

Methods of test for

Anodic oxidation coatings on aluminium and its alloys —

Part 19: Determination of image
clarity — Instrumental method

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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 Policy Committee (SRC/-) to Technical Committee SRC/32, upon which the following bodies were represented:

- Aluminium Federation
- Aluminium Finishing Association
- Aluminium Window Association
- Association of Builders' Hardware Manufacturers
- British Lock Manufacturers' Association
- British Metal Finishing Suppliers' Association
- Institute of Corrosion
- Institute of Metal Finishing
- Metal Finishing Association
- Ministry of Defence

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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 10216:1992 *Anodized aluminium and aluminium alloys — Instrumental determination of image clarity of anodic oxidation coatings — Instrumental method*, prepared by Subcommittee 2, Anodized aluminium, of Technical Committee 79, Light metals and their alloys, of the International Organization for Standardization (ISO), with the active participation and approval of the UK.

At present the following Parts of this British 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° or 85°;*
- *Part 13: Visual determination of image clarity — Chart scale method;*
- *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;*
- *Part 18: Determination of surface abrasion resistance;*
- *Part 19: Determination of image clarity — Instrumental method.*

Additional information

Estimation of the image clarity of anodic oxidation coatings on aluminium and its alloys is normally carried out visually by observing the clearness of an image on the surface. However, the image can be observed at various angles and can be confused with the gloss level of a surface, and while the degree of image clarity is mainly influenced by the clearness of the coating, it is also affected by image distortion caused by surface irregularities and the haziness of the coating layer. Standardized methods of determining image clarity were therefore required.

This British Standard specifies the use of an instrumental method of measuring image clarity using optical combs. A related British Standard BS 6161 *Methods of test for anodic oxidation coatings on aluminium and its alloys* —

Part 13: Visual determination of image clarity — Chart scale method specifies a chart scale also based on optical combs together with a lightness scale to rank image clarity.

NOTE This instrumental method provides more accurate measurements of image clarity and should be used in cases of dispute.

Cross-references

International standard	Corresponding British Standard
	BS 6161 <i>Methods of test for anodic oxidation coatings on aluminium and its alloys</i>
ISO 2128:1976	Part 2:1981 <i>Determination of thickness of anodic oxide coatings: non-destructive measurement by split-beam microscope</i> (Identical)
ISO 7668:1986	Part 12:1987 <i>Measurement of specular reflectance and specular gloss at angles of 20°, 45°, 60° or 85°</i> (Technically equivalent)

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Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 6, 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.