

SLOVENSKI STANDARD SIST EN 2435-001:2009

01-julij-2009

Aeronavtika - Barve in laki - Dvokomponentni temeljni premaz, korozijsko obstojen, kromiran, ki se suši pri sobni temperaturi - 001. del: Minimalne zahteve

Aerospace series - Paints and varnishes - Corrosion resistant chromated two component cold curing primer - Part 001: Minimum requirements

Luft- und Raumfahrt - Beschichtungsstoffe - Korrosionsbeständiger Zweikomponenten-Primer, kalthärtend, chromathaltig - Teil 001: Mindestanforderungen

Série aérospatiale - Peintures et vernis - Peinture primaire anti-corrosion chromatée à deux composants polymérisant à température ambiante - Partie 001 : Exigences minimales https://standards.iteh.ai/catalog/standards/sist/95bb9470-3a4a-426e-af3e-

a7241124573f/sist-en-2435-001-2009

Ta slovenski standard je istoveten z: EN 2435-001:2006

ICS:

49.040 Prevleke in z njimi povezani Coatings and related

> postopki, ki se uporabljajo v processes used in aerospace

letalski in vesoljski industriji industry

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English Version

Aerospace series - Paints and varnishes - Corrosion resistant chromated two component cold curing primer - Part 001: Minimum requirements

Série aérospatiale - Peintures et vernis - Peinture primaire anti-corrosion chromatée à deux composants polymérisant à température ambiante - Partie 001 : Exigences minimales Luft- und Raumfahrt - Anstrichstoffe -Korrosionsbeständiger Zweikomponenten-Grundanstrich, kalthärtend, chromathaltig - Teil 001: Mindestanforderungen

This European Standard was approved by CEN on 27 February 2006.

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 Central Secretariat 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 Central Secretariat 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 European Standard (EN 2435-001:2006) has been prepared by the AeroSpace and Defense 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 December 2006, and conflicting national standards shall be withdrawn at the latest by December 2006.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom. STANDARD PREVIEW

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1 Scope

This standard specifies the minimum requirements for a two-component, chromated epoxy or polyurethane, corrosion resistant primer which can be used with or without a finish for aerospace applications.

The properties specified in this standard are obtained on defined aluminium alloy test pieces prepared in accordance with EN 3837, procedure A and ISO 3270. The ability of the material to be used for a specific application (e.g. alternative substrate, specific drying conditions, etc.) shall be determined by supplementary tests to confirm that the requirements of this standard are met.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including amendments) applies.

EN 2379, Aerospace series — Fluids for assessment of non-metallic materials¹⁾

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 11:

ISO 1518, Paints and varnishes — Scratch test and ards.iteh.ai)

ISO 2409, Paints and varnishes — Cross-cut testIST EN 2435-001:2009

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3 Definitions

None applicable.

4 Classification

The primers are classified according to the nature of the most typical chemical reaction that occurs between the two components:

Type A: chromated epoxy — (reaction between an epoxy resin and an activator with amino functional groups).

Type B: polyurethane — (reaction between an hydroxyl functional resin and a polyisocyanate activator).

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¹⁾ Published as ASD Prestandard at the date of publication of this standard.

5 Required characteristics

Requirements concerning delivery, qualification, batch acceptance, sampling, test methods and other requirements specific to the material are defined in EN 3840.

5.1 Composition

The primer consists of:

- a base containing one or several corrosion inhibitors associated, or not, with pigments and fillers dispersed in a mixture of resins and solvents;
- an activator solution;

and, if need be, a thinner.

These components shall be mixed in simple whole number proportions, by volume or by weight, in accordance with the manufacturer's instructions.

5.2 Required characteristics

5.2.1 General

The required characteristics are listed in the tables in annex A in accordance with the technical specification EN 3840. Unless otherwise specified, these characteristics are obtained for a primer paint applied with a dry film thickness of $(20 \pm 5) \, \mu m$ and dried at $(23 \pm 2) \, C/(50 \pm 5) \, \%$ HR for at least 7 days (168 h) before testing.

5.2.2 Qualification tests

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For qualification, all tests mentioned in the tables in Annex A, shall be carried out.

5.2.3 Acceptance tests

For batch acceptance, only the tests marked (*), in the tables in Annex A, need to be carried out.

6 Designation

EXAMPLE

	Description block	Identity block
	PRIMER	EN 2435-001 A
Number of this standard —		
Type A or type B (see clause 4)		

Annex A

(normative)

Test methods

Table A.1 — Tests on individual paint components

Test according to EN 3840	Characteristics	Units	Base	Activator	Thinner
1	Non-volatile matter	%	± 2 % ^{a b}	± 2 % ^{a b}	
3 *	Density	g/cm ³	± 2 % ^{a b}		
4 *	Density hydrometer	g/cm ³		± 1 % ^{a b}	± 1 % ^{a b}
7	Flash point	°C	> Reference value ^b	> Reference value ^b	> Reference value ^b

^{*} See 5.2.3.

Table A.2 — Tests on liquid paint

Test according to EN 3840	Characteristics	Units	Requirements
5 *	Sedimentation rating	m1/4 h	Base + activator + thinner
8 *	Flow time (Standar	as.iten.	± 10 %
9 *	Viscosity high shear rate	Pa [·] s	Base + activator ^{a b c}
10 *	Fineness of grind https://standards.iteh.ai/catalog/stand	35-001:2009 um ards/sist/95bb9	< 30 470-3a4a-426 Base ≎+ activator
20 *	Pot life a7241124573f/sist	en_2435-001-	2009 < 2 x value of test 8 or 9 after 4 h Base + activator + thinner ^c
49	Volatile organic content (VOC)	g/l	< Reference value Base + activator + thinner ^b

^{*} See 5.2.3.

Table A.3 — Tests on wet film

Test according	Characteristics Units		Requirements	Test pieces according to EN 3837	
to EN 3840				Metal	Treatment
21 *	Surface dry time	min.	< 60	A ₂	Process A
22 *	Drying time — print free	h	< 4 using a mass of 1 000 g	A ₂	Process A
23 *	Through-dry time	h	< 16 using a mass of 1 500 g	A ₂	Process A
* See 5.2.3					

^a The deviation specified is as compared to the reference value (see footnote b).

^b The reference value is as established during qualification.

^a The deviation specified is as compared to the reference value (see footnote b).

^b The reference value is as established during qualification.

^c Test 8 shall be used for non-thixotropic paints and test 9 for thixotropic paints.