

SLOVENSKI STANDARD**SIST EN 2435-005:2009****01-junij-2009**

Aeronavtika - Barve in laki - Dvokomponentni temeljni premaz, korozisko obstojen, kromiran, ki se suši pri sobni temperaturi - 005. del: Visoka koroziska odpornost, za vojaško uporabo

Aerospace series - Paints and varnishes - Corrosion resistant chromated two component cold curing primer - Part 005: High corrosion resistance for military application

Luft- und Raumfahrt - Beschichtungsstoffe - Korrosionsbeständiger Zweikomponenten-Primer, kalthärtend, chromathaltig - Teil 005: Hoher Korrosionsschutz, für militärische Anwendung

Série aérospatiale - Peintures et vernis - Peinture primaire anti-corrosion chromatée, à deux composants polymérisant à température ambiante - Partie 005 : Haute résistance à la corrosion pour applications militaires

Ta slovenski standard je istoveten z: EN 2435-005:2006

ICS:

49.040	Prevleke in z njimi povezani postopki, ki se uporabljajo v letalski in vesoljski industriji	Coatings and related processes used in aerospace industry
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 2435-005

June 2006

ICS 49.040

English Version

Aerospace series - Paints and varnishes - Corrosion resistant chromated two component cold curing primer - Part 005: High corrosion resistance for military application

Série aérospatiale - Peintures et vernis - Peinture primaire anti-corrosion chromatée, à deux composants polymérisant à température ambiante - Partie 005 : Haute résistance à la corrosion pour applications militaires

Luft- und Raumfahrt - Anstrichstoffe - Korrosionsbeständiger Zweikomponenten-Grundanstrich, kalthärtend, chromathaltig - Teil 005: Hoher Korrosionsschutz, für militärische Anwendung

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

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Foreword

This European Standard (EN 2435-005:2006) 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.

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1 Scope

This standard defines the requirements for a two component, chromated epoxy, high corrosion resistant primer.

The coating shall be suitable for use on chromic acid anodised or conversion coated aluminium alloys and other suitably prepared substrates.

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 2436-006, *Aerospace series - Paints and varnishes - Corrosion resistant chromate-free two component cold curing epoxy primer - Part 006: High corrosion resistance for military application*

EN 3212, *Aerospace series — Paints and varnishes — Corrosion test by alternate immersion in a buffered sodium chloride solution*

EN 3837, *Aerospace series — Paints and varnishes — Nature and method for surface preparation of test pieces in aluminium alloys¹⁾*

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EN 3840, *Aerospace series — Paints and varnishes — Technical specification¹⁾*

EN 3847, *Aerospace series — Paints and varnishes — Determination of sedimentation rating¹⁾*

EN 4160, *Aerospace series — Non-metallic materials — Paints and varnishes — Test methods — Determination of the effects of thermal exposure¹⁾*

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ISO 1513, *Paints and varnishes — Examination and preparation of samples for testing*

ISO 1517, *Paints and varnishes — Surface-drying test — Ballotini method*

ISO 1518, *Paints and varnishes — Scratch test*

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

ISO 1520, *Paints and varnishes — Cupping test*

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

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

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

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

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

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

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

ISO 2812-1, *Paints and varnishes — Determination of resistance to liquids — Part 1: General methods*

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

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

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

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

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

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

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

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

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

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*

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 the scribe*

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*

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

ISO 7253, *Paints and varnishes — Determination of resistance to neutral salt spray (fog)*

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*

ISO 9117, *Paints and varnishes — Determination of through-dry state and through-dry time — Method of test*

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

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

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

3 Definitions

See EN 3840.

4 Classification

The primer is classified according to the following types and classes:

Type I: Standard solvent content;

Type II: Low volatile organic content ($\leq 350 \text{ g/l}$);

Class A: Standard pigments;

Class B: Low infrared reflective pigments.

5 Batch release and qualification testing

5.1 Qualification tests

For product qualification, all tests defined in this standard, in the Tables 1 to 7, shall be performed.

A minimum of three batches shall be tested for qualification purposes.

5.2 Batch acceptance testing

For batch acceptance the tests marked with the symbol ^{*} in the Tables 2 and 3 shall be performed.

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Table 1 – General requirements

	Material description	Epoxy primer with corrosion resistance chromate pigments, for aerospace applications
	Formulation	SIST EN 2435-005:2009 Base – epoxy resin Activator with polyamide and/or amine resin 1d2375feab0c/sist-en-2435-005-2009 Thinner
	Preparation	These components shall be mixed in simple whole number proportions, by volume or weight, in accordance with the manufacturers instructions.
	Technical specification	EN 3840
	Marking	See EN 3840.
	Storage stability	See EN 3840.
	Application and use	Dry film thickness of $(25 \pm 5) \mu\text{m}$.
	Drying conditions	ISO 3270 for 168 h before testing.
	Freedom from defects	See EN 3840.
	Quality assurance	See EN 3840.
	Packaging	See EN 3840.
	Health and safety	See EN 3840.

Table 2 — Physical and chemical characteristics — Delivery conditions

Tests according to EN 3840	Test	Test criteria	Test requirements								
— *	Condition	Test method	ISO 1513 (as received in original container)								
		Requirement	Shall be free from extraneous matter and show no skinning, gelling, hard settlement or other defect which will prevent satisfactory application to produce a defect free film.								
1 *	Non volatile matter	Test method	ISO 3251								
		Requirement	%	Base	Activator	Thinner					
				± 2 % ref. value ^{a b}	± 2 % ref. value ^{a b}	—					
49	Volatile organic content (VOC) (Type II only)	Test method	ISO 11890-1, ISO 11890-2								
		Test condition	Base + activator + thinner								
		Requirement	g/l	< reference value ^b							
7	Flash point	Test method	ISO 3679 or ISO 3680								
		Requirement	°C	Base	Activator	Thinner					
				≥ reference value ^b	≥ reference value ^b	≥ reference value ^b					
8 *	Flow time	Test method	ISO 2431								
		Test condition	SIST EN 2435-005:2009 https://standards.iteh.ai/catalog/standards/sist/1252bb-e62c-422a-bf23-1d22731eac/sist-en-2435-005-2009	Base + activator							
				± 10 % ref. value ^{a b}							
5	Sedimentation rating	Test method	EN 3847								
		Test condition	Base + activator + thinner								
		Requirement	m1/4 h	≤ 30							
3 *	Density	Test method	ISO 2811								
		Test condition	ISO 3270								
		Requirements	g/cm ³	Base	Activator	Thinner					
				± 2 % ref. value ^{a b}	± 2 % ref. value ^{a b}	—					
4 *	Density hydrometer	Test method	ISO 3675								
		Test condition	ISO 3270								
		Requirement	g/cm ³	Base	Activator	Thinner					
				—	± 1 % ref. value ^{a b}	± 1 % ref. value ^{a b}					
10	Fineness of grind	Test method	ISO 1524								
		Requirement	μm	Base	Activator	Thinner					
				≤ 30		—					