

Aerospace series - Anodic electrodeposition of
hexavalent chromium free primer

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 4868:2019 sisaldab Euroopa standardi EN 4868:2019 ingliskeelset teksti.	This Estonian standard EVS-EN 4868:2019 consists of the English text of the European standard EN 4868:2019.
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.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 04.09.2019.	Date of Availability of the European standard is 04.09.2019.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 49.040

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

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

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards 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 a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Aerospace series - Anodic electrodeposition of hexavalent chromium free primer

Série aérospatiale - Electrodeposition anodique d'un
primaire sans chrome hexavalent

Luft- und Raumfahrt - Anodische
Elektrotauchlackierung von sechswertigem
chromfreiem Grundierung

This European Standard was approved by CEN on 5 May 2019.

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-CENELEC 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-CENELEC 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword	3
1 Scope.....	4
2 Normative references.....	4
3 Terms and definitions	5
4 Purpose of process	6
5 Protection system classification.....	6
6 Process requirements	7
7 Required characteristics	9
8 Quality requirements	9
Annex A (normative) Engineering requirements.....	11
Annex B (normative) Tests methods.....	15
Annex C (normative) Parts acceptance inspections	16
Annex D (normative) Periodic tests requirements.....	17
Bibliography.....	18

European foreword

This document (EN 4868:2019) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

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 2020, and conflicting national standards shall be withdrawn at the latest by March 2020.

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.

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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This document defines the requirements for hexavalent chromium free anodic electrodeposition of organic coatings on aluminium and aluminium alloys for corrosion protection of parts.

The purpose of this standard is to give design, quality and manufacturing requirements. It doesn't give complete in-house process instructions; these shall be given in the processor detailed process instructions.

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.

EN 3840, *Aerospace series — Paints and varnishes — Technical specification*

EN ISO 1463, *Metallic and oxide coatings — Measurement of coating thickness — Microscopical method*

EN ISO 1518-1, *Paints and varnishes — Determination of scratch resistance — Part 1: Constant-loading method*

EN ISO 1519, *Paints and varnishes — Bend test (cylindrical mandrel)*

EN ISO 2360, *Non-conductive coatings on non-magnetic electrically conductive base metals — Measurement of coating thickness — Amplitude-sensitive eddy-current method*

EN ISO 2409, *Paints and varnishes — Cross-cut test*

EN ISO 2812-1, *Paints and varnishes — Determination of resistance to liquids — Part 1: Immersion in liquids other than water*

EN ISO 2812-2, *Paints and varnishes — Determination of resistance to liquids — Part 2: Water immersion method*

EN ISO 4623-2, *Paints and varnishes — Determination of resistance to filiform corrosion — Part 2: Aluminium substrates*

EN ISO 4628-8, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 8: Assessment of degree of delamination and corrosion around a scribe or other artificial defect*

EN ISO 4628-10, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 10: Assessment of degree of filiform corrosion*

EN ISO 9220, *Metallic coatings — Measurement of coating thickness — Scanning electron microscope method*

EN ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

EN ISO 17872, *Paints and varnishes — Guidelines for the introduction of scribe marks through coatings on metallic panels for corrosion testing*