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Australian Standard 1981 — 1977

STATIONARY BATTERIES OF THE LEAD-ACID PASTED PLATE TYPE



STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter



THE FOLLOWING INDUSTRIAL, SCIENTIFIC AND GOVERNMENTAL organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Associated Chambers of Manufactures of Australia
Australian Automobile Association
Australian Lead Development Association
Department of Construction
Department of Defence
Electricity Supply Association of Australia
Federal Chamber of Automotive Industries
Railways of Australia Committee
Society of Automotive Engineers—Australasia
Telecom Australia

This standard, prepared by Committee EL/5, Accumulators, was approved on behalf of the Council of the Standards Association of Australia on 9 November 1976, and was published on 1 February 1977.

To keep abreast of progress in industry, Australian standards are regularly reviewed. Suggestions for improvements to published standards, addressed to the head office of the Association, are welcomed.

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June 1978

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AMENDMENT No 1
to
AS 1981—1977
STATIONARY BATTERIES OF THE LEAD-ACID PASTED
PLATE TYPE

SUMMARY: The following sections of the standard are covered by this amendment:
Clauses 1.7.5 and 1.14.1.3.

AUSTRALIAN STANDARD SPECIFICATION

**STATIONARY BATTERIES
OF THE LEAD-ACID
PASTED PLATE TYPE**

AS 1981 — 1977

First published 1977

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PREFACE

This standard was prepared by the Association's Committee on Accumulators at the request of both users and manufacturers of stationary batteries of the lead-acid pasted plate type. The standard is divided into sections as follows:

- Section 1—Scope, definitions and general requirements
- Section 2—Specific requirements for 10-hour rate batteries
- Section 3—Specific requirements for 1-hour rate batteries.

Batteries covered by Section 2 were originally developed by the Australian Post Office (now Telecom Australia) in conjunction with local battery manufacturers. These batteries have proved to be most successful in the field having service lives in excess of 15 years.

Batteries covered by Section 3 are currently being developed both locally and overseas for various high-discharge-rate applications. Although these batteries are still in the relatively early stages of development and no practical experience has been gained as to minimum service life, it is considered that adherence to the basic parameters described herein will assist in the correct development and usage of such batteries and promote adequate levels of performance and service lives.

In the preparation of this standard, reference was made to Australian Post Office Specification 662, Indian Standard 6304, and Japanese Industrial Standards C8704 and C2313, and acknowledgement is made of the assistance received therefrom.

This standard requires reference to the following Australian standards:

- AS 1042 Direct-acting Indicating Electrical Measuring Instruments and Their Accessories
- AS 1199 Sampling Procedures and Tables for Inspection by Attributes
- AS 1320 Separators for Lead-acid Starter Batteries
- AS 1399 Guide to AS 1199, Sampling Procedures and Tables for Inspection by Attributes
- AS 1852(50) International Electrotechnical Vocabulary: Electrochemistry and Electrometallurgy
- AS C59 Water for Use in Secondary Batteries of the Enclosed Cell Type
- AS C60 Sulphuric Acid for Use in Secondary Batteries

AS D23 Containers and Cell Covers for Lead-acid Batteries
of the Automobile Type
AS K185 Colours for Specific Purposes.

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CONTENTS

	<i>Page</i>
SECTION 1. SCOPE, DEFINITIONS AND GENERAL REQUIREMENTS	
1.1 Scope	5
1.2 Application	5
1.3 Definitions	5
1.4 Materials	6
1.5 Workmanship	6
1.6 Operating Conditions	7
1.7 Design and Construction	7
1.8 Capacity	11
1.9 Float Current Performance	11
1.10 Self-discharge	11
1.11 Marking	11
1.12 Accessories	12
1.13 Sampling	13
1.14 Tests	13
 SECTION 2. SPECIFIC REQUIREMENTS FOR 10-HOUR RATE BATTERIES	
2.1 General	20
2.2 Design and Construction	20
2.3 Capacity	21
2.4 Tests	21
 SECTION 3. SPECIFIC REQUIREMENTS FOR 1-HOUR RATE BATTERIES	
3.1 General	24
3.2 Design and Construction	24
3.3 Tests	24
 APPENDICES	
A Information to be Supplied by the Purchaser	26
B Dimensions of Batteries	27
C A Method of Determining Internal Resistance	28

STANDARDS ASSOCIATION OF AUSTRALIA

**Australian Standard Specification
for
STATIONARY BATTERIES OF THE LEAD-ACID PASTED
PLATE TYPE**

SECTION 1. SCOPE, DEFINITIONS AND GENERAL REQUIREMENTS

1.1 SCOPE. This specification applies to lead-acid batteries of the enclosed, pure lead positive, pasted plate type, designed specifically for floating service in a stationary mode. These batteries are designed to yield service lives as follows:

- (a) For 10-hour rate batteries—approximately 15 years.
- (b) For 1-hour rate batteries—not yet verified by experience in the field. However, it is anticipated that adherence to the relevant parameters listed herein should ensure service lives equivalent to the 10-hour rate design.

The specification includes requirements for batteries of the above types incorporating cells of either the 10-hour rate or 1-hour rate design and their accessories, but does not apply to Planté, tubular-positive plate or lead-calcium type batteries, or to those batteries designed for planned routine cycling.

1.2 APPLICATION. A stationary battery of the lead-acid pasted plate type shall be deemed to comply with this specification only if it complies with all the relevant requirements of this Section and with the appropriate requirements and tests of the following relevant Section:

Section 2—Specific requirements for 10-hour rate batteries

Section 3—Specific requirements for 1-hour rate batteries.

NOTE: The performance of batteries at rates other than those nominated above is subject to negotiation between purchaser and supplier.

1.3 DEFINITIONS. For the purpose of this specification the following definitions, in addition to those listed in AS 1852(50)*, shall apply:

Accessories—items supplied with a battery to facilitate the continued operation, service and adjustment of the battery. Such accessories include distilled water in containers, cable lugs,

*AS 1852(50), International Electrotechnical Vocabulary: Electrochemistry and Electrometallurgy.