

STN	Letectvo a kozmonautika Anodizácia hliníka a zliatin hliníka bez obsahu šest'mocného chrómu	STN EN 4827
		31 2382

Aerospace series - Hexavalent chromium free anodizing of aluminium and aluminium alloys

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. 07/17

Obsahuje: EN 4827:2017

125198

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2017

Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnogožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 4827

February 2017

ICS 49.025.20; 49.040

English Version

**Aerospace series - Hexavalent chromium free anodizing of
aluminium and aluminium alloys**

Série aérospatiale - Anodisation sans chrome
hexavalent de l'aluminium et des alliages d'aluminium

Luft- und Raumfahrt - Hexavalentes chromfreies
Anodisieren von Aluminium und
Aluminiumlegierungen

This European Standard was approved by CEN on 24 September 2016.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, 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: Avenue Marnix 17, B-1000 Brussels

Contents

	Page
European foreword	3
1 Scope.....	4
2 Normative references.....	4
3 Purpose of process	5
4 Terms and definitions	6
5 Protection system classification.....	7
6 Process requirements	8
7 Engineering requirements	10
8 Quality requirements	12
Annex A (normative) Engineering requirements.....	14
Annex B (normative) Quality requirements.....	15
B.1 Quality requirements	15
B.2 Interpretation of the results of the dye-spot test	15
Bibliography.....	18

European foreword

This document (EN 4827:2017) 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 August 2017, and conflicting national standards shall be withdrawn at the latest by August 2017.

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.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard defines the requirements for hexavalent chromium free anodizing of aluminium and aluminium alloys for corrosion protection, bonding and painting.

Hard anodizing is not covered by this European Standard.

The purpose of this European Standard is to give design, quality and manufacturing requirements. It does not give complete in-house process instructions; these shall be given in the manufacturers detailed process instructions.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2284, *Aerospace series — Sulphuric acid anodizing of aluminium and wrought aluminium alloys*

EN 3665, *Aerospace series — Test methods for paints and varnishes — Filiform corrosion resistance test on aluminium alloys*

EN 4704, *Aerospace series — Tartaric-Sulphuric-Acid anodizing of aluminium and aluminium wrought alloys for corrosion protection and paint pre-treatment (TSA)*

EN 4707, *Aerospace series — Acid pickling of aluminium and aluminium alloy without hexavalent chromium*

EN 6072, *Aerospace series — Metallic materials — Test methods — Constant amplitude fatigue testing*

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

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

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

EN ISO 2085, *Anodizing of aluminium and its alloys — Check for continuity of thin anodic oxidation coatings — Copper sulfate test (ISO 2085)*

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

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

koniec náhľadu – text d'alej pokračuje v platenej verzii STN