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**Aeronavtika - Barve in laki - Dvokomponentni temeljni premaz, korozijsko obstojen, brez kroma, ki se suši pri sobni temperaturi - 006. del: Visoka korozijska odpornost, za vojaško uporabo**

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

Luft- und Raumfahrt - Beschichtungsstoffe - Korrosionsbeständiger Zweikomponenten-Primer, kalthärtend, chromatfrei - Teil 006: Hoher Korrosionsschutz für militärische Anwendung

Série aérospatiale - Peintures et vernis - Peinture primaire anti-corrosion sans chromate à deux composants polymérisant à température ambiante - Partie 006 : Haute résistance à la corrosion pour applications militaires

**Ta slovenski standard je istoveten z: EN 2436-006:2006**

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**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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**SIST EN 2436-006:2009****en,de**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 2436-006**

July 2006

ICS 49.040

English Version

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

Série aérospatiale - Peintures primaire anti-corrosion sans  
chromate à deux composants polymérisant à température  
ambiante - Partie 006 : Haute résistance à la corrosion  
pour applications militaires

Luft- und Raumfahrt - Anstrichstoffe -  
Korrosionsbeständiger Zweikomponenten-Grundanstrich,  
kalthärtend chromatfrei - Teil 006: Hoher Korrosionsschutz  
für militärische Anwendung

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.

CEN members are the national standards bodies of 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 United Kingdom.



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

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

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## Foreword

This European Standard (EN 2436-006:2006) 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 January 2007, and conflicting national standards shall be withdrawn at the latest by January 2007.

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.

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**EN 2436-006:2006 (E)****0 Introduction**

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

**1 Scope**

This standard defines the requirements for a two component, chromate and lead free epoxy, high corrosion resistant primer.

The coating shall be suitable for use on chromic acid anodised or conversion coated aluminium alloys, fibre reinforced composite materials 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 2435-005, *Aerospace series — Paints and varnishes — Corrosion resistant chromated two component cold curing epoxy primer — Part 005: High corrosion resistance for military application*<sup>1)</sup>

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 alloys*<sup>1)</sup>

EN 3840, *Aerospace series — Paints and varnishes — Technical specification*<sup>1)</sup>

EN 3847, *Aerospace series — Paints and varnishes — Determination of sedimentation rating*<sup>1)</sup>

EN 4160, *Aerospace series — Non-metallic materials — Paints and varnishes — Test methods — Determination of the effects of thermal exposure*<sup>1)</sup>

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*

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

- 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*
- 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*
- 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.

**EN 2436-006:2006 (E)****4 Classification**

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

Type I: Standard solvent content.

Type II: Low volatile organic content ( $\leq 350$  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.

**Table 1 — General requirements**

	Material description	Lead and chromate free epoxy with corrosion resistance for aerospace applications.
	Formulation	Base — epoxy resin Activator with polyamide and/or amine resin 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 ± 2 % ref. value <sup>a b</sup>	Activator ± 2 % ref. value <sup>a b</sup>	Thinner —
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 <sup>b</sup>		
7	Flash point	Test method	ISO 3679 or ISO 3680			
		Requirement	°C	Base ≥ reference value <sup>b</sup>	Activator ≥ reference value <sup>b</sup>	Thinner ≥ reference value <sup>b</sup>
8 *	Flow time	Test method	ISO 2431			
		Test condition	Base + activator			
		Requirement	s	± 10 % ref. value <sup>a b</sup>		
5	Sedimentation rating	Test method	EN 3847			
		Test condition	Base + activator + thinner			
		Requirement	m <sup>1</sup> / <sub>4</sub> h	≤ 30		
3 *	Density	Test method	ISO 2811			
		Test condition	ISO 3270			
		Requirements	g/cm <sup>3</sup>	Base ± 2 % ref. value <sup>a b</sup>	Activator ± 2 % ref. value <sup>a b</sup>	Thinner —
4 *	Density hydrometer	Test method	ISO 3675			
		Test condition	ISO 3270			
		Requirement	g/cm <sup>3</sup>	—	± 1 % ref. value <sup>a b</sup>	± 1 % ref. value <sup>a b</sup>
10	Fineness of grind	Test method	ISO 1524			
		Requirement	µm	Base ≤ 30	Activator	Thinner —