

Australian Standard<sup>®</sup>

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**Metallic coatings—Coatings other than those anodic to the basis metal—Accelerated corrosion tests—Method for the evaluation of the results**

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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  
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## PREFACE

This Standard was prepared by the Standards Australia Committee on Metal Finishing to supersede AS 1247—1972, *The evaluation of results of accelerated corrosion tests on metallic coatings*.

It is identical with and has been reproduced from ISO 1462:1973, *Metallic coatings—Coatings other than those anodic to the basis metal—Accelerated corrosion tests—Method for the evaluation of the results*.

For the purposes of this Australian Standard, the ISO text should be modified by substituting a full point (.) for a comma (,) as a decimal point.

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# Metallic coatings—Coatings other than those anodic to the basis metal—Accelerated corrosion tests—Method for the evaluation of the results

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard gives a rating system that provides a means of defining levels of performance of coatings, other than those anodic to the basis metal, that have been subjected to accelerated corrosion tests. This method takes into account only corrosion of the basis metal.

This method is employed only on articles which have not already been rejected on simple inspection on the grounds of the size or grouping of individual corrosion defects as required by the International Standard for the particular coating.

Individual articles having a significant surface less than about 25 mm<sup>2</sup> in area are unsuitable for assessment by this method.

## 2 DEFINITIONS

In this International Standard the following definitions apply:

**2.1 significant surface:** The part of the surface which is essential to the appearance or serviceability of the article and which is to be covered or is covered by the coating.

When necessary, the significant surface shall be the subject of agreement, and shall be indicated on drawings, or by the provision of suitably marked samples.

**2.2 corrosion spot:** A surface corrosion defect at which the coating is penetrated, as indicated by the appearance of basis metal corrosion products or lifting of the coating.

Discoloration or other surface defects which do not penetrate the coating do not count as corrosion spots.

The size of a corrosion spot is the area of the penetration through the coating and not that of associated staining.

## 3 SAMPLING

The batch shall be sampled in the manner required by the relevant specification. The total significant surface area of the sample shall be in excess of 5 000 mm<sup>2</sup>.

If the individual articles forming the sample have a significant surface area smaller than 5 000 mm<sup>2</sup>, the sample for assessment shall comprise a sufficient number of individual articles to obtain a total significant surface area equal to or greater than this area.

If the rating number required is greater than or equal to 8, the total significant surface area of the sample shall exceed 10 000 mm<sup>2</sup>.

## 4 EXAMINATION OF SAMPLE AFTER TEST

The sample shall be examined in its condition at the end of the test or after rinsing in running water, if this is necessary to remove the residue of the test medium.

Corrosion products may be removed subsequently, to enable the size of individual corrosion spots to be assessed.

For the purpose of evaluation, divide the area of the significant surface of the sample hypothetically into squares of 5 mm side. This is easily done by placing a graticule, made of fully flexible transparent plastics material, on the sample so as to give the most favourable result, i.e. the highest rating.

Count the number *N* of 5 mm squares in the significant area of the sample and the number *n* of such squares containing one or more corrosion spots.

When evaluating the total area of the sample, squares more than half-occupied by the sample shall be counted as full squares; those less than half-occupied shall be ignored.

If a spot appears to lie in more than one square, it shall be counted only once in the evaluation, but cracks traversing more than one square shall be counted for each square entered.