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Space engineering - Materials

Táto norma obsahuje anglickú verziu európskej normy.
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English version

Space engineering - Materials

Ingénierie spatiale - Matériaux

Raumfahrttechnik - Werkstoffe

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

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European Foreword

This document (EN 16603-32-08:2016) has been prepared by Technical Committee CEN/CLC/TC 5 “Space”, the secretariat of which is held by DIN.

This standard (EN 16603-32-08:2016) originates from ECSS-E-ST-32-08C 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of an identical text or by endorsement, at the latest by February 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.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 14607-8:2004.

The main changes with respect to EN 14607-8:2004 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),
- Deletion of deletion of clauses 4.2, 4.4, 4.9, 4.10, 4.12, 4.13 and Table 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.

1
Scope

ECSS-E-ST-32-08 specifies the mechanical engineering requirements for materials. This Standard also encompasses the mechanical effects of the natural and induced environments to which materials used for space applications can be subjected.

This standard specifies requirements for the establishment of the mechanical and physical properties of the materials to be used for space applications, and the verification of these requirements.

Verification includes destructive and non-destructive test methods. Quality assurance requirements for materials (e.g. procurement and control) are covered by ECSS-Q-ST-70.
This standard may be tailored for the specific characteristics and constrains 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 16603-32	ECSS-E-ST-32	Space engineering - Structural
EN 16602-70	ECSS-Q-ST-70	Space product assurance - Materials, mechanical parts and processes
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 - Material, processes and their data selection
	EN 4179:2005	Aerospace series - Qualification and approval of personnel for non-destructive testing