ICS 25.220.20 SLOVENSKÁ TECHNICKÁ NORMA Marec 2019

STN	**Anodická oxidácia hliníka a jeho zliatin Meranie oteruvzdornosti anodických povlakov (ISO 8251: 2018)**	**STN EN ISO 8251** 42 4309

Anodizing of aluminium and its alloys - Measurement of abrasion resistance of anodic oxidation coatings (ISO 8251:2018)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/19

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Oznámením tejto normy sa ruší
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EUROPEAN STANDARD

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EUROPÄISCHE NORM

EN ISO 8251

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ICS 25.220.20

Supersedes EN ISO 8251:2011

English Version

Anodizing of aluminium and its alloys - Measurement of abrasion resistance of anodic oxidation coatings (ISO 8251:2018)

Anodisation de l'aluminium et de ses alliages - Détermination de la résistance à l'abrasion des couches d'oxyde anodiques (ISO 8251:2018)

Anodisieren von Aluminium und Aluminiumlegierungen - Messung der Abriebfestigkeit von anodisch erzeugten Oxidschichten (ISO 8251:2018)

This European Standard was approved by CEN on 19 August 2018.

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European foreword

This document (EN ISO 8251:2018) 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of an identical text or by endorsement, at the latest by March 2019, and conflicting national standards shall be withdrawn at the latest by March 2019.

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.

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Endorsement notice

The text of ISO 8251:2018 has been approved by CEN as EN ISO 8251:2018 without any modification.

INTERNATIONAL STANDARD

ISO 8251

Third edition
2018-08

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

Anodisation de l'aluminium et de ses alliages — Détermination de la résistance à l'abrasion des couches d'oxyde anodiques

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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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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of 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 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 8251:2011), which has been technically revised. The main technical changes are as follows:

— preparation for test specimens has been added;

— for expression of results, loss of mass has been added;

— some expressions of results have been moved to Annex B;

— standard specimen made of PMMA sheet has been added.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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, can be readily detected by means of an abrasive wear resistance test.

The use of the term “abrasion resistance” is a convention of the industry. Strictly, the property should be described as “wear resistance”. There are different types of wear including abrasive wear and erosive wear.

INTERNATIONAL STANDARD **ISO 8251:2018(E)**

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

1 Scope

This document specifies the following tests:

a) abrasive-wheel-wear test, determining the abrasion resistance of anodic oxidation coatings with abrasive wheel on flat specimens of aluminium and its alloys;

b) abrasive jet test, determining the comparative abrasion resistance of anodic oxidation coatings with jet of abrasive particles on anodic oxidation coatings of aluminium and its alloys;

c) falling sand abrasion test, determining the abrasion resistance of anodic oxidation coatings with falling sand on thin anodic oxidation coatings of aluminium and its alloys.

The use of abrasive-wheel-wear test and abrasive jet test for coatings produced by hard anodizing is described in ISO 10074.

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

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

ISO 7823-1, *Plastics — Poly(methyl methacrylate) sheets — Types, dimensions and characteristics — Part 1: Cast sheets*

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

