

BS ISO 24113:2011



BSI Standards Publication

Space systems — Space debris mitigation requirements

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National foreword

This British Standard is the UK implementation of ISO 24113:2011.

Growth in the volume of space debris is of major international concern. The aim of ISO 24113 is to reduce this growth by setting out high level debris mitigation measures applicable to all elements of unmanned 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. These internationally agreed measures are derived from and are consistent with broader space debris mitigation guidelines published by organizations such as the Inter Agency Space Debris Coordination Committee (IADC) and the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS).

Global agreement that the growth in space debris needs to be reduced, and international consensus on the measures contained in ISO 24113 and associated lower level standards, offer a basis for a globally consistent approach to space debris mitigation. Measures for the mitigation of space debris can be adopted voluntarily, or be brought into effect through commercial contract, or incorporated as a condition in National regulation.

UK nationals and entities incorporated in the UK which launch, procure the launch or operate a space object or undertake any other activity in outer space must be licensed under the Outer Space Act 1986 (OSA). Before issuing a licence, the licensing authority – currently the UK Space Agency – assesses if the proposed space activity conforms to international treaties (e.g. the requirements on liability and registration) and other applicable laws and regulations. A safety evaluation is required by the UK Space Agency before issuing a licence. The safety evaluation aims to determine whether a licence applicant can safely conduct the launch, operation and disposal of a space system. In particular, the evaluation seeks to assess whether an applicant can demonstrate a clear understanding of the hazards involved, and that an appropriate risk management regime exists to limit those hazards. This is necessary to ensure that the activity will not jeopardize public health or the safety of persons or property.

The assessment carried out by the UK Space Agency also considers whether the proposed activity is compliant with international guidelines such as those relating to space debris mitigation. ISO 24113 and associated ISO debris mitigation standards provide implementable and verifiable requirements that can be used by UK nationals or entities to demonstrate compliance with the broader debris mitigation guidelines mentioned above.

As the implementation of debris mitigation measures can have a significant impact on the design and operation of space systems and consequently mission cost, it is clearly in the interest of those applying for a licence to confirm, at an early stage, which debris mitigation measures apply to their specific space system and with which the applicant must demonstrate compliance. ISO 24113 can be used as a basis for such an assessment by the UK Space Agency prior to granting an applicant a licence pursuant to the OSA.