

Methods of test for

Anodic oxidation coatings on aluminium and its alloys —

Part 16: Rating system for the
evaluation of pitting corrosion —
Chart method

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Surface Coatings (other than Paints) Standards Policy Committee (SRC/-) to Technical Committee SRC/32, upon which the following bodies were represented:

- Aluminium Federation
- Aluminium Window Association
- Association of Builders Hardware Manufacturers
- British Anodising Association
- British Lock Manufacturers Association
- British Metal Finishing Suppliers' Association
- Institute of Metal Finishing
- Institution of Chemical Engineers
- Institution of Corrosion Science and Technology
- Metal Finishing Association
- Metal Window Federation Ltd.
- Royal Institution of Chartered Surveyors

This British Standard, having been prepared under the direction of the Surface Coatings (other than Paints) Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 28 February 1990

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The following BSI references relate to the work on this standard:
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National foreword

This Part of BS 6161 has been prepared under the direction of the Surface Coatings (other than Paints) Standards Policy Committee. It is identical with ISO 8993:1989 “*Anodized aluminium and aluminium alloys — Rating system for the evaluation of pitting corrosion — Chart method*” published by the International Organization for Standardization (ISO). ISO 8993 was prepared by Subcommittee 2 “Anodized aluminium” of Technical Committee ISO/TC 79 “Light metals and their alloys”, with the active participation and approval of the UK.

The following Parts of this standard have been published.

- *Part 1: Determination of mass per unit area (surface density) of anodic oxidation coatings (gravimetric method);*
- *Part 2: Determination of thickness of anodic oxide coatings: non-destructive measurement by split-beam microscope;*
- *Part 3: Assessment of sealing quality by measurement of the loss of mass after immersion in phosphoric-chromic acid solution;*
- *Part 4: Assessment of sealing quality by measurement of the loss of mass after immersion in acid solution;*
- *Part 5: Estimation of loss of absorptive power of sealed coatings: dye spot test with prior acid treatment;*
- *Part 6: Assessment of sealing quality by measurement of admittance or impedance;*
- *Part 7: Accelerated determination of light fastness of coloured anodic oxidation coatings using artificial light;*
- *Part 8: Determination of the fastness to ultraviolet light of coloured anodic oxide coatings;*
- *Part 9: Measurement of wear properties with an abrasive wheel wear test apparatus;*
- *Part 10: Measurement of mean specific abrasion resistance with an abrasive jet test apparatus;*
- *Part 11: Measurement of total reflectance using a photoelectric reflectometer;*
- *Part 12: Measurement of specular reflectance and specular gloss at angles of 20°, 45°, 60° and 85°;*
- *Part 13: Image clarity test using the Gardam grid;*
- *Part 14: Determination of infra-red reflectance;*
- *Part 15: Determination of electrical breakdown potential;*
- *Part 16: Rating system for the evaluation of pitting corrosion — Chart method;*
- *Part 17: Rating system for the evaluation of pitting corrosion — Grid method.*

It should be noted that in clause 4 “Test report”, the information required for items e, f and g is predetermined and does not arise from this method of test.

Cross-references

International standard	Corresponding British Standard
	BS 6161 Methods of test for anodic oxidation coatings on aluminium and its alloys
ISO 2106-1982	Part 1:1984 Determination of mass per unit area (surface density) of anodic oxidation coatings (gravimetric method) (Identical)

This Part of BS 6161 describes a method of test only and should not be used or quoted as a specification defining anodic oxidation coating quality. Reference to this Part should state that the method of test used is in accordance with BS 6161-16.

Textual errors. In 2.2, Note, for “decolouration” read “discolouration”.

In Figure 5, caption, for “destignation” read “designation”.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

