

Australian/New Zealand Standard™

Wheelchairs

**Part 25: Batteries and chargers for
powered wheelchairs**



AS/NZS ISO 7176.25:2014

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee ME-067, Assistive Technology Products for Persons with Disability. It was approved on behalf of the Council of Standards Australia on 8 January 2014 and on behalf of the Council of Standards New Zealand on 30 January 2014. This Standard was published on 17 February 2014.

The following are represented on Committee ME-067:

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Australian Rehabilitation and Assistive Technology Association
Bus & Coach Association of New Zealand
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME-067, Assistive Technology Products for Persons with Disability.

The objective of this Standard is to specify requirements and test methods for batteries and battery chargers intended for use with electrically powered wheelchairs.

This Standard is identical with, and has been reproduced from ISO 7176-25:2013, *Wheelchairs, Part 25: Batteries and chargers for powered wheelchairs*.

As this Standard is reproduced from an International Standard, the following applies:

- (a) In the source text ‘this International Standard’ should read ‘this Australian/New Zealand Standard’.
- (b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard</i>		<i>Australian/New Zealand Standard</i>	
ISO		AS/NZS	
7176	Wheelchairs	3696	Wheelchairs
7176-8	Part 8: Requirements and test methods for static, impact and fatigue strengths	3696.8	Part 8: Requirements and test methods for static, impact and fatigue strengths
7176-21	Part 21: Requirements and test methods for electromagnetic compatibility of electrically powered wheelchairs and scooters, and battery chargers	3696.21	Part 21: Requirements and test methods for electromagnetic compatibility of electrically powered wheelchairs and motorized scooters
IEC			
60335	Household and similar electrical appliance—Safety	60335	Household and similar electrical appliances—Safety
60335-2-29	Part 2-29: Particular requirements for battery chargers	60335.2.29	Part 2.29: Particular requirements for battery chargers
		AS	
60529	Degrees of protection provided by enclosures (IP Code)	60529	Degrees of protection provided by enclosures (IP Code)

Only normative references that have been adopted as Australian or Australian/New Zealand Standard have been listed.

The term ‘informative’ has been used in this Standard to define the application of the annex to which it applies. An ‘informative’ annex is only for information and guidance.

CONTENTS

1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Apparatus	3
5	Battery chargers	5
	5.1 Electrical safety.....	5
	5.2 Performance-related safety.....	6
	5.3 Charging capability.....	9
	5.4 Electromagnetic compatibility.....	11
	5.5 Indicators.....	11
6	Batteries	12
	6.1 Requirements.....	12
	6.2 Test method.....	12
7	Test report	13
	7.1 Test reports for battery chargers.....	13
	7.2 Test reports for batteries.....	13
8	User manual	14
	8.1 User manual for battery chargers.....	14
	8.2 User manual for batteries.....	15
9	Disclosure	15
	Annex A (informative) Recommendations for cyclic endurance	16
	Bibliography	17

INTRODUCTION

Since the reliability and performance of an electrically powered wheelchair depend on the operation, performance and reliability of the battery set and the battery charger, it is important to ensure that wheelchair batteries and chargers are suitable for the purpose and that the wheelchair, batteries and charger are compatible. It is also important to ensure that risks arising from the use of wheelchair batteries and their chargers are eliminated or reduced as far as is practicable. Consequently, it is essential that performance requirements and safety requirements for wheelchair batteries and battery chargers are available.

Battery chargers are divided into three types: off-board, carry-on and on-board. Operating, transport and storage situations can differ for these types, so it is appropriate to apply different requirements to them.

AUSTRALIAN/NEW ZEALAND STANDARD

Wheelchairs

Part 25:

Batteries and chargers for powered wheelchairs

WARNING — This part of ISO 7176 calls for the use of procedures that might be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve those carrying out or commissioning the tests from legal obligations relating to health and safety. Prior to carrying out tests that could cause batteries or chargers to exhibit dangerous behaviour, it is recommended that the likely outcome is assessed and appropriate arrangements made to minimise risk.

1 Scope

This International Standard specifies requirements and test methods for batteries and battery chargers intended for use with electrically powered wheelchairs. It is applicable to lead acid batteries and chargers intended for use with them. Requirements for chargers are applicable to those with a rated input voltage not greater than 250 V a.c. and a nominal output voltage not greater than 36 V.

NOTE 1 Requirements for other battery chemistries (nickel and lithium based batteries) and suitable chargers are under consideration.

NOTE 2 Requirements regarding safety are applicable to all battery chargers intended for use with electrically powered wheelchairs.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 7176-8, *Wheelchairs — Part 8: Requirements and test methods for static, impact and fatigue strengths*

ISO 7176-21, *Wheelchairs — Part 21: Requirements and test methods for electromagnetic compatibility of electrically powered wheelchairs and scooters, and battery chargers*

IEC 60254-1, *Lead-acid traction batteries — Part 1: General requirements and methods of tests*

IEC 60254-2, *Lead-acid traction batteries — Part 2: Dimensions of cells and terminals and marking of polarity on cells*

IEC 60335-2-29, *Household and similar electrical appliances — Safety — Part 2-29: Particular requirements for battery chargers*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 61076-2-103, *Connectors for electronic equipment — Part 2-103: Circular connectors — Detail specification for a range of multipole connectors (type 'XLR')*

SAE J1495, *Test Procedure for Battery Flame Retardant Venting Systems*

IATA *Special Provision A67*