AS/NZS 4534:2006
Reconfirmed 2017

AS/NZS 4534:2006

Australian/New Zealand Standard™

Zinc and zinc/aluminium-alloy coatings on steel wire

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AS/NZS 4534:2006

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee MT-009, Metal Finishing. It was approved on behalf of the Council of Standards Australia on 8 June 2006 and on behalf of the Council of Standards New Zealand on 16 June 2006.
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The following are represented on Committee MT-009:

Australian Institute of Metal Finishing
Australian Aluminium Council
Australian Industry Group
Australian Paint Manufacturers' Federation
Department of Defence
Galvanizers Association of Australia
Institution of Materials Engineering Australia
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This Standard was issued in draft form for comment as DR 06060.

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION
OF
AS/NZS 4534:2006
Zinc and zinc/aluminium-alloy coatings on steel wire

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Technical Committee MT-009 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

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The following are represented on Technical Committee MT-009:

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Australian Chamber of Commerce and Industry
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Australian Steel Institute
Bureau of Steel Manufacturers of Australia
Galvanizers Association of Australia
Galvanizing Association of New Zealand
New Zealand Metal Roofing Manufacturers

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Australian/New Zealand Standard™

Zinc and zinc/aluminium-alloy coatings on steel wire

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee MT-009, Metal Finishing, to supersede AS/NZS 4534:1998, *Zinc and zinc/aluminium-alloy coatings on steel wire.*

The objective of this Standard is to specify requirements for zinc/aluminium-alloy coatings on steel wire and on fabricated wire products. The coatings are formed by the application of molten metal by hot dipping using a specialized continuous process, or by electroplating. However, in this revision of the Standard, a further range of coatings, specifically of high coating mass, has been added. The purpose of these new coatings, which first appeared in AS 2423—2002, *Coated steel wire fencing products for terrestrial, aquatic and general use*, is to provide superior protection to steel wire subjected to the more aggressive forms of corrosive environment, such as immersion in seawater.

This edition contains improved guidelines, set out in an Appendix, for the selection of appropriate coatings for the corrosion protection of steel wire.

During the preparation of this Standard cognisance was taken of ISO 7989:1988, *Zinc coatings for steel wire*. However, this international Standard could not be endorsed as an Australian Standard, as it is deficient in technical detail and is considered unsuitable by Australian industry.

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, where an 'informative' appendix is only for information and guidance.

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1 SCOPE

This Standard specifies requirements for the mass, quality and testing of zinc coatings and zinc/aluminium-alloy coatings on steel wire of circular or non-circular (shaped) cross-section. The coatings are applied in a continuous process and may be formed either by the application of molten metal or by electrodeposition.

Six standard coating mass classes and a range of special coating mass classes are covered. The standard classes are intended, in general, for applications subjected to normal atmospheric corrosion conditions, whereas the special classes are specifically designed to provide acceptable durability under severe to extreme service conditions, such as for prolonged immersion in freshwater or seawater.

This Standard applies to coatings on wire at its final size, whether or not the coating has been applied after final cold working, prior to cold working, or at an intermediate stage of cold working.

Matters not relating to the coating itself are outside the scope of this Standard.

This Standard does not apply to coatings on articles that have been fabricated from uncoated steel wire and which have subsequently been coated with zinc or zinc/aluminium alloy, except where the coating has been applied in a specialized continuous process (e.g. for wire netting) as opposed to batch treatment (e.g. for nails).

NOTES:

1 Advice and recommendations on information to be supplied by the purchaser at the time of enquiry or order are contained in Appendix A.

2 Coatings in accordance with this Standard may not be available in every combination of wire size, coating mass class and coating type. Reference should be made to appropriate Australian Standards for the types of wire involved.

3 Means for determining compliance with this Standard are given in Appendix B.

4 Except as stated in this Clause, requirements for zinc coatings on manufactured wire articles, which have been electroplated following fabrication, are given in AS 1789.

5 This Standard does not specify the Preece test for coating uniformity. If this test is required, arrangements should be made between the purchaser and the supplier.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1199	Sampling procedures for inspection by attributes
1199.0	Part 0: Introduction to the ISO 2859 attribute sampling system
1199.1	Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection
1242	Zinc ingots
1329	Methods for the analysis of zinc and zinc alloys
1329.1	Method 1: Determination of aluminium content—Titrimetric method

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