

DIN EN 9300-003



ICS 01.110; 35.240.30; 49.020

Einsprüche bis 2024-07-31
Vorgesehen als Ersatz für
DIN EN 9300-003:2012-12**Entwurf**

**Luft- und Raumfahrt –
LOTAR – Langzeit-Archivierung und -Bereitstellung digitaler
technischer Produktdokumentationen wie zum Beispiel von 3D-, CAD-
und PDM-Daten –
Teil 003: Grundlagen und Konzepte;
Englische Fassung prEN 9300-003:2024**

Aerospace series –

LOTAR – Long Term Archiving and Retrieval of digital technical product documentation
such as 3D, CAD and PDM data –

Part 003: Fundamentals and concepts;

English version prEN 9300-003:2024

Série aérospatiale –

LOTAR – Archivage long terme et récupération des données techniques produits
numériques telles que CAO, 3D et PDM –

Partie 003: Fondamentaux et concepts;

Version anglaise prEN 9300-003:2024

Anwendungswarnvermerk

Dieser Entwurf mit Erscheinungsdatum 2024-05-31 wird der Öffentlichkeit zur Prüfung und Stellungnahme vorgelegt.

Weil das beabsichtigte Dokument von der vorliegenden Fassung abweichen kann, ist die Anwendung dieses Entwurfs besonders zu vereinbaren.

Stellungnahmen werden erbeten

- vorzugsweise online im Norm-Entwurfs-Portal von DIN unter www.din.de/go/entwuerfe bzw. für Norm-Entwürfe der DKE auch im Norm-Entwurfs-Portal der DKE unter www.entwuerfe.normenbibliothek.de, sofern dort wiedergegeben;
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- oder in Papierform an den DIN-Normenausschuss Luft- und Raumfahrt (NL), 10772 Berlin oder Am DIN-Platz, Burggrafenstr. 6, 10787 Berlin.

Es wird gebeten, mit den Kommentaren zu diesem Entwurf jegliche relevanten Patentrechte, die bekannt sind, mitzuteilen und unterstützende Dokumentationen zur Verfügung zu stellen.

Gesamtumfang 32 Seiten

DIN-Normenausschuss Luft- und Raumfahrt (NL)

Nationales Vorwort

Der Verband der Europäischen Luft-, Raumfahrt- und Verteidigungsindustrie – Normung (ASD-STAN) ist vom Europäischen Komitee für Normung (CEN) für zuständig erklärt worden, Europäische Normen (EN) für das Gebiet der Luft- und Raumfahrt auszuarbeiten. Durch die Vereinbarung vom 3. Oktober 1986 wurde ASD Assoziierte Organisation (ASB) des CEN.

Das vorliegende Dokument (prEN 9300-003:2024) wurde von ASD-STAN, Fachbereich Digitale Projekte, unter Mitwirkung deutscher Experten des DIN-Normenausschusses Luft- und Raumfahrt (NL) erarbeitet.

Das zuständige deutsche Normungsgremium ist der Arbeitsausschuss NA 131-05-01 AA „Qualitäts- und Managementverfahren“ im DIN-Normenausschuss Luft- und Raumfahrt (NL).

Dieses Dokument enthält unter Berücksichtigung des DIN-Präsidialbeschlusses 1/2004 nur die Englische Fassung von prEN 9300-003:2024.

Der Bedarf für eine Deutsche Fassung wird derzeit beraten.

Entsprechend Beschluss 57/9 des Technischen Ausschusses des Beirats des DIN-Normenausschusses Luft- und Raumfahrt (NL) sind die europäischen Luft- und Raumfahrt-Normungsergebnisse zweisprachig, in Deutsch und Englisch, in das Deutsche Normenwerk zu überführen. Aus diesem Grund wird die Norm beide Sprachfassungen enthalten.

Aktuelle Informationen zu diesem Dokument können über die Internetseiten von DIN (www.din.de) durch eine Suche nach der Dokumentennummer aufgerufen werden.

Änderungen

Gegenüber DIN EN 9300-003:2012-12 wurden folgende Änderungen vorgenommen:

- a) Dokument redaktionell überarbeitet;
- b) Überarbeitung des Abschnitts „European Foreword“;
- c) Einfügen des Abschnitts „Introduction“;
- d) Überarbeitung des Abschnitts 1 „Scope“, allgemeine Information über die EN 9300-Reihe wurde integriert;
- e) vorheriger Abschnitt 5 „Applicability“ ist jetzt Abschnitt 4 und wurde überarbeitet;
- f) Struktur des vorherigen Abschnitts 4 wurde komplett überarbeitet – auch inhaltlich – und ist jetzt Abschnitt 5 „Fundamentals for Long-Term Archiving and Retrieval (LOTAR)“;
- g) Abschnitt 6 wurde strukturell und inhaltlich komplett überarbeitet und heißt jetzt „Archiving of digital product data“;
- h) neuer Titel von Abschnitt 7 ist „Fundamental concepts of long-term archival and retrieval of digital data“ und wurde strukturell und inhaltlich komplett überarbeitet;
- i) Abschnitt 8 wurde überarbeitet und Inhalte des vorherigen Abschnitts 7 wurden u. a. integriert;
- j) Literaturhinweise wurden hinzugefügt.

Nationaler Anhang NA (informativ)

Begriffe

Für die Anwendung dieses Dokuments gelten die Begriffe nach EN 9300-007.

ISO und IEC stellen terminologische Datenbanken für die Verwendung in der Normung unter den folgenden Adressen bereit:

- ISO Online Browsing Platform: verfügbar unter <https://www.iso.org/obp>
- IEC Electropedia: verfügbar unter <https://www.electropedia.org/>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 9300-003

May 2024

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Will supersede EN 9300-003:2012

English Version

**Aerospace series - LOTAR - LOng Term Archiving and
Retrieval of digital technical product documentation such
as 3D, CAD and PDM data - Part 003: Fundamentals and
concepts**

Série aérospatiale - LOTAR - Archivage long terme et
récupération des données techniques produits
numériques telles que CAO, 3D et PDM - Partie 003 :
Fondamentaux et concepts

Luft- und Raumfahrt - LOTAR - Langzeit-Archivierung
und -Bereitstellung digitaler technischer
Produktdokumentationen, wie zum Beispiel von 3D-,
CAD- und PDM-Daten - Teil 003: Grundlagen und
Konzepte

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee ASD-STAN.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword	3
Introduction	4
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions	5
4 Applicability.....	5
5 Fundamentals for LOng-Term Archiving and Retrieval (LOTAR)	5
5.1 General.....	5
5.2 Invariance.....	6
5.2.1 General.....	6
5.2.2 Requirements for preserving digital data	7
5.2.3 Retention period for storing digital data	7
5.3 The product life cycle	7
5.4 Stored form of product data.....	9
5.4.1 General.....	9
5.4.2 Detail level.....	9
5.4.3 Representation vs presentation	9
5.4.4 Format.....	10
6 Archiving of digital product data	10
6.1 Product information model and product model	10
6.1.1 General.....	10
6.1.2 Business application	11
6.2 Long-term archiving and retention of product models	11
6.2.1 General.....	11
6.2.2 Identifying product data.....	13
6.2.3 Business requirements and use cases for archival.....	14
7 Fundamental concepts of long-term archival and retrieval of digital data	15
7.1 General.....	15
7.2 Introduction to Open Archive Information System (OAIS) – ISO 14721	15
ISO 10303 Standard for the Exchange of Product model data (STEP)	17
8 Data descriptions.....	17
8.1 Overview	17
8.2 Data	18
8.2.1 Archiving digital product information vs. archiving physical documents.....	18
8.2.2 Data content.....	19
8.2.3 Data quality assurance.....	21
8.3 Mapping approach onto physical data representation	24
8.4 Fundamentals for testing the LOTAR process and components	25
8.4.1 General.....	25
8.4.2 VP: Validation Properties	26
Bibliography	27

European foreword

This document (prEN 9300-003:2024) has been prepared jointly by AIA, ASD-STAN, PDES, Inc., AFNeT and the prostep ivip Association.

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 is currently submitted to the CEN Enquiry.

This document will supersede EN 9300-003:2012.

prEN 9300-003:2024 includes the following significant technical changes with respect to EN 9300-003:2012:

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Introduction

The AFNeT association is an international non-profit association in Europe and has operated for more than 30 years as a multi-sectoral “Think Tank” articulated with a “Do Tank”, with digital transformation projects or standardization projects in many industries. These activities have led to the emergence of a network of recognized and highly skilled actors from the manufacturing industry, IT businesses, and research companies. Its members represent leading industrial companies, SMEs, French governmental agencies, software vendors, universities, and research organizations. AFNeT has conducted voluntary and innovative actions in order to develop competitiveness and innovation in industry by setting up collaboration projects or programs in the industrial sectors (e.g. Aerospace and Defence, Automotive, Rail, Shipbuilding, Nuclear, Energy) to enable the digital thread for the extended enterprise processes such as Product Lifecycle Management, Supply-Chain Management, Manufacturing, Maintenance and Operations, Integrated Logistics Support, and Identification. AFNeT promotes the development, testing and usage of a set of coherent international standards for supporting these activities, especially in the PLM and the SCM domains.

The prostep ivip Association is an international non-profit association in Europe. For establishing leadership in IT-based engineering it offers a moderated platform to its nearly 200 members from leading industries, system vendors and research institutions. Its product and process data standardization activities at European and worldwide levels are well known and accepted. The prostep ivip Association sees this document and the related parts as a milestone of product data technology.

PDES Inc. is an international non-profit association in USA. The mission of PDES Inc. is to accelerate the development and implementation of ISO 10303, enabling enterprise integration and PLM interoperability for member companies. PDES Inc. gathers members from leading manufacturers, national government agencies, PLM vendors and research organizations. PDES Inc. supports this standard as an industry resource to sustain the interoperability of digital product information, ensuring and maintaining authentic longevity throughout their product lifecycle.

Readers of this document should note that all standards undergo periodic revisions and that any reference made herein to any other standard implies its latest edition, unless otherwise stated.

Within the context of the EN 9300 series the terms “shall” and “should” are to be used per the TOC-2 NAS Style Guide_2021 Clause 3.1 and 3.2:

- “shall” is to be used in an imperative sense. All requirements will be prefaced with a “shall” statement denoting mandatory compliance;
- “should” is to be used to indicate a recommendation. All non-mandatory requirements or statements will be prefaced with a “should” statement denoting non-mandatory action.
- “includes” means “includes but is not limited to”.

1 Scope

This document specifies the fundamentals and concepts for the long-term preservation of digital product and technical data. EN 9300 is a series of separate standard parts that elucidate various regulatory and business requirements, applicable domain specific methodologies and are extensible for future long-term archiving formats and data management practices.

EN 9300-003 will focus on the fundamentals and concepts of long-term archival and retrieval of digital product and technical data.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 9300-007,¹ *Aerospace series — LOTAR — Long Term Archiving and Retrieval of digital technical product documentation such as 3D, CAD and PDM data — Part 007: Terms and definitions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 9300-007 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp/>
- IEC Electropedia: available at <https://www.electropedia.org/>

4 Applicability

EN 9300 is a series of standards for long-term archiving and retrieval of model-based product data.

Since technical product documentation, such as design documents, are generated, exchanged, and used digitally, architecture, technology, processes, data formats, rules and regulations need to be adapted to enable digital retention and long-term archiving. The EN 9300 series closes this gap as a standard for long-term archival and retrieval of model-based product data.

For further explanation on applicability of this document and its series, see FprEN 9300-001.

5 Fundamentals for Long-Term Archiving and Retrieval (LOTAR)

5.1 General

This clause discusses the fundamentals and concepts applicable to the long-term archiving and retrieval of digital product and technical data domain. It provides detailed clarification of these concepts into a context beyond basic definitions defined in EN 9300-007.

Various user communities such as aerospace and defence, automotive or shipbuilding demonstrate specific needs for long-term archiving and retrieval of their product and technical data. This is noted in their diverse retention and archival requirements as well as various data management processes. This clause explains the major differences of the terms “retention” and “archival” and their relation to the scope of EN 9300. See Figure 1.

¹ Published as ASD-STAN Standard at the date of publication of this document, available at: <https://www.asd-stan.org/>.

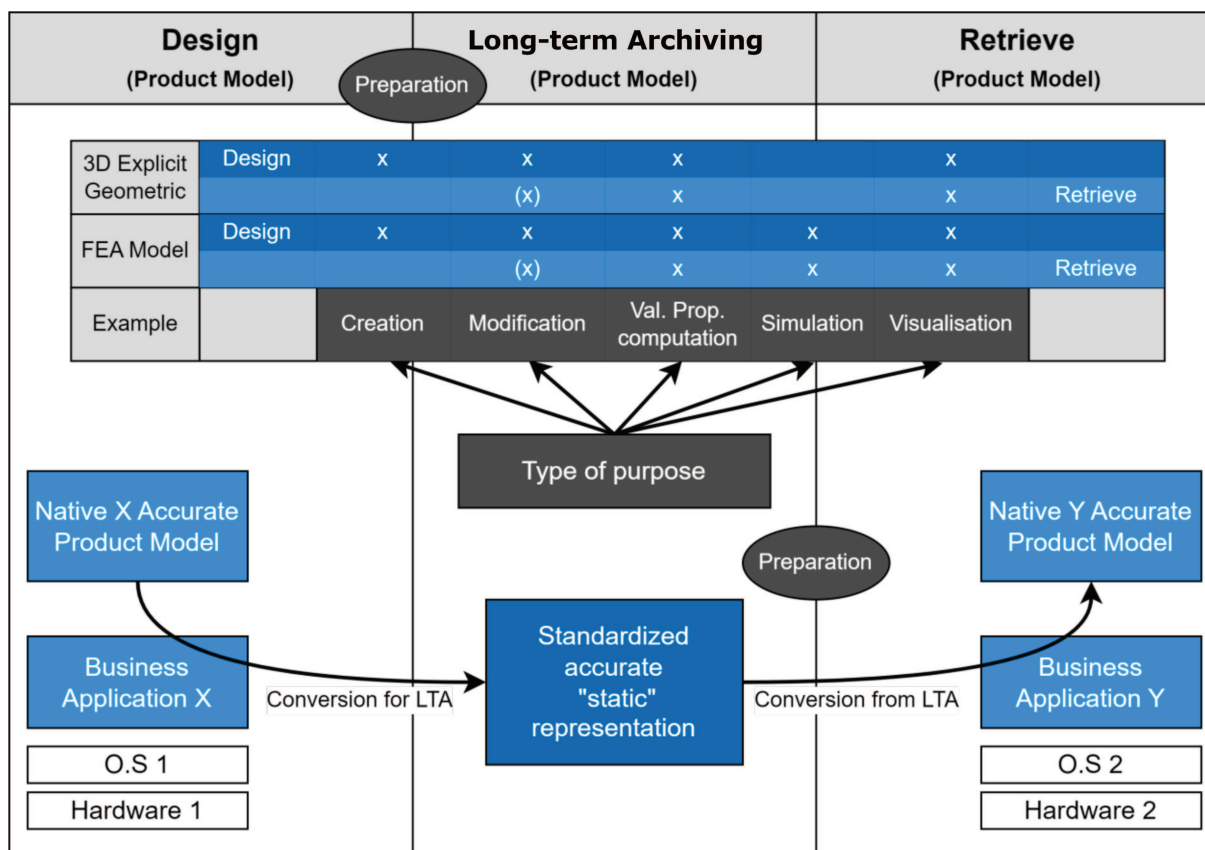


Figure 1 — Archival — Storage and retention

Companies within various industries need to keep data and records to fulfil, certification, legal and business requirements. For most modern applications, this data is digital. These requirements fall under four main categories regarding the retention of digital data:

- invariance:** how important is it to ensure that digital data is not altered;
- requirements:** why and for which cases preservation of digital data is required or not;
- retention period:** the required length of time for retaining digital data;
- stored form:** the stored format of the digital data.

The following subclauses describe these four categories and are the foundation for this document.

5.2 Invariance

5.2.1 General

Invariance covers the need to ensure that the information has not changed over time and thus provide evidential weight that the design intent has not changed.

Three sub-categories further clarify invariance:

- **auditable** – where validation methods and test suites ensure that information cannot be changed without the change being detected, e.g. by the comparison of stored secure hash algorithm (SHA) checksums of the record before and after archiving – (refer to EN 9300-005 “Authentication and Verification”, ISO 16363);
- **implicit** – where the system is designed to prevent changes. The system shall supervise activities which would result in changes of the digital data. The supervision, for example, could be realized