

STN	Letectvo a kozmonautika Manažerstvo programu Návod na riadenie bezporuchovosti	STN EN 9227-2 31 0477
------------	---	---

Aerospace series - Programme management - Guide for reliability control

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. 07/25

Obsahuje: EN 9227-2:2025

140856

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2025
Slovenská technická norma a technická normalizačná informácia je chránená zákonom č. 60/2018 Z. z. o technickej normalizácii v znení neskorších predpisov.

EUROPEAN STANDARD

EN 9227-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2025

ICS 49.140

English Version

**Aerospace series - Programme management - Guide for
reliability control**Série aérospatiale - Management de programme -
Guide pour la maîtrise de la fiabilitéLuft- und Raumfahrt - Programm-Management -
Richtlinien für das management der Zuverlässigkeit

This European Standard was approved by CEN on 7 April 2025.

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

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

EN 9227-2:2025 (E)

Contents	Page
European foreword	4
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions	5
4 List of acronyms	7
5 Principles of reliability control.....	8
5.1 Purpose of reliability control	8
5.2 Construction of reliability.....	8
6 Construction of reliability tasks	8
6.1 Purpose of the clause.....	8
6.2 Calculation tasks	9
6.2.1 Reliability goals and allocation.....	9
6.2.2 Reliability prediction	10
6.3 Analysis tasks.....	10
6.3.1 Risk analysis	10
6.3.2 Experience feedback.....	10
6.3.3 Functional analysis.....	10
6.3.4 Failure mode, effects and criticality analysis (FMECA).....	11
6.3.5 Reliability and availability modelling	12
6.3.6 Design guides.....	14
6.3.7 Other analyses.....	15
6.4 Testing tasks.....	16
6.4.1 General.....	16
6.4.2 Reliability/durability characterization tests in the development phase.....	16
6.4.3 Use of integrated reliability growth tests (non-specific tests)	17
6.4.4 Reliability dedicated growth tests.....	17
6.4.5 Reliability demonstration tests.....	17
6.4.6 Measurement of reliability in series production	18
7 Management tasks.....	19
7.1 Reliability programme plan.....	19
7.2 Activity management.....	19
7.3 Programme reviews.....	19
7.4 Risk management	19
7.5 Failure reporting analysis and corrective action system (FRACAS).....	20
7.6 Reliability assurance	20
8 Guidance for reliability control	21
8.1 General.....	21
8.2 Preparation phase	22
8.2.1 Objectives	22
8.2.2 Management tasks.....	22
8.2.3 Calculation tasks	22
8.2.4 Analysis tasks.....	23
8.3 Realization phase.....	24

8.3.1 Objectives	24
8.3.2 Management tasks	24
8.3.3 Calculation tasks	25
8.3.4 Analysis tasks	25
8.3.5 Testing tasks	26
8.4 Use phase	26
8.4.1 Objectives	26
8.4.2 Management tasks	26
8.4.3 Calculation tasks	26
8.4.4 Analysis tasks	27
8.4.5 Expected results	27
Annex A (informative) Task summary table	28
Bibliography	30

EN 9227-2:2025 (E)**European foreword**

This document (EN 9227-2:2025) has been prepared by ASD-STAN.

After enquiries and votes carried out in accordance with the rules of this Association, this document has received the approval of the National Associations and the Official Services of the member countries of ASD-STAN, prior to its presentation to CEN.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2025, and conflicting national standards shall be withdrawn at the latest by November 2025.

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

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this document: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

1 Scope

The purpose of this document is to provide customers and their suppliers with a document specifying the notions of product reliability “construction” and “management”.

It offers programme directors and project managers information likely to help them:

- determine the tasks to be performed and the application procedures, according to the specific nature of the programme and its goals;
- define and implement the provisions necessary for performing these tasks;
- within programme execution, situate the various tasks involved in constructing and managing the reliability of a product.

This document applies to all programmes (in particular aeronautical, space and armament programmes).

These reliability construction procedures concern not only all the products and its constituents covered by these programmes, but also the means and manufacturing processes to be implemented for their realization.

The provisions of this document can be negotiated at all levels between the parties directly concerned by a given programme. This implies, on the part of the customer, that each lower level is provided with the information necessary to perform tasks and meet the specified targets.

2 Normative references

There are no normative references in this document.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN