

STN	Zabezpečovanie výrobkov kozmického programu. Materiály, mechanické časti a procesy.	STN EN 16602-70 31 0542
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Space product assurance - Materials, mechanical parts and processes

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. 03/17

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Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

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English version

Space product assurance - Materials, mechanical parts and processes

Assurance produits des projets spatiaux - Matériaux,
composants mécaniques et procédés

Raumfahrtproduktsicherung - Werkstoffe,
mechanische Teile und Prozesse

This European Standard was approved by CEN on 22 May 2016.

CEN and CENELEC 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 CEN-CENELEC Management Centre or to any CEN and CENELEC 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 and CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European foreword

This document (EN 16602-70:2016) has been prepared by Technical Committee CEN-CENELEC/TC 5 "Space", the secretariat of which is held by DIN.

This European Standard (EN 16602-70:2016) originates from ECSS-Q-ST-70C Rev.1.

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of an identical text or by endorsement, at the latest by April 2017, and conflicting national standards shall be withdrawn at the latest by April 2017.

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 supersedes EN 13291-3:2003.

The main changes with respect to EN 13291-3:2003 are listed below:

- new EN number and modified title,
- Reorganization of the content of the document to separate descriptive text and requirements, including clarification, modification of requirements and implementation of change requests,
- Alignment of the three Standards EN 16603-32-08 (based on ECSS-E-ST-32-08C Rev.1), EN 16602-70 (based on ECSS-Q-ST-70C Rev.1) and EN 16602-70-71 (based on ECSS-Q-ST-70-71C),
- Addition of Subclauses 5.1.18 "Bacterial and fungus growth", 5.1.19 "Hydrogen embrittlement" and 5.1.20 "Manned environment" coming from ECSS-Q-ST-70-71A Rev.1.

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.

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Scope

This European Standard specifies the requirements and statements applicable to materials, mechanical parts and processes to satisfy the mission performance requirements.

This standard also specifies the documentation requirements and the procedures relevant to obtaining approval for the use of materials, mechanical parts and processes in the fabrication of space systems and associated equipment.

This standard covers the following:

- management, including organization, reviews, acceptance status and documentation control;
- selection criteria and rules;
- evaluation, validation and qualification, or verification testing;
- procurement and receiving inspection;
- utilization criteria and rules.

The relationship between activities and programme phases is defined in Annex E.

The provisions of this standard apply to all actors involved at all levels in the production of space systems. These can include manned and unmanned spacecraft, launchers, satellites, payloads, experiments, electrical ground support equipment, mechanical ground support equipment, and their corresponding organizations.

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

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Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN reference	Reference in text	Title
EN 16601-00-01	ECSS-S-ST-00-01	ECSS system - Glossary of terms
EN 16603-20-06	ECSS-E-ST-20-06	Space engineering - Spacecraft charging
EN 16601-80	ECSS-M-ST-80	Space product assurance - Risk management
EN 16602-10	ECSS-Q-ST-10	Space product assurance - Product assurance management
EN 16602-10-04	ECSS-Q-ST-10-04	Space product assurance - Critical-item control
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 16602-40	ECSS-Q-ST-40	Space product assurance - Safety
EN 16602-70-01	ECSS-Q-ST-70-01	Space product assurance - Cleanliness and contamination and control
EN 16602-70-02	ECSS-Q-ST-70-02	Space product assurance - Thermal vacuum outgassing test for the screening of space materials
EN 16602-70-04	ECSS-Q-ST-70-04	Space product assurance - Thermal testing for the evaluation of space materials, processes, mechanical parts and assemblies
EN 16602-70-06	ECSS-Q-ST-70-06	Space product assurance - Particle and UV radiation testing of space materials
EN 16602-70-09	ECSS-Q-ST-70-09	Space product assurance - Measurements of thermo-optical properties of thermal control materials
EN 16602-70-21	ECSS-Q-ST-70-21	Space product assurance - Flammability testing for the screening of space materials
EN 16602-70-22	ECSS-Q-ST-70-22	Space product assurance - Control of limited shelf-life materials

EN 16602-70-29	ECSS-Q-ST-70-29	Space product assurance - Determination of offgassing products from materials and assembled articles to be used in a manned space vehicle crew compartment
EN 16602-70-36	ECSS-Q-ST-70-36	Space product assurance - Material selection for controlling stress-corrosion cracking
EN 16602-70-37	ECSS-Q-ST-70-37	Space product assurance - Determination of the susceptibility of metals to stress-corrosion cracking
EN 16602-70-71	ECSS-Q-ST-70-71	Space product assurance - Materials, processes and their data selection

koniec náhľadu – text ďalej pokračuje v platenej verzii STN