

Australian Standard[®]

Motor vehicles—Light alloy road wheels

STANDARDS
Australia



This Australian Standard® was prepared by Committee MT-003, Aluminium and Aluminium Alloys. It was approved on behalf of the Council of Standards Australia on 1 February 2008. This Standard was published on 6 March 2008.

The following are represented on Committee MT-003:

- Australian Aluminium Council
 - Australian Automotive Aftermarket Association
-

This Standard was issued in draft form for comment as DR C 364.

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 remain in 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Standards may also be withdrawn.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[®]

Motor vehicles—Light alloy road wheels

Originally as AS 1638—1974.
Previous edition 1991.
Third edition 2008.

COPYRIGHT

© Standards Australia

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.

Published by Standards Australia GPO Box 476, Sydney, NSW 2001, Australia

ISBN 0 7337 8572 7

PREFACE

This Standard was prepared by the Australian members of Standards Australia/Standards New Zealand Committee MT-003, Aluminium and Aluminium Alloys, to supersede AS 1638—1991, *Motor vehicles—Light alloy road wheels*.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this revision is to reconfirm the test methods and requirements and introduce additional requirements on safety issues related to modifications of wheels and wheel damage. Advice on compliance with the Standard is included in an Appendix.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

CONTENTS

	<i>Page</i>
1 SCOPE.....	4
2 REFERENCED DOCUMENTS.....	4
3 DEFINITIONS.....	5
4 CONSTRUCTION REQUIREMENTS.....	6
5 DAMAGED WHEELS	7
6 PERFORMANCE REQUIREMENTS	7
7 TYPE APPROVAL.....	11
8 MARKING	11
 APPENDICES	
A DYNAMIC CORNERING FATIGUE TEST.....	13
B MEANS FOR DEMONSTRATING COMPLIANCE WITH THIS STANDARD	16
C DYNAMIC RADIAL FATIGUE TEST.....	18
D THIRTY DEGREE IMPACT TEST	21

STANDARDS AUSTRALIA

Australian Standard
Motor vehicles—Light alloy road wheels

1 SCOPE

This Standard specifies the minimum requirements for the type approval based on performance testing of light aluminium alloy and magnesium alloy road wheels for vehicles with a gross mass not exceeding 3.5 t. The wheels may be cast, wrought or of composite construction.

It applies to wheels which are designed for normal driving conditions, and does not purport to apply to wheels which will not fracture or fail under conditions such as may be experienced in an accident. It should be noted that wheels conforming to this Standard may fracture under conditions similar to those which produce severe buckling or failure in steel wheels.

This Standard does not specify the materials to be used in the manufacture of the wheels. Suitable alloy designations may be selected from AS 1874 for aluminium alloys, and EN 1753 for magnesium alloys.

NOTES:

- 1 This Standard does not apply to trailer wheels, caravan wheels and motorcycle wheels.
- 2 Wheels complying with this Standard are also required to comply with the requirements of relevant statutory authorities
- 3 For guidance on how to comply with this Standard refer to Appendix B.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard.

AS

- 1199 Sampling procedure for inspection by attributes
 1199.0 Part 0: Introduction to the ISO 2859 attribute sampling systems
 1199.1 Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

1874 Aluminium and aluminium alloys—Ingots and castings

AS ISO

- 1302 Geometrical product specification (GPS)—Indication of surface texture in technical product documentation

AS/NZS ISO

- 9001 Quality management systems—Requirements
 9004 Quality management systems—Guidelines for performance improvements
 HB 18.28 Conformity assessment—Guidance on a third-party certification system for products

ISO

- 7141 Road vehicles—Light alloy wheels—Impact test

EN

- 1753 Magnesium and magnesium alloys—Magnesium alloys ingots and castings