

STN	Zabezpečovanie výrobkov kozmického programu. Aplikácia náterových látok a povlakov na konštrukčné časti kozmického programu.	STN EN 16602-70-31 31 0542
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Space product assurance - Application of paints and coatings on space hardware

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/15

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ICS 49.140

English version

Space product assurance - Application of paints and coatings on space hardware

Assurance produit des projets spatiaux - Application des peintures et revêtements des matériels d'un projet spatial

Raumfahrtproduktsicherung - Anwendung von Farben und Beschichtungen auf Raumflug-Hardware

This European Standard was approved by CEN on 11 April 2014.

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Table of contents

Foreword	4
Introduction.....	5
1 Scope.....	6
2 Normative references	7
3 Terms, definitions and abbreviated terms.....	9
3.1 Terms from other standards.....	9
3.2 Terms specific to the present standard	9
3.3 Abbreviated terms.....	10
4 Requirements.....	11
4.1 General.....	11
4.1.1 Establishment of verification programme.....	11
4.1.2 Surface to be coated	11
4.1.3 Potential limitations on parts geometry and structure	11
4.1.4 Aspect and dimensions of parts prior to painting	12
4.2 Preparatory conditions.....	12
4.2.1 Hazards, health and safety precautions	12
4.2.2 Preparation of materials and workpieces.....	12
4.2.3 Procurement	13
4.2.4 Facilities.....	13
4.2.5 Equipment.....	14
4.3 Procedures	15
4.3.1 Pre-treatment.....	15
4.3.2 Masking	16
4.3.3 Primer	17
4.3.4 Paint	17
4.3.5 Handling and packaging of finished parts.....	19
4.3.6 Paint repairing process	19
4.4 Acceptance criteria	20
4.5 Quality assurance	21

4.5.1	General	21
4.5.2	Data	21
4.5.3	Nonconformance.....	21
4.5.4	Calibration.....	21
4.5.5	Traceability	21
Bibliography.....		22

Foreword

This document (EN 16602-70-31:2014) has been prepared by Technical Committee CEN/CLC/TC 5 “Space”, the secretariat of which is held by DIN.

This standard (EN 16602-70-31:2014) originates from ECSS-ST-Q-70-31C.

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of an identical text or by endorsement, at the latest by April 2015, and conflicting national standards shall be withdrawn at the latest by April 2015.

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.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This document has been developed to cover specifically space systems and has therefore precedence over any EN covering the same scope but with a wider domain of applicability (e.g. : aerospace).

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This Standard describes in a generic way the methods and techniques that can be used for application of paints on space hardware. This document is prepared to replace all existing ECSS-Q-70 paint standards, i.e. ECSS-Q-70-25A, ECSS-Q-70-33A, ECSS-Q-70-34A and ECSS-Q-70-35A. It also covers the acceptance criteria for paints.

The parameters to be defined are:

- For substrate:
 - Cleanliness
 - Roughness or other preparation
- For primer:
 - Quality
 - Thickness
 - Adhesion
 - Time between application of primer and application of paint
- For paint:
 - Aspect
 - Thickness
 - Adhesion
 - Thermo-optical properties
 - Electrical properties

NOTE This list is not exhaustive.

1

Scope

This Standard defines the approach for producing a defined surface finish to spacecraft or associated equipment, by means of the controlled application of a paint. This also includes measurements and verifications to be performed.

This standard may be tailored for the specific characteristic and constraints of a space project in conformance with ECSS-S-ST-00.

2

Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this ECSS Standard. For dated references, subsequent amendments to, or revision of any of these publications do not apply. However, parties to agreements based on this ECSS Standard are encouraged to investigate the possibility of applying the more recent editions of the normative documents indicated below. For undated references, the latest edition of the publication referred to applies.

EN reference	Reference in text	Title
EN 16601-00-01	ECSS-S-ST-00-01	ECSS system — Glossary of terms
EN 16602-10-09	ECSS-Q-ST-10-09	Space product assurance - Nonconformance control system
EN 16602-20	ECSS-Q-ST-20	Space product assurance - Quality assurance
EN 16602-70	ECSS-Q-ST-70	Space product assurance - Materials, mechanical parts and processes
EN 16602-70-02	ECSS-Q-ST-70-02	Space product assurance - Thermal vacuum outgassing test for the screening of space materials
EN 16602-70-09	ECSS-Q-ST-70-09	Space product assurance - Measurement of thermo-optical properties of thermal control materials
EN 16602-70-13	ECSS-Q-ST-70-13	Space product assurance - Measurement of the peel and pull-off strength of coatings and finishes using pressure-sensitive tapes
EN 16602-70-22	ECSS-Q-ST-70-22	Space product assurance - Control of limited shelf-life materials
	ASTM D1005-95	Standard Test Method for Measurement of Dry-Film Thickness of Organic Coatings Using Micrometers
	ASTM D1400-94	Standard Test Method for Non-destructive Measurement of Dry Film Thickness of Nonconductive Coatings Applied to a Nonferrous Metal Base
	ISO 2409:2007	Paints and Varnishes – Cross-cut test
	ISO 2360:2003	Non-conductive coatings on non-magnetic electrically conductive basis materials – Measurement of coating thickness – Amplitude-sensitive eddy current method

	EC 1907/2006	European regulation for the registration, evaluation, authorisation and restriction of chemicals
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