

STANDARDS AUSTRALIA

---

**RECONFIRMATION**

**OF**

**AS 2331.1.1—2001**

**Methods of test for metallic and related coatings**

**Method 1.1: Local thickness tests—Micrographic examination of cross-sections**

---

**RECONFIRMATION NOTICE**

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.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 20 March 2017.

The following are represented on Technical Committee MT-009:

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

## NOTES

# Australian Standard™

AS 2331.1.1

## Methods of test for metallic and related coatings

### Method 1.1: Local thickness tests—Micrographic examination of cross-sections

#### PREFACE

This Standard has been prepared by the Joint Standards Australia/Standards New Zealand Committee MT-009, Metal Finishing, to supersede AS 2331.1.1—1980. It is the result of a consensus among representatives on the Joint Committee to produce it as an Australian Standard. The objective of this revision is to upgrade the requirements so that they closely align with ISO 1463:1982, *Metallic and oxide coatings—Measurement of coating thickness—Microscopical method*.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

#### METHOD

##### 1 SCOPE

This Standard specifies a method for the measurement of the local thickness of metallic coatings, oxide layers, and porcelain or vitreous enamel coatings, by the microscopical examination of cross-sections using an optical microscope. This Standard does not apply to paint coatings. Test methods for paint and related coatings are specified in the AS/NZS 1580 series of Standards.

Under good conditions, when using an optical microscope, the method is capable of giving an absolute measuring accuracy of 0.8 µm; this will determine the suitability of the method for measuring the thickness of thin coatings.

##### NOTES:

- 1 The test procedures described in this Standard do not necessarily include all of the precautions required to satisfy health and safety aspects. Care should be taken to ensure that the procedures are carried out only by people who have received suitable training. Guidance in the handling and use of hazardous chemicals is given in AS/NZS 2243.1 and AS/NZS 2243.2.
- 2 Factors relating to measuring accuracy are given in Appendix A.

##### 2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS/NZS  
1580      Paints and related materials—Methods of test (all Standards)