

Anodizing of aluminium and its alloys - Assessment of quality of sealed anodic oxidation coatings by measurement of the loss of mass after immersion in phosphoric acid/chromic acid solution

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 3210:2010 sisaldab Euroopa standardi EN ISO 3210:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.09.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 01.07.2010.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 3210:2010 consists of the English text of the European standard EN ISO 3210:2010.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.09.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 01.07.2010.

The standard is available from Estonian standardisation organisation.

ICS 25.220.20

Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

Right to reproduce and distribute belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:
Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: 605 5050; E-mail: info@evs.ee

English Version

Anodizing of aluminium and its alloys - Assessment of quality of sealed anodic oxidation coatings by measurement of the loss of mass after immersion in phosphoric acid/chromic acid solution (ISO 3210:2010)

Anodisation de l'aluminium et de ses alliages - Évaluation de la qualité des couches anodiques colmatées par mesurage de la perte de masse après immersion en solution phosphochromique (ISO 3210:2010)

Anodisieren von Aluminium und Aluminiumlegierungen - Prüfung der Qualität von verdichteten, anodisch erzeugten Oxidschichten durch Bestimmung des Masseverlustes nach Eintauchen in Chromphosphorsäure-Lösung (ISO 3210:2010)

This European Standard was approved by CEN on 30 June 2010.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

This document (EN ISO 3210:2010) 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.

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

This document supersedes EN 12373-6:1998, EN 12373-7:2002.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of ISO 3210:2010 has been approved by CEN as a EN ISO 3210:2010 without any modification.

Contents

Page

Foreword	iv
1 Scope	1
2 Principle	1
3 Reagents	1
4 Apparatus	2
5 Preparation of test piece	2
6 Procedure	2
6.1 Method 1	2
6.2 Method 2	3
7 Expression of results	4
8 Test report	4
Annex A (normative) Method for the drying of samples	5
Bibliography	6

Anodizing of aluminium and its alloys — Assessment of quality of sealed anodic oxidation coatings by measurement of the loss of mass after immersion in phosphoric acid/chromic acid solution

1 Scope

This International Standard specifies methods of assessing the quality of sealed anodic oxidation coatings on aluminium and its alloys by measurement of the loss of mass after immersion in phosphoric acid/chromic acid solution.

This International Standard consists of the following two methods.

- Method 1: assessment of quality of sealed anodic oxidation coatings by measurement of the loss of mass after immersion in phosphoric acid/chromic acid solution, without prior acid treatment.
- Method 2: assessment of quality of sealed anodic oxidation coatings by measurement of the loss of mass after immersion in phosphoric acid/chromic acid solution with prior acid treatment.

Method 1 is applicable to anodic oxidation coatings intended for decorative or protective purposes or where resistance to staining is important.

Method 2 is applicable to anodic oxidation coatings intended for architectural purposes. For less severe applications, Method 1 may be more suitable.

The methods are not applicable to the following:

- hard-type anodic oxidation coatings which normally are not sealed;
- anodic oxidation coatings that have been sealed only in dichromate solutions;
- anodic oxidation coatings produced in chromic acid solutions;
- anodic oxidation coatings that have undergone a treatment to render them hydrophobic.

NOTE The methods are destructive and can serve as reference methods in case of doubt or dispute regarding the results of the test for loss of absorptive power (see ISO 2143^[1]), or the measurement of admittance (ISO 2931^[2]).

2 Principle

An unsealed anodic oxidation coating on aluminium is dissolved rapidly by acid media, whereas a well-sealed coating will withstand long immersion without appreciable attack.

3 Reagents

Use only reagents of recognized analytical grade and distilled water or deionized water.