

BS EN 16604-10:2014



BSI Standards Publication

**Space sustainability —
Adoption Notice of ISO 24113:
Space systems — Space debris
mitigation requirements**

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee ACE/68, Space systems and operations.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English version

Space sustainability - Adoption Notice of ISO 24113: Space systems - Space debris mitigation requirements

Développement durable de l'espace - Notice d'adoption de la norme ISO 24113: Systèmes spatiaux - Exigences relatives à la réduction des débris spatiaux

Nachhaltigkeit im Weltraum - Übernahmebemerkung zu ISO 24113: Space systems - Space debris mitigation requirements

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Foreword

This document (EN 16604-10:2014) has been prepared by Technical Committee CEN/CLC/TC 5 "Space", the secretariat of which is held by DIN.

This standard (EN 16604-10:2014) originates from ECSS-U-AS-10C.

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of an identical text or by endorsement, at the latest by March 2015, and conflicting national standards shall be withdrawn at the latest by March 2015.

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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

This document identifies the clauses and requirements modified with respect to the standard ISO 24113, Space systems — Space debris mitigation requirements, Second edition 2011-05-15 for application in ECSS.

2

Context information

The standard ISO 24113, Space systems — Space debris mitigation requirements has been developed by ISO TC20/SC14. The key space debris mitigation requirements have been thoroughly discussed at international level, agreed by the ISO members and published as standard ISO 24113.

Aiming at the development of world wide implementation standards dealing with space debris mitigation, ECSS has proactively contributed to the preparation of ISO 24113.

ECSS decided to adopt and apply ISO 24133 with a minimum set of modifications, identified in the present document, to account for the reference and applicable space debris mitigation documents existing in Europe and of the needs of the ECSS members.

| Clause or requirement number | Applicability | Applicable text (the new/added text is underlined) | Comments | Text as in the original document (deleted text with strikethrough) |
|------------------------------|---|---|--|--|
| 6.1.1.3 | New requirement | <p><u>If space debris are released into Earth orbit during normal launch operations, then the number of space debris released, other than those covered by 6.1.2, shall not exceed:</u></p> <p><u>a. One, for the launch of a single spacecraft.</u></p> <p><u>b. Two, for the launch of multiple spacecraft.</u></p> | New requirement added | - |
| 6.1.2.2 | Modified (whole text of the requirement) | Solid rocket motors shall be designed and operated to avoid releasing solid combustion products <u>larger than 1 mm</u> into the GEO protected region. | ISO requirement modified to include the maximum size of solid combustion products. | <i>Solid rocket motors shall be designed and operated so as to avoid releasing solid combustion products into the GEO protected region.</i> |

Application requirements

- a. ISO 24113, Space systems - Space debris mitigation requirements, Second edition 2011-05-15 shall apply with the modifications listed in Table 3-1.

Table 3-1: Applicability table for ISO 24113

| Clause or requirement number | Applicability | Applicable text (the new/added text is underlined) | Comments | Text as in the original document (deleted text with strikethrough) |
|--|----------------------------|---|---|--|
| 1 Scope (1 st paragraph) | Modified | This International Standard defines the primary space debris mitigation requirements applicable to all elements of systems launched into or passing through near-Earth space, including launch vehicle orbital stages, operating spacecraft, and any objects released as part of normal operations or disposal actions. | Word “unmanned” deleted from the Scope of the ISO standard. | <i>This International Standard defines the primary space debris mitigation requirements applicable to all elements of unmanned systems launched into...</i> |
| 3.15 re-entry | Modified (NOTE deleted) | process in which atmospheric drag cascades deceleration of a spacecraft or launch vehicle orbital stage (or any part thereof), leading to its destruction or return to Earth | NOTE deleted | <i>process in which atmospheric drag cascades deceleration of a spacecraft or launch vehicle orbital stage (or any part thereof), leading to its destruction or return to Earth</i> <i>NOTE—For operational purposes, this is when the period of the mean orbit is 89 minutes or less.</i> |

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