

Australian Standard[®]

Steel wire ropes—Product specification



This Australian Standard® was prepared by Committee ME-007, Steel Wire Ropes. It was approved on behalf of the Council of Standards Australia on 23 March 2009. This Standard was published on 19 March 2010.

The following are represented on Committee ME-007:

- Australasian Institute of Mining and Metallurgy
 - Australian Business Limited
 - Australian Chamber of Commerce and Industry
 - Crane Industry Council of Australia
 - Materials Australia
 - Shipping Australia
 - TestSafe Australia
-

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PREFACE

This Standard was prepared by the Standards Australia Committee ME-007, Steel Wire Ropes to supersede AS 3569—1989.

This Standard incorporates Amendment No. 1 (October 2012). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard is to provide a common specification, vocabulary, designation and classification system for steel wire ropes for reference by manufacturers, suppliers, users and regulators so that steel wire ropes may be selected and applied appropriately.

Australia has a standard for spiral ropes (AS 2841, *Galvanized steel wire strand*), which does not conflict with this Standard.

This Standard is based on the following ISO Standards:

ISO

2408:2004 Steel wire ropes for general purposes—Minimum requirements

17893:2004 Steel wire ropes—Vocabulary, designation and classification

Variations in this Standard from the above ISO Standards include the following:

- 1 The range of sizes has been extended beyond 60 mm.
- 2 Breaking strengths of 1570 Grade ropes have been developed for a limited range of sizes and classifications of wire ropes.
- 3 The Australian Standards for wire and coatings for wire are specified.
- 4 The information required on test certificates has been expanded.
- 5 The markings required are more substantial.

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.

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STANDARDS AUSTRALIA

Australian Standard Steel wire ropes—Product specification

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Australian Standard specifies minimum requirements for the manufacture and testing of stranded steel wire ropes for general purposes, including lifting equipment such as cranes and hoists. Ropes for slings are also dealt with, and tables giving minimum breaking forces for the more common sizes, grades and constructions of stranded rope presented. It is applicable to single-layer, rotation-resistant and parallel-closed ropes made from wires of uncoated (bright), zinc-coated and zinc-alloy coated finish. Additional requirements may apply for specific applications including, but not limited to the following:

- (a) Mining purposes.
- (b) Aircraft control.
- (c) The petroleum and natural gas industries.
- (d) Aerial ropeways and funiculars.
- (e) Lifts.

NOTES:

- 1 For rope grade equivalents see Appendix F.
- 2 Standards relevant for the application of steel wire ropes are listed in Appendix G.

1.2 NORMATIVE REFERENCES

The following are the normative documents referenced in this Standard:

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

AS	
1394	Round steel wire for ropes
4534	Zinc and zinc/aluminium-alloy coatings on steel wire
ISO	
2408	Steel wire ropes for general purposes—Minimum requirements
3108	Steel wire ropes for general purposes—Determination of actual breaking load
4345	Steel wire ropes—Fibre main cores—Specification
4346	Steel wire ropes for general purposes—Lubricants—Basic requirements
6892	Metallic materials—Tensile testing
6892-1	Part 1: Method of test at room temperature