Australian Standard™

Starter batteries—Lead acid

Standards Australia

This Australian Standard was prepared by Committee EL-005, Secondary Batteries. It was approved on behalf of the Council of Standards Australia on 3 October 2003 and published on 14 November 2003.

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Australasian Railway Association
Australian Automobile Association
Australian Automotive Aftermarket Association
Australian Chamber of Automotive Industries
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Electricity Supply Association of Australia
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PREFACE

This Standard was prepared by the Standards Australia Committee EL-005 Secondary Batteries, to supersede AS 2149—1990, *Starter batteries—Lead-acid.*

In the preparation of the Standard consideration was given to European Standard EN 60095-1, *Lead-acid starter batteries*, Part 1: *General requirements and methods of test*. EN 60095-1 is a modified version of International Electrotechnical Commission Standard 95-1, *Lead-acid starter batteries*, Part 1: *General requirements and methods of test*.

The method of testing a battery's flame retardant venting system given in Appendix P is taken from the Battery Technical Manual (June 1982) published by the Battery Council International.

The objective of this Standard is to provide users and manufacturers of automotive starter batteries with definitions of terms, safety requirements, methods of specifying performance and methods of test.

The committee recognized that the Standard supplies limited requirements for valve-regulated cells and proposes that separate parts for vented and valve-regulated cells will be produced at the next revision. In the development for the proposed part for valve-regulated cells requirements for —

(a) control valves;

(b) integrity of seal (leak test);

(c) gas recombination efficiency; and

(d) endurance towards high temperatures and vibration in the areas of sealing integrity

will be considered.

The requirement of EN 60095-1 that batteries are considered new not later than—

(i) 30 days after the acid filling and formation date for filled and charged batteries; and

(ii) 60 days after the shipment date of the manufacturer for dry-charged batteries

has been changed to 60 days and 90 days respectively to reflect Australian conditions.

The principal differences to the previous edition are:

(A) The addition of a stand and rechargeability test (light load recovery test).

(B) The addition of a test of the flame retardance of a battery's venting system.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A normative appendix is an integral part of a Standard.

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SECTION 1 GENERAL

1.1 SCOPE

This Standard is applicable to lead-acid batteries with a nominal voltage of 12 V, used primarily as a power source for the starting of internal combustion engines, lighting and for auxiliary equipment of internal combustion engine vehicles. These batteries are commonly called 'starter batteries'. Batteries with a nominal voltage of 6 V are also included within the scope of this Standard. All referenced voltages have to be divided by two for 6 V batteries.

This Standard is applicable to batteries for the following purposes:

(a) Batteries for passenger cars.

(b) Batteries for commercial and industrial vehicles for normal use.

(c) Batteries for commercial and industrial vehicles for severe use.

(d) Batteries for use in deep-cycling applications (e.g. marine use, taxis and coaches).

This Standard is not applicable to—

(i) batteries for starting railcar internal combustion engines;

(ii) motorcycle batteries; or

(iii) aircraft batteries.

NOTE: Further requirements for valve-regulated batteries including; requirements for control valves, integrity of seal (leak test), gas recombination efficiency and endurance towards high temperatures and vibration in the areas of sealing integrity will considered in the next revision.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
1216	Class labels for dangerous goods
2700	Colour standards for general purposes
IEC	
60051	Direct acting indicating analogue electrical measuring instruments and their accessories
60051-2	Part 2: Special requirements for ammeters and voltmeters
60417	Graphical symbols for use on equipment
61429	Marking of secondary cells and batteries with the international recycling symbol ISO 7000-1135
SAE	
J537	Storage batteries

