



AEROSPACE STANDARD	AS9125™	
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	Superseding ARP9005	
Technically equivalent writings published in all IAQG sectors.		
Aerospace Series - Non-Deliverable Software Requirements		

RATIONALE

This standard defines the requirements for the effective control of non-deliverable software utilized in the design, production, evaluation, test, acceptance, or calibration of a deliverable product. This standard supersedes the Aerospace Recommended Practice (ARP) 9005, Aerospace Guidance for Non-Deliverable Software, published in June 2005.

FOREWORD

This document standardizes, to the greatest extent possible, the non-deliverable software requirements for the Aviation, Space, and Defense industry. The establishment of common requirements for use at all levels of the supply chain by organizations around the world is intended to result in improved quality, schedule, and cost performance by the reduction or elimination of organization unique requirements and wider application of good practices.

Applicability of this standard should be based on the context of organization, business, operations, product development. Other standards may be required for higher quality assurance and safety criticality levels as appropriate. The organization should identify applicable non-deliverable software based on the impact to the deliverable products and services.

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1. SCOPE

1.1 General

This standard defines the requirements for the effective control of non-deliverable software. This standard can be used during the design, development, test, production, release, use, maintenance, and retirement of non-deliverable software. This can include non-deliverable software procured from external suppliers and utilized in the design, production, evaluation, test, acceptance, or calibration of a deliverable product.

This standard focuses solely on the unique requirements of the operational processes that pertain to non-deliverable software as identified by clause 1.2.

Operational processes not covered in this standard are addressed by the respective organization's Quality Management System (QMS), based on the 9100-series (i.e., 9100, 9110, 9120) and/or ISO 9001 standards.

If there is a conflict between the requirements of this standard, and customer or applicable statutory/regulatory requirements, the latter shall take precedence.

1.2 Application

The organization shall consider the requirements of this International Standard to determine applicability.

This standard applies to non-deliverable software (including firmware) that affects a deliverable product or service. Following are several applications and supporting examples of non-deliverable software that is within the scope of this standard:

- Design and Development: modeling, simulation, virtual reality, virtual machine, Computer-Aided Design (CAD), Three-Dimensional (3D) modeling and analysis tools, software compiler, and code generators.
- Manufacturing: additive manufacturing, Computer Numerical Controlled (CNC) programs, robotics, factory automation, tools that load deliverable software, software used in special process (e.g., heat treat, shot peen, sonic wall inspection), and automated manufacturing software (i.e., pick and place).
- Verification, Validation and Maintenance: Coordinate Measuring Machine (CMM) programs, hardware or software qualification, code coverage, test scripts, analysis tools, acceptance test, production acceptance, calibration (inspection, test or calibration), simulator, emulator, and software used in post-delivery service provisions.

The following types of software are not within scope of this standard:

- deliverable software (refer to 9115);
- manufacturing and measuring equipment embedded software (e.g., operating system, drivers);
- enterprise or office software (e.g., MS Office, word processing or spreadsheet applications, Teams, network software, email, employee management system).

1.3 Informative

In this standard, the following verbal forms are used:

- “shall” indicates a requirement;
- “should” indicates a recommendation;
- “may” indicates a permission;
- “can” indicates a possibility or a capability.

Information marked as “NOTE” is for guidance in understanding or clarifying the associated requirement, and “e.g.” indicates suggestions given for guidance.

2. REFERENCES

The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

9100	Quality Management Systems – Requirements for Aviation, Space, and Defense Organizations
9110	Quality Management Systems – Requirements for Aviation Maintenance Organizations
9115	Quality Management Systems – Requirements for Aviation, Space, and Defense Organizations – Deliverable Software (Supplement to 9100:2016)
9120	Quality Management Systems – Requirements for Aviation, Space and Defense Distributors

As developed under the auspices of the International Aerospace Quality Group (IAQG) and published by various standards bodies [e.g., AeroSpace and Defense Industries Association of Europe – Standardization (ASD-STAN), SAE International, European Committee for Standardization (CEN), Japanese Standards Association (JSA)/Society of Japanese Aerospace Companies (SJAC), Brazilian Association for Technical Norms (ABNT)].

ISO 9001 Quality management systems – Requirements

3. TERMS AND DEFINITIONS

Definitions for general terms can be found in the IAQG Dictionary (located on the IAQG website - <https://dictionary.iaqg.org/>). Abbreviations for this document are presented in Appendix A. For the purpose of this standard, the following terms and definitions apply:

3.1 Free Open-Source Software (FOSS)

Software that is both freely licensed software and open-source software where anyone is typically able to use, copy, study, and change the software.

3.2 Information Security

The protection of information, products, and systems from unauthorized access, use, disclosure, disruption, modification, or destruction in order to provide confidentiality, integrity, and availability.

NOTE: This is also commonly referred to as “cybersecurity”; see ISO/IEC 27001 for additional information.

3.3 Non-Deliverable Software

Software that is not delivered to the end-user of a deliverable product under a contract or agreement; non-deliverable software may be used in the design, manufacturing, inspection, test, acceptance, or calibration processes for deliverable products (hardware or software) or services.

3.4 Obsolete Software

Software that is no longer used in the design, manufacturing, inspection, test, acceptance, or calibration processes for deliverable products or services.