

Australian Standard[®]

Stainless steel chain for lifting purposes

STANDARDS
Australia



This Australian Standard® was prepared by Committee ME-025, Lifting Tackle. It was approved on behalf of the Council of Standards Australia on 26 February 2009. This Standard was published on 14 July 2009.

The following are represented on Committee ME-025:

- Australian Business
 - Australian Chamber of Commerce and Industry
 - Australian Forging Group
 - Australian Industry Group
 - Australian Maritime Safety Authority
 - Department of Defence (Australia)
 - Engineers Australia
 - Institute of Quarrying Australia
 - National Association of Testing Authorities Australia
 - Victorian WorkCover Authority
 - WorkCover New South Wales
-

This Standard was issued in draft form for comment as DR 07431.

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Standards may also be withdrawn.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[®]

Stainless steel chain for lifting purposes

First published as AS 4797—2009.

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 9181 6

PREFACE

This Standard was prepared by the Standards Australia Committee ME-025, Lifting Tackle.

The objective of this Standard is to provide requirements for the safe and fit-for-purpose specification of stainless steel chain for lifting purposes for reference by users, manufacturers, suppliers and regulators.

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.

Statements expressed in mandatory terms in notes to tables are deemed to be requirements of this Standard.

CONTENTS

	<i>Page</i>
1 SCOPE.....	4
2 APPLICATION	4
3 NORMATIVE REFERENCES	4
4 DEFINITIONS.....	4
5 MATERIAL AND HEAT TREATMENT.....	6
6 DESIGN AND MANUFACTURE.....	7
7 MARKING	9
8 MECHANICAL PROPERTIES	9
9 TESTING OF MECHANICAL PROPERTIES	9
10 PROOF-TESTING.....	9
 APPENDICES	
A INFORMATION THAT SHOULD BE SUPPLIED WITH INQUIRIES AND ORDERS	11
B STANDARDS FOR COMPONENTS USED IN LIFTING SYSTEMS.....	12
C CARE AND USE	13
D TEST FORCES AND CONDITIONS FOR THEIR APPLICATION	15
E MEANS FOR DEMONSTRATING COMPLIANCE WITH THIS STANDARD	17
F DETERMINATION OF ELONGATION	19
BIBLIOGRAPHY	22

STANDARDS AUSTRALIA

Australian Standard
Stainless steel chain for lifting purposes

1 SCOPE

This Standard specifies requirements for non-calibrated short-link stainless steel chain for lifting purposes, manufactured from electrically welded round stainless steel short links.

NOTES:

- 1 Guidance on information that should be supplied with enquiries and orders is given in Appendix A.
- 2 Standards for components that are used in lifting systems are listed in Appendix B.

2 APPLICATION

Stainless steel chains are typically used in corrosive environments for a wide range of specialized industrial lifting applications. Such specialized applications include, but are not limited to, the food, pharmaceutical, chemical, fishing, water and wastewater industries.

Where stainless steel chain is selected for properties other than corrosion resistance, subject to competent assessment, chain in the as-welded condition may be adequate.

Care and use of chain shall be in accordance with Appendix C.

3 NORMATIVE REFERENCES

The following documents are indispensable to the application of this Standard:

NOTE: Documents referenced for informative purposes are listed in the Bibliography.

AS

- | | |
|-----------|--|
| 1418 | Cranes, hoists and winches |
| 1418.1 | Part 1: General requirements |
| 2193 | Methods for calibration and grading of force-measuring systems of testing machines |
| 2205 | Methods for destructive testing of welds in metal |
| 2205.10.1 | Method 10.1: Corrosion test for welded austenitic stainless steel |

ASTM

- | | |
|------------|--|
| A276 | Standard Specification for Stainless Steel Bars and shapes |
| A580/A580M | Standard Specification for Stainless Steel Wire |

4 DEFINITIONS

For the purpose of this Standard, the definitions below apply.

4.1 Barrel

The straight side of a link, which may include the weld zone adjoining the curved ends.

4.2 Breaking force

The maximum force that a chain test sample withstands during a destruction test.