



**Electrically propelled road vehicles—
Safety specifications**

**Part 3: Protection of persons against
electric shock**

STANDARDS
Australia

Currently in preview, click buy full version

This Australian Standard® was prepared by Committee EM-001, Electric Vehicle Operation. It was approved on behalf of the Council of Standards Australia on 4 June 2014. This Standard was published on 30 June 2014.

The following are represented on Committee EM-001:

- Australasian Road Rescue Organisation
 - Australian Automobile Association
 - Australian Electric Vehicle Association
 - Australian Industry Group
 - Auto Skills Australia
 - ChargePoint
 - Consumers Federation of Australia
 - Curtin University of Technology
 - Department of Resources, Energy and Tourism
 - Electrical Regulatory Authorities Council
 - Energy Networks Association
 - Federal Chamber of Automotive Industries
 - Motor Trades Association of Australia
 - National Association of Testing Authorities Australia
 - Transport for NSW
 - Tritium
 - Victorian Automobile Chamber of Commerce
-

This Standard was issued in draft form for comment as DR 102419.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

Keeping Standards up-to-date

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting www.standards.org.au

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

Australian Standard[®]

**Electrically propelled road vehicles—
Safety specifications**

**Part 3: Protection of persons against
electric shock**

First published as AS ISO 6469.3:2014.

COPYRIGHT

© Standards Australia Limited

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968.

Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 1 74342 782 8

PREFACE

This Standard was prepared by the Standards Australia Committee EM-001, Electric Vehicle Operation.

The objective of this Standard is to specify requirements for the electric propulsion systems and conductively connected auxiliary electric systems, if any, of electrically propelled road vehicles for the protection of persons inside and outside the vehicle against electric shock.

This Standard is identical with, and has been reproduced from ISO 6469-3:2011, *Electrically propelled road vehicles—Safety specifications, Part 3: Protection of persons against electric shock*

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

- (a) In the source text ‘this part of ISO 6469’ should read ‘this Australian Standard’
- (b) A full point substitutes for a comma when referring to a decimal marker.

None of the normative references in the source document have been adopted as Australian or Australian/New Zealand Standards.

CONTENTS

1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Environmental and operational conditions	4
5	Voltage classes.....	4
6	Marking.....	5
7	Measures and requirements for protection of persons against electric shock.....	5
8	Test procedures for the protection measures against electric shock.....	10
9	Safety requirements at vehicle crash test	13
10	Owner's guide and manual.....	13
	Bibliography.....	14

AUSTRALIAN STANDARD

Electrically propelled road vehicles—Safety specifications**Part 3:
Protection of persons against electric shock****1 Scope**

This part of ISO 6469 specifies requirements for the electric propulsion systems and conductively connected auxiliary electric systems, if any, of electrically propelled road vehicles for the protection of persons inside and outside the vehicle against electric shock.

It does not apply to motorcycles and vehicles not primarily intended as road vehicles, such as material handling trucks or forklifts.

It applies only to on-board electric circuits with maximum working voltages according to voltage class B.

It does not provide comprehensive safety information for manufacturing, maintenance and repair personnel.

NOTE Requirements for the electric power supply interface conductively connected to the external power supply (grid) for charging the RESS are also specified in IEC 61851-1 and IEC 61851-21.

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 6469-1, *Electrically propelled road vehicles — Safety specifications — Part 1: On-board rechargeable energy storage system (RESS)*

ISO 7010, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

ISO 20653, *Road vehicles — Degrees of protection (IP-Code) — Protection of electrical equipment against foreign objects, water and access*

IEC 60664 (all parts), *Insulation coordination for equipment within low-voltage systems*