

Australian Standard™

**Metal finishing—Thermoset powder  
coatings**

This Australian Standard was prepared by Committee MT-009, Metal Finishing. It was approved on behalf of the Council of Standards Australia on 18 April 2005. This Standard was published on 18 May 2005.

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Australian Chamber of Commerce and Industry  
Australian Industry Group  
Australasian Institute of Metal Finishing  
Australian Paint Manufacturers Federation  
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STANDARDS AUSTRALIA

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RECONFIRMATION

OF

AS 4506—2005

Metal finishing—Thermoset powder coatings

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NOTES

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Australian Standard™

**Metal finishing—Thermoset powder coatings**

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## PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee MT-009, Metal Finishing, to supersede AS/NZS 4506:1998, *Metal finishing—Thermoset powder coatings*. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian, rather than an Australian/New Zealand Standard.

The objective of the Standard is to provide test procedures and performance requirements for powder-coated metal products, other than aluminium products intended for architectural applications. Requirements for aluminium products for use in architectural applications are contained in AS 3715, *Metal finishing—Thermoset powder coatings for architectural applications of aluminium and aluminium alloys*.

The objective of this revision is to include testing criteria which relate to service condition categories that are set out as described in AS/NZS 2312, *Guide to the protection of structural steel against atmospheric corrosion by the use of protective coating*.

Powder coatings consist of pigments and reinforcing fillers combined with resins such as epoxy and polyester. They may be applied to suitably prepared ferrous, galvanized steel, non-ferrous or metal-sprayed surfaces.

Currently there are no international (ISO) Standards on the subject.

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.

## CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE .....	4
1.2 REFERENCED DOCUMENTS .....	4
1.3 DEFINITIONS .....	6
1.4 ATMOSPHERIC CLASSIFICATIONS.....	6
1.5 SAFETY REQUIREMENTS .....	7
SECTION 2 PERFORMANCE REQUIREMENTS	
2.1 GENERAL .....	8
2.2 PRETREATMENT .....	8
2.3 APPEARANCE .....	8
2.4 SPECULAR GLOSS .....	8
2.5 COATING THICKNESS.....	9
2.6 CURE TEST (SOLVENT RESISTANCE METHOD).....	9
2.7 ADHESION (CROSS-CUT).....	9
2.8 HUMIDITY RESISTANCE .....	9
2.9 DURABILITY (EXPOSURE) OF POWDER COATINGS .....	9
2.10 HOLIDAY TESTING.....	9
2.11 CORROSION RESISTANCE.....	9
2.12 PERMEABILITY TEST.....	14
2.13 RESISTANCE TO MORTAR .....	14
APPENDICES	
A PURCHASING REQUIREMENTS .....	15
B MEANS OF DEMONSTRATING COMPLIANCE WITH THIS STANDARD.....	16
C WEATHERING PERFORMANCE OF POWDER-COATED METAL PRODUCTS	18
D MAINTENANCE OF POWDER-COATED METAL .....	19
E REPAIR OF POWDER-COATED METAL .....	20
F HANDLING AND TEMPORARY PROTECTION DURING TRANSPORTATION AND INSTALLATION.....	21
G ATMOSPHERIC ENVIRONMENTS.....	22
H SELECTION OF TEST SPECIMENS .....	25
I SURFACE PRETREATMENT FOR POWDER COATINGS .....	26
J TEST METHODS FOR DURABILITY (EXPOSURE) AND CORROSION RESISTANCE.....	31
K PERMEABILITY TEST.....	33
L TEST METHOD FOR RESISTANCE TO MORTAR.....	34
M SOLVENT-CURE TEST .....	36

## STANDARDS AUSTRALIA

**Australian Standard**  
**Metal finishing—Thermoset powder coatings**

## SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE**

This Standard sets out relevant test procedures and specifies performance requirements for thermoset powder coatings applied to metal substrates, with the exception of aluminium for architectural applications (see AS 3715). It specifies six atmospheric categories.

The requirements to be specified by the purchaser at the time of enquiry or order are shown in Appendix A.

## NOTES:

- 1 The means of demonstrating compliance with the Standard is shown in Appendix B.
- 2 Information on the weathering of powder-coated metal products is given in Appendix C.
- 3 Information on maintenance of coatings is given in Appendix D.
- 4 Recommendations for the repair of powder coated metals are given in Appendix E.
- 5 Advice on handling and temporary protection during transportation and installation is given in Appendix F.

**1.2 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.
1580	Paints and related materials—Methods of test
1580.408.4	Method 408.4: Adhesion (cross-cut)
1580.481.3	Method 481.3: Coatings—Exposed to weathering—Degree of corrosion of coated metal substrates
1627	Metal finishing—Preparation and pretreatment of surfaces
1627.0	Part 0: Method selection guide
1627.1	Part 1: Removal of oil, grease and related contamination
1627.2	Part 2: Power tool cleaning
1627.4	Part 4: Abrasive blast cleaning
1627.5	Part 5: Pickling
1627.6	Part 6: Chemical conversion treatment of metals
1672	Limes and limestones
1672.1	Part 1: Limes for building
1745	Outdoor weathering of plastics in the Australian environment
1745.1	Part 1: Commercial products
2331	Methods of test for metallic and related coatings
2331.3.1	Method 3.1: Corrosion and related property tests—Neutral salt spray (NSS) test