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STANDARD

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JIS H 8683-1 : 1999

**Test methods for sealing quality
of anodic oxide coatings on
aluminium and aluminium alloys—
Part 1 : Dye spot test method**

ICS 25.220.20

Descriptors : aluminium, aluminium alloys, protective coatings, oxidation methods,
anodizing, anodic coating, adsorption, dyes

Reference number : JIS H 8683-1 : 1999 (E)

H 8683-1 : 1999

Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of International Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law. Consequently, **JIS H 8683 : 1994** was withdrawn and one of the test methods specified in **JIS H 8683**, "Dye spot test method" was replaced to this Standard. For the purposes of helping to compare this Standard with International Standards; to prepare Japanese Industrial Standard conforming with International Standards; and to propose a draft for International Standard which is based on Japanese Industrial Standard, the test methods, (1) Dye spot test method, (2) Phosphoric-chromic acid solution immersion test method and (3) Admittance test method specified in **JIS H 8683 : 1994** are individually standardized as follows.

- JIS H 8683-1 *Test methods for sealing quality of anodic oxide coatings on aluminium and aluminium alloys—Part 1 : Dye spot test method*
- JIS H 8683-2 *Test methods for sealing quality of anodic oxide coatings on aluminium and aluminium alloys—Part 2 : Phosphoric-chromic acid solution immersion test method*
- JIS H 8683-3 *Test methods for sealing quality of anodic oxide coatings on aluminium and aluminium alloys—Part 3 : Admittance test method*

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Test methods for sealing quality of anodic oxide coatings on aluminium and aluminium alloys— Part 1 : Dye spot test method

Introduction This Japanese Industrial Standard has been made on the basis of **ISO 2143** *Anodizing of aluminium and its alloys—Estimation of loss of absorptive power of anodic oxide coatings after sealing—Dye spot test with prior acid treatment* published in 1981 as the first edition, without changing the technical contents, while adding some clauses (normative references, definitions and principle) not specified in the International Standard.

The standards specifying the test methods for sealing quality of anodic oxide coatings on aluminium and aluminium alloys are composed of three standards of Dye spot test, Phosphoric-chromic acid solution immersion test and Admittance test, the application of which is determined by agreement between the parties concerned taking, for example, the shape of products, type of coatings and thickness of coatings into account.

The “sentence” underlined with dots is the item not specified in the corresponding International Standard.

1 Scope This Japanese Industrial Standard specifies a test method for sealing quality by the dye spot test of the anodic oxide coatings (hereafter referred to as “coatings”) applied on the products of aluminium and aluminium alloys (hereafter referred to as “products”).

This method is not applicable to the products coloured in deep shades and is likely to be influenced by the coating thickness of the test piece and the roughness of the testing surface.

Remarks : The International Standard corresponding to this Standard is as follows:

ISO 2143 : 1981 *Anodizing of aluminium and its alloys—Estimation of loss of absorptive power of anodic oxide coatings after sealing—Dye spot test with prior acid treatment*

2 Normative references The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. Of these referred standards, their latest editions apply.

JIS H 0201 *Glossary of terms used in the surface treatment of aluminium*

JIS K 8815 *Potassium fluoride*

JIS K 8951 *Sulfuric acid*

JIS Z 8730 *Colour specification—Colour differences of non-luminous object colours*

3 Definitions For the purpose of this Standard the definitions given in **JIS H 0201** apply.