

Methods of test for

Anodic oxidation coatings on aluminium and its alloys —

**Part 3: Assessment of sealing quality by
measurement of the loss of mass after
immersion in phosphoric-chromic acid
solution —**

**[ISO title: Anodizing of aluminium and
its alloys — Assessment of quality of
sealed anodic coatings by measurement
of the loss of mass after immersion in
phosphoric-chromic acid solution]**

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Surface Coatings (other than Paints) Standards Committee (SRC/-) to Technical Committee SRC/4 upon which the following bodies were represented:

- Aluminium Federation
- Aluminium Window Association
- Association of Builders' Hardware Manufacturers
- British Anodizing 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 Limited
- Ministry of Defence
- Royal Institution of Chartered Surveyors

This British Standard, having been prepared under the direction of the Surface Coatings (other than Paints) Standards Committee, was published under the authority of the Board of BSI and comes into effect on 31 December 1984

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Contents

	Page
Committees responsible	Inside front cover
National foreword	ii
1 Scope	1
2 Field of application	1
3 Reference	1
4 Principle	1
5 Reagents	1
6 Apparatus	1
7 Preparation of test piece	1
8 Procedure	1
9 Expression of results	2
10 Test report	2
Annex Suggested method for drying of samples before and after acid treatment	3
Publications referred to	Inside back cover

National foreword

This revision of this Part of BS 6161 has been prepared under the direction of the Surface Coatings (other than Paints) Standards Committee and supersedes the 1981 edition which is withdrawn. It is identical with ISO 3210:1983 “*Anodizing of aluminium and its alloys — Assessment of quality of sealed anodic coatings by measurement of the loss of mass after immersion in phosphoric-chromic acid solution*”, published by the International Standards Organization (ISO). ISO 3210 was prepared by Subcommittee 2 “*Anodized aluminium*” of Technical Committee 79 “Light metals and their alloys” with the active participation and approval of the UK.

This revision differs from the 1981 edition as follows.

- a) A correction has been made in respect of an incorrectly specified reagent.
- b) The procedure has been more rigorously described and provision made for more accurate weighing of the test specimen.
- c) A procedure has been included for drying the test specimen before and after acid treatment.

The individual Parts of this standard are intended to replace progressively the appendices of BS 1615:1972 “*Anodic oxidation coatings on aluminium*” and, when all the test methods required for the purposes of that standard have been issued as Parts of BS 6161, BS 1615 will be revised accordingly.

Further Parts of this standard are in preparation; at present the following Parts have been published:

- *Part 1: Determination of mass per unit area of anodic oxide 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 test 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.*

Terminology and conventions. The text of the international standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

The comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Wherever the words “International Standard” appear, referring to this standard, they should be read as “Part of BS 6161”.