SLOVENSKI STANDARD
SIST EN ISO 16791:2026

01-julij-2026

Nadomešča:
SIST-TS CEN ISO/TS 16791:2021

Zdravstvena informatika - Zahteve za mednarodne strojno berljive kode za pakiranje zdravil (ISO 16791:2026)

Health informatics - Requirements for international machine-readable coding of medicinal product package identifiers (ISO 16791:2026)

Medizinische Informatik - Anforderungen für internationale maschinenlesbare Kodierungen von Identifikatoren für Arzneimittelpackungen (ISO 16791:2026)

Informatique de santé - Exigences relatives au codage international lisible par machine des identifiants d'emballages de médicaments (ISO 16791:2026)

Ta slovenski standard je istoveten z: **EN ISO 16791:2026**

ICS:

11.120.10	Zdravila	Medicaments
35.040.50	Tehnike za samodejno razpoznavanje in zajem podatkov	Automatic identification and data capture techniques
35.240.80	Uporabniške rešitve IT v zdravstveni tehniki	IT applications in health care technology

SIST EN ISO 16791:2026 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 16791

April 2026

ICS 35.240.80

Supersedes CEN ISO/TS 16791:2020

English Version

Health informatics - Requirements for international machine-readable coding of medicinal product package identifiers (ISO 16791:2026)

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This European Standard was approved by CEN on 27 March 2026.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (EN ISO 16791:2026) has been prepared by Technical Committee ISO/TC 215 "Health informatics" in collaboration with Technical Committee CEN/TC 251 “Health informatics” the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2026, and conflicting national standards shall be withdrawn at the latest by October 2026.

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.

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Endorsement notice

The text of ISO 16791:2026 has been approved by CEN as EN ISO 16791:2026 without any modification.

International Standard

ISO 16791

Health informatics — Requirements for international machine-readable coding of medicinal product package identifiers

Informatique de santé — Exigences relatives au codage international lisible par machine des identifiants d'emballages de médicaments

Third edition
2026-03

Reference number
ISO 16791:2026(en)

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Published in Switzerland

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 215, *Health informatics*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 251, *Health informatics,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO/TS 16791:2020), which has been technically revised.

The main changes are as follows:

— addition of a definition on electronic product information;

— adjustment of 5.5.1 to reference ePL;

— addition of Annex F.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Globally, healthcare regulators, medicinal product suppliers, and healthcare providers, among others, are facing increased pressure to ensure a more secure and safer supply chain for medicinal products. The primary objective is to ensure optimal patient safety outcomes. Organizations such as the World Health Organization (WHO), the European Union and the US Congress, along with many other healthcare organizations, are also seeking robust systems that will deliver outcomes to enhance overall supply chain integrity, to prevent product falsification and to improve patient safety, especially at the point of care.

Machine-readable coding is a technology capable of achieving these stated outcomes. Therefore, the core purpose of this document is to provide requirements for machine-readable coding based on globally harmonized and interoperable standards for wide scale international implementation, such as GS1 System or UDI for medical devices.

This document outlines the requirements to implement international machine-readable coding on medicinal product packages in the healthcare supply chain; this process cannot be isolated from more general identification practice with medical devices or other categories of products. It assists all stakeholders implement, use, and optimize automatic identification and data capture (AIDC) technologies in their respective enterprises with a particular attention to health informatics. In that respect, this document complements ISO 11615; for example, it provides requirements regarding medicinal product package identifiers (PCID) and their relation with data carrier identifiers (DCID).

As AIDC offers a wide spectrum of potential solutions, particularly for data carriers such as barcodes, it has highlighted the importance of properly defining data structures to prevent ambiguity when information is encoded and captured.

Furthermore, the semantics of data carried can be specified by a number of organizations (also called “issuing agencies”), some with commercial activities, some with a national emphasis, and others with a standard development organizations’ objective. This document focuses on the GS1®[1] System of Standards.

The majority of supplies (such as processed food, office supplies, apparels, medical devices and equipment, medicinal products) in healthcare around the world use the GS1® System of Standards for AIDC as it is multi-sectorial and a globally implemented system of standards. Interoperability along the supply chain is easier to achieve once a single system of standards is used in any market, including healthcare.

This document is intended to guide healthcare packaging designers, regulatory affairs specialists, logistics operators, and others to implement AIDC solutions for healthcare.

NOTE 1 See Reference [34].

NOTE 2 See Reference [35].

1) GS1® is a registered trademark. This information is given for the convenience of users of this document and does not constitute an endorsement by ISO.

Health informatics — Requirements for international machine-readable coding of medicinal product package identifiers

1 Scope

This document provides requirements on identification and labelling of medicinal products from the point of manufacturing of packaged medicinal product to the point of dispensing the product.

This document outlines commonly accepted international practices for automatic identification and data capture (AIDC) barcoding solutions for applications and applies to manufacturers, distributors, healthcare facilities and all parties involved in labelling and distribution of packaged medicinal products. These users can, however, consider the coding interoperability requirements for other AIDC technologies, e.g. radio frequency identification (RFID); that technology is not addressed in this document except as for information.

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.

ISO 11615, *Health informatics — Identification of medicinal products — Data elements and structures for the unique identification and exchange of regulated medicinal product information*

ISO/TS 19256, *Health informatics — Requirements for medicinal product dictionary systems for health care*

3 Terms, definitions and abbreviated terms

For the purposes of this document, the following terms and definitions 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/

3.1 Terms and definitions

3.1.1
aggregation
packaging aggregation
hierarchical, parent-child relationship between a containing object (i.e. parent) and one or more objects (i.e. children) which are contained

Note 1 to entry: When the content of a delivery is not homogeneous, aggregation shall be provided by using a univocal identification of the delivery, such as with a serial shipping container code (SSCC); see Annex C.

3.1.2
application identifier
AI
GS1® prefix that specifies the meaning and purpose of the data element that follows, as specified in ISO/IEC 15418 and GS1® General Specifications[33]

[SOURCE: ISO/IEC 19762:2025, 3.1.1.77, modified — “defines” and “defined” were changed to “specifies” and “specified”.]

3.1.3
automatic identification and data capture
AIDC
methods or technologies for automatically identifying objects, collecting data about them, and entering that data directly into computer systems, eliminating manual entry

Note 1 to entry: The methods or technologies typically considered as part of AIDC include *barcodes* (3.1.9) which can be linear or 2-dimensional symbols and *radio frequency identification (RFID)* (3.1.33) tags/chips.

3.1.4
authentication
comparing the attributes of the object itself to what is known about objects of that origin

Note 1 to entry: Attributes include unique identifier besides overt, covert, and/or forensic solutions.

3.1.5
medicinal product batch identifier 1
BAID1
unique identifier (3.1.37) allocated to a specific *batch* (3.1.7) of a *medicinal product* (3.1.22), which appears on the *outer packaging* (3.1.26) of the medicinal product

Note 1 to entry: It is constructed by using the *batch number* (3.1.8) assigned by the manufacturer and the expiration date. This is for indexing purposes and to contribute to improving patient safety by allowing for the unique identification of a medicinal product at the package level.

Note 2 to entry: BAID1 is market specific.

Note 3 to entry: See 5.2.1.5 for the difference between BAID1 and BAID2, and batch or lot number.

[SOURCE: ISO 11615:—[2)], 3.1.51, modified — Notes 2 and 3 to entry were added.]

3.1.6
medicinal product batch identifier 2
BAID2
unique identifier (3.1.37) allocated to a specific *batch* (3.1.7) of a *medicinal product* (3.1.22), which appears on the immediate packaging, where this is not the *outer packaging* (3.1.26)

Note 1 to entry: It is constructed by using the *batch number* (3.1.8) assigned by the manufacturer and the expiration date. This is for indexing purposes and to contribute to improving patient safety by allowing for the unique identification of a medicinal product based at the level of the immediate container.

Note 2 to entry: ‘Immediate packaging’ corresponds frequently to ‘primary packaging’. See Annex B.

Note 3 to entry: See 5.2.1.5 for the difference between BAID1 and BAID2, and batch or lot number.

[SOURCE: ISO 11615:—, 3.1.52, modified — Notes 2 and 3 to entry were added.]

2) Under preparation. Stage at the time of publication: ISO/DIS 11615.

3.1.7
batch
specific quantity of a drug or other material that is intended to have uniform character and quality, within specified limits, and is produced according to a single *manufacturing* (3.1.19) order during the same cycle of manufacturing

Note 1 to entry: See 5.2.1.5 for the difference between BAID1 and BAID2, and batch or lot number.

Note 2 to entry: 'Lot' is frequently used as synonym of batch.

[SOURCE: ISO 11615:—, 3.1.8, modified — Notes to entry were added.]

3.1.8
batch number
identifier (3.1.17) assigned to a specific *batch* (3.1.7) of a *medicinal product* (3.1.22) or item resulting from a *manufacturing* (3.1.19) process at a specific point of time

Note 1 to entry: A batch number permits its manufacturing history to be traced.

Note 2 to entry: A batch number is made of series of ASCII characters.

Note 3 to entry: 'Lot number' is frequently used as synonym of batch number.

[SOURCE: ISO 11615:—, 3.1.9, modified — Notes to entry were added.]

3.1.9
barcode
optical machine-readable representation of data, showing data about the object to which it attaches

Note 1 to entry: Originally, barcodes represented data by varying the widths and spacings of parallel lines, and they can be referred to as linear or one-dimensional (1D). Later they evolved into rectangles, dots, hexagons, and other geometric patterns in two dimensions (2D). Although 2D systems use a variety of symbols, they are generally referred to as barcodes as well.

3.1.10
compounded preparation
medicinal products (3.1.22) generally consisting of active substances that can be combined with excipients, formulated into a dosage form suitable for the intended use

3.1.11
dispense
prepare and give out a *medicinal product* (3.1.22) in accordance with a prescription

Note 1 to entry: This includes assessing the pharmaceutical appropriateness including decision support.

Note 2 to entry: See ISO/TS 19293.

3.1.12
electronic product information
ePI
authorized, statutory product information for medicines (i.e. SmPC, PL and labelling)

Note 1 to entry: See Reference [47].

3.1.13
global trade item number
GTIN®
number that is used for the unique *identification* (3.1.15) of trade items worldwide

EXAMPLE 1 GS1® Identification Key, which comprises a GS1® Company Prefix, an Item Reference and Check digit.

EXAMPLE 2 Used to identify trade items such as *medicinal products* (3.1.22) and medical devices.