

Anodizing of aluminium and its alloys - Rating system
for the evaluation of pitting corrosion - Chart method
(ISO 8993:2018)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 8993:2018 sisaldab Euroopa standardi EN ISO 8993:2018 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 8993:2018 consists of the English text of the European standard EN ISO 8993:2018.
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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English Version

Anodizing of aluminium and its alloys - Rating system for
the evaluation of pitting corrosion - Chart method (ISO
8993:2018)

Anodisation de l'aluminium et de ses alliages - Système
de cotation de la corrosion par piqûres - Méthode
reposant sur des images-types (ISO 8993:2018)

Anodisieren von Aluminium und
Aluminiumlegierungen - Bewertungssystem für
Lochkorrosion - Richtreihenmethode (ISO 8993:2018)

This European Standard was approved by CEN on 17 October 2018.

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

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European foreword

This document (EN ISO 8993:2018) 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of an identical text or by endorsement, at the latest by April 2019, and conflicting national standards shall be withdrawn at the latest by April 2019.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.

This document supersedes EN ISO 8993:2010.

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Endorsement notice

The text of ISO 8993:2018 has been approved by CEN as EN ISO 8993:2018 without any modification.

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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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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 8993:2010), which has been technically revised. The main changes compared with the previous edition are as follows:

- rating numbers (RN) have been added to [Table 1](#) and to [Figures A.1](#) to [A.8](#);
- a rating chart for designation A (RN 10) has been added to [Figure A.1](#).

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.

Anodizing of aluminium and its alloys — Rating system for the evaluation of pitting corrosion — Chart method

1 Scope

This document specifies a chart rating system based on standard charts that provides a means of defining levels of performance of anodic oxidation coatings on aluminium and its alloys that have been subjected to corrosion tests.

This rating system is applicable to pitting corrosion resulting from

- accelerated tests,
- exposure to corrosive environments, and
- practical service tests.

This document takes into account only pitting corrosion resulting from penetration of the protective anodic oxidation coating.

NOTE ISO 8994^[1] describes a similar rating system based on defined grids.

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 and the following apply.

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

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

3.1

corrosion pit

surface corrosion defect at which the anodic oxidation coating is penetrated

Note 1 to entry: Discoloration or other surface defects which do not penetrate the anodic coating do not count as corrosion pits.

4 Procedure for rating

4.1 Preparation of test specimen

A flat test specimen area of at least 5 000 mm² is necessary.