AS 3731.2—1995
IEC 622:1988
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Australian Standard®

Stationary batteries—Nickel-cadmium

Part 2: Valve-regulated type

This Australian Standard was prepared by Committee EL/5, Secondary Batteries. It was approved on behalf of the Council of Standards Australia on 29 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

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL/5 on Secondary Batteries to supersede AS 3731.2—1989, *Stationary batteries — Nickel-cadmium*, Part 2: *Sealed 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 622:1988, *Sealed nickel-cadmium prismatic rechargeable single cells*, including Amendment No. 2:1992 (which includes Amendment No. 1) and a Corrigendum of August 1992. The Corrigendum and Amendment are bound at the end of this Standard. The text affected by the Amendment is marked in the source document by double marginal bars.

The objective of this Standard is to provide users of valve-regulated 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 2 of the following series:

AS
3731 Stationary batteries—Nickel-cadmium
3731.1 Part 1: Vented type
3731.2 Part 2: Valve-regulated type (this Standard)

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
68	Basic environmental testing procedures	1099	Basic environmental testing procedures for electrotechnology
68-2-29	Part 2: Tests. Test Eb and guidance: Bump	1099.2.29	Test Eb—Bump and guidance
410	Sampling plans and procedures for inspection by attributes	—	
417	Graphical symbols for use on equipment. Index, survey and compilation of 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	—	

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AUSTRALIAN STANDARD

Stationary batteries—Nickel-cadmium

Part 2:
Valve-regulated type

SECTION ONE—GENERAL

1.1 **Scope**

This standard specifies tests and requirements for sealed nickel-cadmium prismatic rechargeable single cells.

Note. – In this context "prismatic" refers to cells having rectangular sides and base.

1.2 **Definitions**

For the purpose of this standard, the following definitions apply.

1.2.1 *Sealed cell*

A cell which remains closed and does not release either gas or liquid when operated within the limits of charge and temperature specified by the manufacturer. The cell may be equipped with a safety device to prevent dangerously high internal pressure. The cell does not require addition to the electrolyte and is designed to operate during its life in its original sealed state.

1.2.2 *Nominal voltage*

The nominal voltage of a single sealed nickel-cadmium prismatic rechargeable cell is 1.2 V.

1.2.3 *Rated capacity*

The quantity of electricity C_5 in Ah (ampere hours) declared by the manufacturer which a single cell can deliver at the 5 h discharge rate to a final voltage of 1.0 V at 20°C after charging, storing and discharging under the conditions specified in Section Four.

1.3 **Measuring instruments**

The measuring instruments used for the tests shall be selected to meet the magnitude of the parameters to be measured. Equipment shall be regularly calibrated to ensure that it shall at all times have the degree of accuracy given below.

1.3.1 *Voltage measurement*

The instruments used for voltage measurement shall be voltmeters having an accuracy class of 0.5 or better as defined in IEC Publication 51 for analogue instruments and IEC Publication 485 for digital instruments.

The resistance of voltmeters shall be at least 1000 Ω/V.