



NSAI
Standards

Irish Standard
I.S. EN 4729:2017

Aerospace series - Trivalent chromium based chemical conversion coatings for aluminium and aluminium alloys

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I.S. EN 4729:2017

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National Foreword

I.S. EN 4729:2017 is the adopted Irish version of the European Document EN 4729:2017, Aerospace series - Trivalent chromium based chemical conversion coatings for aluminium and aluminium alloys

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EUROPEAN STANDARD

EN 4729

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2017

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English Version

Aerospace series - Trivalent chromium based chemical conversion coatings for aluminium and aluminium alloys

Série aérospatiale - Conversion chimique au chrome trivalent de l'aluminium et des alliages d'aluminium

Luft- und Raumfahrt - Chrom-(III)-basierte chemische Konversionsüberzüge für Aluminium und Aluminiumlegierungen

This European Standard was approved by CEN on 14 May 2017.

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Contents		Page
European foreword		3
1	Scope.....	4
2	Purpose of process	4
3	Normative references.....	4
4	Terms and definitions	4
5	Applicability and limitations of the process	5
6	Classification.....	5
7	Requirements.....	5
8	Main technical engineering requirements	8
9	Quality requirements	10
10	Quality assurance.....	12
11	Health, safety and environmental aspects.....	12
12	Designation	13

European foreword

This document (EN 4729:2017) 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of an identical text or by endorsement, at the latest by March 2018, and conflicting national standards shall be withdrawn at the latest by March 2018.

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1 Scope

This European Standard specifies trivalent chromium based chemical conversion coatings for aluminium and aluminium alloys. It covers the application by bath but also by touch-up. It doesn't give complete in-house process instructions; these shall be given in the manufacturers detailed process instructions.

2 Purpose of process

The aim of the trivalent chromium based chemical conversion coatings is to increase corrosion resistance, to improve the adhesion of paints and varnishes and to ensure electrical conductivity. Coatings are also suitable for the repair of mechanically damaged anodic coatings.

3 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 4707, *Aerospace series — Acid pickling of aluminum and aluminum alloy without hexavalent chromium* ¹⁾

EN 9100, *Quality Management Systems — Requirements for Aviation, Space and Defence Organizations*

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

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

EN ISO 3892, *Conversion coatings on metallic materials — Determination of coating mass per unit area — Gravimetric methods*

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

4 Terms and definitions

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

4.1

batch

unless otherwise specified, it comprises parts of the same type (shape, size, material), processed at the same time in the same bath

4.2

substrate

material upon which a coating is directly applied, in the case of a single or first coating, the substrate is the basis metal and for a subsequent coating, the intermediate coating is the substrate

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