

Anodizing of aluminium and its alloys - Estimation of loss of absorptive power of anodic oxidation coatings after sealing - Dye-spot test with prior acid treatment (ISO 2143:2017)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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ICS 25.220.20

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EUROPEAN STANDARD

EN ISO 2143

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2017

ICS 25.220.20

Supersedes EN ISO 2143:2010

English Version

Anodizing of aluminium and its alloys - Estimation of loss of absorptive power of anodic oxidation coatings after sealing - Dye-spot test with prior acid treatment (ISO 2143:2017)

Anodisation de l'aluminium et de ses alliages - Appréciation de la perte du pouvoir absorbant des couches anodiques après colmatage - Essai à la goutte de colorant après traitement acide (ISO 2143:2017)

Anodisieren von Aluminium und Aluminiumlegierungen - Abschätzung der Anfärbbarkeit von anodisch erzeugten Oxidschichten nach dem Verdichten - Farbtropfentest mit vorheriger Säurebehandlung (ISO 2143:2017)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

This document (EN ISO 2143:2017) has been prepared by Technical Committee ISO/TC 79 “Light metals and their alloys” in collaboration with Technical Committee CEN/TC 132 “Aluminium and aluminium alloys” the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2018, and conflicting national standards shall be withdrawn at the latest by May 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 2143:2010.

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Endorsement notice

The text of ISO 2143:2017 has been approved by CEN as EN ISO 2143:2017 without any modification.

Contents

	Page
Foreword.....	iv
Introduction.....	v
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Principle.....	1
5 Reagents.....	2
6 Test specimens.....	2
7 Procedure.....	3
8 Expression of results.....	3
9 Test report.....	3
Annex A (normative) Interpretation of the results of the dye-spot test.....	5
Bibliography.....	6

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 79, *Light metals and their alloys*, Subcommittee SC 2, *Organic and anodic oxidation coatings on aluminium*.

This third edition cancels and replaces the second edition (ISO 2143:2010), which has been technically revised.

The main changes compared to the previous edition are as follows:

- information on the test specimen has been added;
- the immersion method has been added.

Introduction

The resistance of anodic oxidation coatings to the absorption of dyes gives information on the quality of sealing, the total resistance indicating whether the quality of sealing is good.

The correlation of the results obtained with those of other tests that can assess sealing quality, such as that of ISO 2931, can be affected by the presence of certain agents having been added to the sealing bath. For this reason, the quality is checked from time to time by one of the reference acid-dissolution methods specified in ISO 3210.

Anodizing of aluminium and its alloys — Estimation of loss of absorptive power of anodic oxidation coatings after sealing — Dye-spot test with prior acid treatment

IMPORTANT — The electronic file of this document contains colours which are considered to be useful for the correct understanding of the document. Users should therefore consider printing this document using a colour printer.

1 Scope

This document specifies a method of estimating the loss of absorptive power of anodic oxidation coatings that have undergone a sealing treatment, by dye absorption after acid pretreatment.

The method is suitable for use as a production control method and can be applicable to anodic oxidation coatings which may be subjected to weathering or aggressive environments, or where resistance to staining is important.

The method is not applicable to those coatings that

- a) are formed on alloys containing more than 2 % copper or 4 % silicon,
- b) are sealed by the dichromate process,
- c) have been given supplementary processing, e.g. oiling, waxing or lacquering,
- d) are coloured in deep shades, and
- e) are less than 3 μm thickness.

The method is less appropriate where nickel or cobalt salts, or organic additives, have been added to baths used for hydrothermal sealing.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 7583, *Anodizing of aluminium and its alloys — Terms and definitions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 7583 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Principle

A degreased area of an anodic oxidation coating is subjected to the action of an acid and the coloration obtained after the subsequent application of a dyestuff is observed.