Aerospace series - Paints and varnishes - Chromate free non corrosion inhibiting two components cold curing primer for military application

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NATIONAL FOREWORD

See Eesti standard EVS-EN 4687:2012 sisaldab Euroopa standardi EN 4687:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 4687:2012 consists of the English text of the European standard EN 4687:2012.
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 21.03.2012.	Date of Availability of the European standard is 21.03.2012.
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.

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EUROPEAN STANDARD

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English Version

Aerospace series - Paints and varnishes - Chromate free non corrosion inhibiting two components cold curing primer for military application

Série aérospatiale - Peinture et vernis - Peinture primaire sans chromate non anticorrosive à deux composants polymérisant à température ambiante pour applications militaires

Luft- und Raumfahrt - Beschichtungsstoffe - Zweikomponenten Grundbeschichtung, chromatfrei, nicht korrosionshemmend, raumtemperaturhärtend, für militärische Anwendung

This European Standard was approved by CEN on 21 January 2012.

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.

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

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Foreword

This document (EN 4687:2012) 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 September 2012, and conflicting national standards shall be withdrawn at the latest by September 2012.

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Introduction

The requirements concerning fibre reinforced composite substrates are established in Clause 7.

1 Scope

This European Standard defines the requirements for a two components, chromate and lead free epoxy, non corrosion inhibiting primer.

The coating should be suitable for use on fibre reinforced composite materials, titanium and corrosion resistant steels and other suitably prepared corrosion resistant substrates.

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 2101, *Aerospace series — Chromic acid anodizing of aluminium and wrought aluminium alloys*

EN 2334, *Aerospace series — Chromic-sulphuric acid pickle of aluminium and aluminium alloys*

EN 2437, *Aerospace series — Chromate conversion coatings (yellow) for aluminium and aluminium alloys*

EN 3837, *Aerospace series — Paints and varnishes — Nature and method for surface preparation of test pieces in aluminium alloys* [1)]

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

EN 3847, *Aerospace series — Paints and varnishes — Determination of sedimentation rating* [1)]

EN 4160, *Aerospace series — Non-metallic materials — Paints and varnishes — Test methods — Determination of the effect of thermal exposure* [1)]

EN 4688, *Aerospace series — Paints and varnishes — Corrosion inhibiting two components cold curing primer for military application*

EN 4689, *Aerospace series — Paints and varnishes — Two components cold curing polyurethane finish — High flexibility and chemical agent resistance for military application*

EN ISO 1513, *Paints and varnishes — Examination and preparation of test samples*

EN ISO 1518, *Paints and varnishes — Determination of scratch resistance*

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

EN ISO 1520, *Paints and varnishes — Cupping test*

EN ISO 1524, *Paints, varnishes and printing inks — Determination of fineness of grind*

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

1) Published as ASD-STAN Prestandard at the date of publication of this standard (www.asd-stan.org).

EN ISO 2431, *Paints and varnishes — Determination of flow time by use of flow cups*

EN ISO 2811-1, *Paints and varnishes — Determination of density — Part 1: Pyknometer method*

EN ISO 2811-2, *Paints and varnishes — Determination of density — Part 2: Immersed body (plummet) method*

EN ISO 2811-3, *Paints and varnishes — Determination of density — Part 3: Oscillation method*

EN ISO 2811-4, *Paints and varnishes — Determination of density — Part 4: Pressure cup method*

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 2813, *Paints and varnishes — Determination of specular gloss of non-metallic paint films at 20°, 60° and 85°*

EN ISO 3251, *Paints, varnishes and plastics — Determination of non-volatile-matter content*

EN ISO 3675, *Crude petroleum and liquid petroleum products — Laboratory determination of density — Hydrometer method*

EN ISO 3678, *Paints and varnishes — Print-free test*

EN ISO 3679, *Determination of flash point — Rapid equilibrium closed cup method*

EN ISO 3680, *Determination of flash/no flash — Rapid equilibrium closed cup method*

EN ISO 4628-2, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 2: Assessment of degree of blistering*

EN ISO 6270-1, *Paints and varnishes — Determination of resistance to humidity — Part 1: Continuous condensation*

EN ISO 9117-1, *Paints and varnishes — Drying tests — Part 1: Determination of through-dry state and through-dry time*

EN ISO 9117-3, *Paints and varnishes — Drying tests — Part 3: Surface-drying test using ballotini*

EN ISO 9514, *Paints and varnishes — Determination of the pot life of multicomponent coating systems — Preparation and conditioning of samples and guidelines for testing*

EN ISO 11890-1, *Paints and varnishes — Determination of volatile organic compound (VOC) content — Part 1: Difference method*

EN ISO 11890-2, *Paints and varnishes — Determination of volatile organic compound (VOC) content — Part 2: Gas-chromatographic method*

ISO 3270, *Paints and varnishes and their raw materials — Temperatures and humidities for conditioning and testing*

ISO 7724-1, *Paints and varnishes — Colorimetry — Part 1: Principles*

ISO 7724-2, *Paints and varnishes — Colorimetry — Part 2: Colour measurement*

ISO 7724-3, *Paints and varnishes — Colorimetry — Part 3: Calculation of colour differences*

MIL-PRF-5606H, *Performance specification: Hydraulic fluid, petroleum base; aircraft, missile, and ordnance. (NATO H-515)* [2)]

MIL-PRF-6081D, *Performance specification: Lubricating oil, jet engine. (NATO O-133)* [2)]

MIL-PRF-23699F, *Performance specification: Lubricating oil, aircraft turbine engine, synthetic base, NATO code number O-156* [2)]

MIL-DTL-83133G, *Detail specification: Turbine fuel, aviation, kerosene type, JP-8 (NATO F-34), NATO F-35, and JP-8+100 (NATO F-37)* [2)]

AMS 1526B, *Cleaner for aircraft exterior surfaces water-miscible, pressure- spraying type* [3)]

AMS 1527B, *Cleaner for aircraft exterior surfaces water-miscible, foam-on, pressure-spraying* [3)]

AMS 1533A, *Cleaner for exterior aircraft surfaces gel-type, solvent-base* [3)]

DEF STAN 68-10, *Corrosion Preventive, Water Displacing NATO Code: C-634 Joint Service Designation: PX-24*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 3840 apply.

4 Surface pretreatments

In accordance with EN 3837, the surface pretreatments applicable to aluminium alloy test panels are the following:

EN 3837 — Procedure A : Sulfochromic pickling in accordance with EN 2334;

EN 3837 — Procedure B : Chromic acid anodizing in accordance with EN 2101;

EN 3837 — Procedure C : Chromate conversion coating in accordance with EN 2437.

5 Classification

The primer is classified according to the following types:

TYPE I: Standard solvent content (VOC < 680 g/l);

TYPE II: Low volatile organic content (VOC < 420 g/l);

TYPE III: Waterborne (VOC < 350 g/l).

2) Published by: DoD National (US) MIL. Department of Defense http://www.defenselink.mil/

3) Published by: SAE National (US) Society of Automotive Engineers http://www.sae.org/