
**Space systems — Explosive systems
and devices**

Systèmes spaciaux — Dispositifs et équipements explosifs



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 26871 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 14, *Space systems and operations*.

Space systems — Explosive systems and devices

1 Scope

This International Standard specifies requirements for the use of explosives on spacecraft and other space products, including launch vehicles. It addresses the aspects of design, analysis, verification, manufacturing, operations and safety.

NOTE Specific requirements for man-rating are not addressed.

2 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.

ISO 14300-1, *Space systems — Programme management — Part 1: Structuring of a project*

ST/SG/AC.10/1, UN Recommendations on the transport of dangerous goods (Model Regulations)

UNO *Manual of Tests and Criteria*. United Nations, Fifth Edition, 2010

Mil-std 1576, *Electroexplosive Subsystem Safety Requirements and Test Methods for Space Systems*, USAF, 1992

3 Terms, definitions, abbreviated terms and symbols

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1

actuator

component that performs the moving function of a mechanism

NOTE An actuator can be either an electric motor, or any other mechanical (e.g. spring) or electric component or part providing the torque or force for the motion of the mechanism.

3.1.2

all-fire level

lowest level of the fire stimulus (including rise time, shape, duration), which results in initiation of a first element (initiator) within a specific reliability and confidence level as determined by test and analysis

NOTE 1 The stimulus duration shall be compliant with the system.

NOTE 2 It is recommended that the test sequence be carried out at the lowest temperature of the operating range.

NOTE 3 The probability of functioning should be equal to or better than 0,999 at the 95 % confidence level.

3.1.3

armed

condition that allows the probability of a wanted event to be above an agreed limit