of a consensus among representatives on the Joint Committee to produce it as an Australian Standard.

This Standard is identical with and has been reproduced from IEC 623:1990, *Vented nickel-cadmium prismatic rechargeable single cells*, including Amendment No. 1:1992 and Amendment No. 2:1992. Amendments Nos. 1 and 2 are bound at the end of this Standard. The text affected by the Amendments is marked in the source document by double marginal bars.

The objective of this Standard is to provide users of vented nickel-cadmium batteries with specifications covering their construction and performance.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of this Standard.

This Standard is Part 1 of the following series:

AS

3731 Stationary batteries—Nickel-cadmium

3731.1 Part 1: Vented type (this Standard)

3731.2 Part 2: Valve-regulated type

For the purposes of this Australian Standard the source text should be modified as follows:

- (a) The words 'this Australian Standard' should replace 'this International Standard' wherever they appear.
- (b) A full point (.) substitutes for a comma (,) when appearing as a decimal marker.
- (c) The references to international Standards should be replaced by references to the following equivalent Australian or Joint Australian/New Zealand Standards:

Reference to International Standard		Australian or Joint Australian/New Zealand Standard	
IEC		AS	
51	Direct acting indicating analogue electrical-measuring instruments and their accessories	1042	Direct-acting indicating electrical measuring instruments and their accessories
410	Sampling plans and procedures for inspection by attributes	_	
417	Graphical symbols for use on equipment. Index, survey and compilation of the single sheets	1104	Informative symbols for use on electrical and electronic equipment
485	Digital electronic d.c. voltmeters and d.c. electronic analogue-to-digital converters	_	

CONTENTS

		Page		
	SECTION 1: GENERAL			
Clause				
1.1 1.2 1.3 1.4	Scope	1 1 1 2		
SECTION 2: DESIGNATION AND MARKING				
2.1 2.2 2.3	Cell designation	3 3 3		
SECTION 3: DIMENSIONS				
3.1	Dimensions	4		
SECTION 4: ELECTRICAL TESTS				
4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8	Charging procedure for test purposes Discharge performance Charge retention Endurance Charge acceptance at constant voltage Overcharge Vent operation Storage (under consideration)	6 7 8 9 9 9		
SECTION 5: MECHANICAL TESTS				
5.1	Mechanical test (under consideration)	9		
	SECTION 6: CONDITIONS FOR APPROVAL AND ACCEPTANCE			
6.1 6.2	Type approval	10 11		
Amendment No. 1				

Originated as AS 3731.1—1989. Second edition 1995.

NOTES

AUSTRALIAN STANDARD

Stationary batteries—Nickel-cadmium

Part 1:

Vented type

SECTION 1: GENERAL

1.1 Scope

This international standard specifies tests and requirements for vented nickel-cadmium prismatic secondary single cells.

NOTE — In this context, "prismatic" refers to cells having rectangular sides and base.

When there exists an IEC standard specifying test conditions and requirements for cells used in special applications and which is in conflict with this standard, the former shall take precedence.

1.2 Normative references

The following standard contains provisions which, through reference in this text, constitute provisions of this international standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this international standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid international standards.

IEC 51: Direct acting indicating analogue electrical measuring

instruments and their accessories.

IEC 410 (1973): Sampling plans and procedures for inspection by

attributes.

IEC 417 (1973): Graphical symbols for use on equipment - Index, survey

and compilation of the single sheets.

IEC: 485 (1974): Digital electronic d.c. voltmeters and d.c. electronic

analogue-to-digital converters.

1.3 **Definitions**

For the purpose of this international standard, the following definitions apply: