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Responsible committee: ACE/65 Non-metallic materials for aerospace purposes

Interested committees:

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

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Introduction

This draft standard is based on European discussions in which the UK has taken an active part. Your comments on this draft are welcome and will assist in the preparation of the consequent British Standard. Comment is particularly welcome on national, legislative or similar deviations that may be necessary.

Even if this draft standard is not approved by the UK, if it receives the necessary support in Europe, the UK will be obliged to publish the official English Language text unchanged as a British Standard and to withdraw any conflicting standard.

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	(7)
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/ Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

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

~~Série aéronautique — Peinture et vernis — Peinture de finition polyuréthane à deux composants polymérisant à température ambiante — Haute flexibilité et résistance aux substances chimiques pour applications militaires~~
~~Série aéronautique — Peinture et vernis — Peinture de finition polyuréthane à deux composants polymérisant à température ambiante — Haute flexibilité et résistance aux substances chimiques pour applications militaires~~

~~Luft- und Raumfahrt — Beschichtungsstoffe — Zweikomponenten Polyurethan- Decklack, raumtemperaturhärtend — Hohe Elastizität und Beständigkeit gegen Chemikalien für militärische Anwendung~~
~~Luft- und Raumfahrt — Beschichtungsstoffe — Zweikomponenten Polyurethan- Decklack, Raumtemperaturhärtend — Hohe Elastizität und Beständigkeit gegen Chemikalien für militärische Anwendung~~

ICS:

Deskriptoren

Dokument-Typ: Europäische Norm
Dokument-Untertyp:
Dokument-Stage: CEN-Umfrage
Dokument-Sprache: D

STD Version 2.8l

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Foreword

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1 Scope

This European Standard specifies the requirements for a two components flexible polyurethane top-coat to be applied over EN 4687 and/or EN 4688 primers mainly for exterior aerospace applications.

The primer and the finish tested to this specification will be from the same manufacturer applied in accordance with (i.a.w.) their instruction/Table 1.

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 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 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 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 — Paints and varnishes — Determination of the effect of thermal exposure*¹⁾

EN 4687, *Aerospace series — Paints and varnishes — Chromate free non corrosion inhibiting two components cold curing primer for military application*

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

EN 4704, *Aerospace series - Tartaric-Sulphuric-Acid anodizing of aluminium and aluminium wrought alloys for corrosion protection and paint pre-treatment (TSA)*

EN 6042, *Aerospace series — Organic compounds — Test method — Analysis by infrared spectroscopy*¹⁾

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

EN ISO 1518-1, *Paints and varnishes — ~~Determnation of scratch resistance~~Scratch test — Part 1: Constant-loading method*

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*

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

- EN ISO 2409, *Paints and varnishes — Cross-cut test*
- 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 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 a scribe*
- EN ISO 6270-1, *Paints and varnishes — Determination of resistance to humidity — Part 1: Continuous condensation*
- ~~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*~~
- 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 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*
- 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 11664 (all parts). Colorimetry

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

EN ISO 11909, *Binders for paints and varnishes — Polyisocyanate resins — General methods of test*

EN ISO 16474-1, *Paints and varnishes — Methods of exposure to laboratory light sources — Part 1: General guidance*

EN ISO 16474-3, *Paints and varnishes — Methods of exposure to laboratory light sources — Part 3: Fluorescent UV lamps*

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-156²⁾*

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 type³⁾*

AMS 1527B, *Cleaner for aircraft exterior surfaces water-miscible, foam-on, pressure-spraying³⁾*

AMS 1533A, *Cleaner for exterior aircraft surfaces gel-type, solvent-base³⁾*

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

BS 1595-1:1986, *Propan-2-ol (isopropyl alcohol) for industrial use — Part 1: Specification for propan-2-ol (isopropyl alcohol)*

3 Terms and definitions

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

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/>.