

AS/NZS 7176.31:2024



Australian/New Zealand Standard™

# Wheelchairs

**Part 31: Lithium-ion battery systems and chargers for powered wheelchairs — Requirements and test methods (ISO 7176-31:2023, MOD)**



AS/NZS 7176.31:2024

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- Assistive Technology Suppliers New Zealand
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- Australian Rehabilitation & Assistive Technology Association
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## Preface

This Standard was prepared the Joint Standards Australia/Standards New Zealand Committee ME-067, Assistive Technology.

The objective of this document is to specify requirements and test methods for lithium-ion batteries and battery systems intended for use in electrically powered wheelchairs, and their charging systems.

This document is identical with national modifications, and has been reproduced from, ISO 7176-31:2023, *Wheelchairs — Part 31: Lithium-ion battery systems and chargers for powered wheelchairs — Requirements and test methods*.

The modifications are additional requirements and are set out in [Appendix ZZ](#), which has been added at the end of the source text.

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The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

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## Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 173, *Assistive products*, Subcommittee SC 1, *Wheelchairs*.

A list of all parts in the ISO 7176 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

This document was developed to standardize requirements for use of lithium-ion batteries in wheelchairs.

Lithium-ion batteries provide performance enhancements relative to batteries with other chemistries, but operation outside specified limits can pose unacceptable risks. It is important not to overlook conditions that occur not only when charging using the wheelchair battery charger, but during operation of the wheelchair, which can charge the battery system when decelerating and/or travelling down a slope. In many cases, the wheelchair controller can be considered part of the battery system and charging system combined.