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Australian Standard®

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**Hot-dipped galvanized coatings on  
ferrous articles**

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STANDARDS AUSTRALIA



This Australian Standard was prepared by Committee MT/9, Metal Finishing. It was approved on behalf of the Council of Standards Australia on 5 July 1989 and published on 7 August 1989.

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The following interests are represented on Committee MT/9:

Aluminium Development Council  
Australasian Institute of Metal Finishing  
Bureau of Steel Manufacturers of Australia  
Confederation of Australian Industry  
Department of Defence  
Metal Trades Industry Association of Australia  
Royal Australian Chemical Institute  
Telecom Australia  
University of Queensland

Additional interests participating in preparation of Standard:

Australian Zinc Development Association  
Galvanizers Association of Australia  
Tubemaking organizations

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## PREFACE

This Standard was prepared by Standards Australia's Committee on Metal Finishing to supersede AS 1650—1981, *Galvanized coatings*.

In this edition the section on fasteners has been deleted. It is considered that this is adequately covered by AS 1214, *Hot-dip galvanized coatings on threaded fasteners (ISO metric coarse thread series)*.

The Preece Test for uniformity of coating is not included in the Standard since it is recognized, both in Australia and overseas, that it has many drawbacks which make it highly suspect in a pass/fail situation.

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## STANDARDS AUSTRALIA

## Australian Standard

## Hot-dipped galvanized coatings on ferrous articles

## SECTION 1. SCOPE AND GENERAL

**1.1 SCOPE.** This Standard specifies requirements for the mass, quality and testing of the hot-dip zinc (galvanized) coating on ferrous articles, of the following product types:

- (a) Sheet.
- (b) Hollow sections (circular and non-circular).
- (c) Wire of circular cross-section.
- (d) General articles (forgings, fabricated steelwork, castings, centrifuged work, bar and wire products).

Matters relating to the quality, properties, or dimensional requirements of the iron or steel base material are outside the scope of this Standard.

## NOTES:

1. Appendix A contains advice and recommendations on information which should be supplied by the purchaser at the time of enquiry or order.
2. Advisory information on methods of determining compliance of a lot with this Standard is given in Appendix B.

**1.2 REFERENCED DOCUMENTS.** The following documents are referred to in this Standard:

AS	
1074	Steel tubes and tubulars threaded or suitable for threading with pipe threads of Whitworth form
1199	Sampling procedures and tables for inspection by attributes
1250	SAA Steel Structures Code
1397	Steel sheet and strip—Hot-dipped zinc-coated or aluminium/zinc coated
1399	Guide to AS 1199, Sampling procedures and tables for inspection by attributes
1511	SAA High-strength Structural Bolting Code
1791	Chromate conversion coatings—Zinc and cadmium
1821–1823	Suppliers Quality Systems
2000	Guide to AS 1821–1823—Suppliers quality systems
2204	Zinc-rich organic priming paint
2331	Methods of test for metallic and related coatings
2331.1.3	Method 1.3: Local thickness tests—Magnetic method
2331.1.4	Method 1.4: Local thickness tests—Magnetic induction and eddy current methods

2331.1.5	Method 1.5: Local thickness tests—Beta-backscatter method
2331.2.1	Method 2.1: Average thickness tests—Dissolution methods—Strip and weigh, and analytical
2331.2.3	Method 2.3: Average thickness tests—Hydrogen evolution method for zinc coatings
2483	Metal finishing—Recommended sampling plans for the inspection and testing of coatings
2490	Sampling procedures and charts for inspection by variables for percent defective
2505	Methods for bend and related testing of metals
2505.1	Part 1: Sheet, strip and plate
2706	Numerical values—Rounding and interpretation of limiting values
3900	Quality systems—Guide to selection and use
3901	Quality systems for design/development, production, installation and servicing
3902	Quality systems for production and installation
3903	Quality systems for final inspection and test
3904	Quality systems—Guide to quality management and quality system elements
BS	
443	Specification for testing zinc coatings on steel wire and for quality requirements
ASTM	
A 143	Recommended practice for safeguarding against embrittlement of hot-dip galvanized structural steel products and procedure for detecting embrittlement

**1.3 DEFINITIONS.** For the purpose of this Standard, the definitions below apply.

**1.3.1 Coating mass**—mass of the zinc coating per unit area expressed in grams per square metre.

NOTE: The mass of the coating for sheet is expressed as the total amount on both surfaces of the steel base (see also AS 1397).

**1.3.2 Galvanized coating**—a coating obtained by dipping prepared ferrous articles in molten zinc.

**1.3.3 Galvanizer**—a person, persons, or organization responsible for the coating of the article with molten zinc.