

Anodizing of aluminium and its alloys - Measurement of abrasion resistance of anodic oxidation coatings (ISO 8251:2011)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 8251:2011 sisaldab Euroopa standardi EN ISO 8251:2011 ingliskeelset teksti.

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English Version

Anodizing of aluminium and its alloys - Measurement of abrasion
resistance of anodic oxidation coatings (ISO 8251:2011)

Anodisation de l'aluminium et de ses alliages -
Détermination de la résistance à l'abrasion des couches
d'oxyde anodiques (ISO 8251:2011)

Anodisieren von Aluminium und Aluminiumlegierungen -
Messung der Abriebfestigkeit von anodisch erzeugten
Oxidschichten (ISO 8251:2011)

This European Standard was approved by CEN on 29 January 2011.

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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 8251:2011) 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of an identical text or by endorsement, at the latest by August 2011, and conflicting national standards shall be withdrawn at the latest by August 2011.

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Endorsement notice

The text of ISO 8251:2011 has been approved by CEN as a EN ISO 8251:2011 without any modification.

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Introduction

The resistance of anodic oxidation coatings to abrasion is an important property. As it is dependent upon the composition of the metal, the thickness of the coating and the conditions of anodizing and sealing, it can give information about the quality of the coating, its potential resistance to erosion or wear and its performance in service. For example, the effect of an abnormally high anodizing temperature, which could cause potential deterioration in service by chalking of the surface layers, may be readily detected by means of an abrasive wear resistance test.

Anodizing of aluminium and its alloys — Measurement of abrasion resistance of anodic oxidation coatings

1 Scope

This International Standard specifies the following three test methods:

- a) **abrasive-wheel-wear test method**, determining the wear resistance and the wear index of anodic oxidation coatings on flat specimens of aluminium and its alloys;
- b) **abrasive jet test method**, comparing the resistance to abrasion of anodic oxidation coatings on aluminium and its alloys with that of a standard specimen or, alternatively, a reference specimen, by use of a jet of abrasive particles;
- c) **falling sand abrasion method**, determining the abrasion resistance with falling sand applied to thin anodic oxidation coatings.

The use of these methods for coatings produced by hard anodizing is described in ISO 10074.

2 Normative references

The following referenced documents are indispensable for the application 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 565:1990, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings*

ISO 2360:2003, *Non-conductive coatings on non-magnetic electrically conductive basis materials — Measurement of coating thickness — Amplitude-sensitive eddy-current method*

ISO 6344-1, *Coated abrasives — Grain size analysis — Part 1: Grain size distribution test*

ISO 8486-1:1996, *Bonded abrasives — Determination and designation of grain size distribution — Part 1: Macrogrits F4 to F220*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

test specimen

specimen on which the test is to be carried out

3.2

standard specimen

test specimen produced in accordance with the conditions specified in Annex A