

Australian Standard[®]

**Continuous hot-dip metallic coated steel
sheet and strip—Coatings of zinc and
zinc alloyed with aluminium and
magnesium**

STANDARDS
Australia



This Australian Standard® was prepared by Committee MT-001, Iron and Steel. It was approved on behalf of the Council of Standards Australia on 18 August 2011. This Standard was published on 15 September 2011.

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- Australian Building Codes Board
 - Australasian Corrosion Association
 - Australian Foundry Institute
 - Australian Institute of Architects
 - Australian Steel Association
 - Australian Steel Institute
 - Bureau of Steel Manufacturers of Australia
 - Materials Australia
 - New Zealand Heavy Engineering Research Association
 - Society of Automotive Engineers—Australasia
 - The University of Sydney
-

This Standard was issued in draft form for comment as DR AS 1397.

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.

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**Continuous hot-dip metallic coated steel
sheet and strip—Coatings of zinc and
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magnesium**

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PREFACE

This Standard was prepared by the Australian members of Joint Standards Australia/Standards New Zealand Committee MT-001, Iron and Steel, to supersede AS 1397—2001, *Steel sheet and strip—Hot-dipped zinc-coated or aluminium/zinc-coated*.

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.

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.

This Standard upgrades the requirements of AS 1397—2001 and introduces three new coating types:

- (a) Zinc and aluminium (Type ZA).
- (b) Zinc, aluminium and magnesium (Type ZM).
- (c) Aluminium, zinc and magnesium (Type AM).

Committee MT-001 has sought to align with the following international and national Standards, where applicable:

ISO 9364:2006, *Continuous hot-dip aluminium/zinc-coated steel sheet of commercial, drawing and structural qualities*

ISO 4998:2011, *Continuous hot-dip zinc-coated carbon steel sheet of structural quality*

ISO 3575:2011, *Continuous hot-dip zinc-coated carbon steel sheet of commercial and drawing qualities*

ASTM A1046/A1046M-10a, *Specification for steel sheet, zinc-aluminium-magnesium alloy-coated by the hot-dip process*

ASTM A902-09, *Terminology relating to metallic coated steel products*

ASTM A875/875M-09a, *Specification for steel sheet, zinc-5% aluminium alloy-coated by the hot-dip process*

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

Continuous hot-dip metallic coated steel sheet and strip—Coatings of zinc and zinc alloyed with aluminium and magnesium

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for continuously hot-dip metallic coated sheet and strip supplied in thicknesses up to and including 5.0 mm.

Requirements for product conformity to this Standard are given in Appendix B.

Requirements covered in this Standard are as follows:

- (a) Formability grades of steel.
- (b) Structural grades of steel.
- (c) Classes of zinc coating, including differential coatings.
- (d) Classes of zinc coating converted to zinc/iron alloy.
- (e) Classes of zinc/aluminium coatings.
- (f) Classes of zinc/aluminium/magnesium alloy coating.
- (g) Classes of aluminium/zinc alloy coating.
- (h) Classes of aluminium/zinc/magnesium alloy coating.
- (i) Surface finish.

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 The specified requirements apply to the full length and full width of the product supplied, unless otherwise indicated.
- 3 Within the description of the classes of coatings, the majority element present is listed first, followed by the next major element and followed by a third element if appropriate.

1.2 NORMATIVE DOCUMENTS

The following are the normative documents referenced in this Standard:

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

AS 1397	Metallic materials—Tensile testing of ambient temperature
2331	Methods of test for metallic and related coatings
2331.2.1	Method 2.1: Tests for average coating mass per unit area or for thickness Dissolution methods—Strip and weigh and analytical
2331.2.3	Method 2.3: Tests for average coating mass per unit area or for thickness— Hydrogen evolution method for zinc coatings
2505	Metallic materials
2505.1	Part 1: Sheet, strip and plate—Bend tests