

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 2143:2010 sisaldab Euroopa standardi EN ISO 2143:2010 ingliskeelset teksti.

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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 2143:2010)

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 avec action acide préalable (ISO 2143:2010)

Anodisieren von Aluminium und Aluminiumlegierungen - Abschätzung der Anfärbbarkeit von anodisch erzeugten Oxidschichten nach dem Verdichten - Farbtropfentest mit vorheriger Säurebehandlung (ISO 2143:2010)

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Foreword

This document (EN ISO 2143:2010) 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of an identical text or by endorsement, at the latest by January 2011, and conflicting national standards shall be withdrawn at the latest by January 2011.

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Endorsement notice

The text of ISO 2143:2010 has been approved by CEN as a EN ISO 2143:2010 without any modification.

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Introduction

The resistance of anodic oxidation coatings to the absorption of dyes can give information on the quality of sealing, the total resistance indicating that the quality of sealing is good. A slight loss of resistance to absorption, however, does not necessarily mean that the sealing of the coating is poor; it may be a consequence of certain agents having been added to the sealing bath. In cases of doubt, the quality of sealing can be established using a reference method such as that those described in ISO 3210.

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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 International Standard 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 is 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;
- e) are less than 3 μm thick.

The method is less appropriate where nickel or cobalt salts, or organic additives, have been added to the sealing bath.

2 Principle

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

3 Reagents

3.1 General

Use only reagents of recognized analytical grade and distilled water or deionized water. The acid solutions specified in 3.2.1 and 3.2.2 may be used equally for either dye-spot test, but the acid solution specified in 3.2.2 is preferred for safety reasons.