SLOVENSKI STANDARD
SIST EN 1573:2016

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Nadomešča:
SIST EN 1573:2003

Črtno kodiranje - Nalepka za medindustrijski transport

Bar coding - Multi industry transport label

Strichcodierung - Branchenübergreifendes Transportetikett

Code à barres - Étiquette de transport multisectorielle

Ta slovenski standard je istoveten z: **EN 1573:2015**

ICS:

03.220.01	Transport na splošno	Transport in general
35.040	Nabori znakov in kodiranje informacij	Character sets and information coding

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iTeh STANDARD PREVIEW

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EUROPEAN STANDARD

NORME EUROPÉENNE

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English Version

Bar code - Multi industry transport label

Code à barres - Etiquette de transport multisectorielle

Strichcodierung - Branchenübergreifendes Transportetikett

This European Standard was approved by CEN on 17 October 2015.

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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.

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EN 1573:2015 (E)

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European foreword

This document (EN 1573:2015) has been prepared by Technical Committee CEN/TC 225 "AIDC technologies", 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of an identical text or by endorsement, at the latest by May 2016, and conflicting national standards shall be withdrawn at the latest by May 2016.

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

This document supersedes EN 1573:1996.

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

EN 1573:2015 (E)

Introduction

The use of electronic data interchange (EDI) in association with the physical transport and handling of goods requires a clear and unique identifier linking the electronic data and the transport unit.

Bar coded transport labels are in widespread use in European industry. There exists a number of different standards many designed to meet the requirements of the specific industry sector. For effective and economic use within, and between, industry sectors a common multi-industry standard is a necessity.

The bar code information on the transport label may be used to access the appropriate database that contains detailed information about the transport unit, including information transmitted by electronic messages. In addition a transport label may contain other information relevant to the trading partners, either encoded in bar codes or printed in a human readable format.

This edition of EN 1573, Multi Industry Standard Label (MITL), expands on the 1996 edition by providing advice on usage of a modularized multi industry transport label that fulfils both product related requirements as well as transport requirements.

This edition also includes additional alternatives for 2D symbols and informative samples of modularized MITLs.

1 Scope

This European Standard:

— specifies the general requirements for the design of transport labels containing linear bar code and two-dimensional symbols for use by a wide range of industries;

— provides for traceability of transported units via a unique transport unit identifier code or 'licence plate', and supplemented where necessary by other identified data presented both in bar code and human readable form;

— provides a choice of linear bar code and two-dimensional symbologies;

— specifies quality requirements, classes of bar code density;

— provides recommendations as to label material, size and the inclusion of free text and any appropriate graphics.

This European Standard draws considerably on the content of ISO 15394:2009. As such, common material will not be repeated here but detailed references will be provided to that standard. However, this European Standard:

— defines some features in a more precise manner for use in the European context;

— provides additional advice possible since the publication of ISO 15394:2009.

This European Standard can be used as the single source, sufficient for an overview and to enable information flows to be incorporated into business systems. ISO 15394 is more relevant to those who are undertaking detailed label design, particularly compliant label generating software.

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.

EN ISO/IEC 15416, *Information technology - Automatic identification and data capture techniques - Bar code print quality test specification - Linear symbols (ISO/IEC 15416)*

EN ISO/IEC 15438, *Information technology - Automatic identification and data capture techniques - PDF417 bar code symbology specification (ISO/IEC 15438)*

ISO 15394:2009, *Packaging — Bar code and two-dimensional symbols for shipping, transport and receiving labels*

ISO/IEC 15417, *Information technology — Automatic identification and data capture techniques — Code 128 bar code symbology specification*

ISO/IEC 15418, *Information technology — Automatic identification and data capture techniques — GS1 Application Identifiers and ASC MH10 Data Identifiers and maintenance*

ISO/IEC 15434, *Information technology — Automatic identification and data capture techniques — Syntax for high-capacity ADC media*

ISO/IEC 15459-1, *Information technology — Automatic identification and data capture techniques — Unique identification — Part 1: Individual transport units*

ISO/IEC 16388, *Information technology — Automatic identification and data capture techniques — Code 39 bar code symbology specification*

ISO/IEC 16022, *Information technology — Automatic identification and data capture techniques — Data Matrix bar code symbology specification*

ISO/IEC 18004, *Information technology — Automatic identification and data capture techniques — QR Code bar code symbology specification*

3 Terms and definitions

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

3.1
unique identifier
an identifier is a character string used to uniquely identify one instance of an object within an identification scheme that is managed by an agency

3.2
licence plate
common term for unique identifier of a transport unit

Note 1 to entry: For this European Standard it is specified by the label issuer and applied to a transport unit to provide access to traceability data regardless of content and destination and valid for the lifetime of the transport unit. The term licence plate is used because of the one-to-one relationship between the number and physical transport unit.

3.3
transport unit
package intended for transportation comprising one or more articles, wrapped or unwrapped, and when multiple articles constrained to form a unit

4 General concepts

4.1 Principles

The purpose of a bar code label is – apart from unique identification of the package- to facilitate the automatic exchange of data among all members within a channel of distribution, e.g. supplier, carrier, purchaser, other intermediaries. The amount of data in linear bar code, two-dimensional symbol, and in human readable form is dependent on the requirements of the trading partners. Where a bar code label is used in conjunction with electronic databases and/or electronic message standards, the amount of data may be significantly reduced by the use of a common mandatory data element (the unique transport unit identifier).

Trading partners, have different information requirements. Some information may be common to two or more trading partners while other information may be specific to a single trading partner. Information for various trading partners becomes available at different times, e g:

— order processing information at the time of processing the order;

— product specific information at the point of manufacture or packaging;

— transport information at the time of shipment.

Trading partners can find it necessary to include additional data elements dealing with the above which may be presented both for automatic data capture from the linear bar code or two-dimensional symbol and for processing in a human readable form.

4.2 Unit load and transport package

For the purposes of this European Standard, a unit load is considered to be one or more transport packages or other items placed in a container or held together by means such as pallet, slip sheet, strapping, interlocking, glue, shrink wrap, or net wrap, making them suitable for transport, stacking, and storage as a unit.

For the purposes of this European Standard a transport package is considered to be a package intended for the transportation and handling of one or more articles, smaller packages, or bulk material. Both unit loads and transport packages are referred to as transport units in this document.

4.3 Unique transport unit identifier

A unique transport unit identifier is assigned to each individual transport unit. This is a basic requirement for all label formats specified by this European Standard. The unique identifier or "licence plate" is the key providing access to information stored in computer files and it may be transmitted by electronic communication between trading partners. The unique identifier may be used by all of the trading partners to retrieve information about the transport unit itself or about the status of the physical movement of the transport unit along the supply chain. It enables systems to track and trace individual transport units.

5 Data elements

5.1 Data identifiers

Data elements in the linear bar codes shall include data identifiers in accordance with ISO/IEC 15418.

GS1 application identifiers (in accordance with ISO/IEC 15418) shall only be used in conjunction with GS1 subset of Code 128 symbology (in accordance with ISO/IEC 15417).

ASC MH10 Data Identifiers (in accordance with ISO/IEC 15418) shall be used in conjunction with either Code 39 symbology (in accordance with ISO/IEC 16388) or Code 128 symbology or QR Code symbology (in accordance with ISO/IEC 18004) or Data Matrix (in accordance with ISO/IEC 16022).

NOTE   ISO 15394 refers to these data identifiers by their previous name of FACT data identifiers. They are now a formal ANSI standard, and maintained by American and international experts from other countries.

Users should become familiar with the issues associated with being confronted with the multiple symbologies and data formats. These issues are discussed in Annex B of ISO 15394:2009.

5.2 Unique transport unit identifier

The unique transport unit identifier, as defined in ISO/IEC 15459-1, shall be present on the multi industry transport label. The unique transport unit identifier has the following structure, it:

— starts with the Issuing Agency Code (IAC), assigned to the Issuing Agency by the Registration Authority;

— conforms to a format specified by the Issuing Agency;

— is unique in the sense that no issuer re-issues a number until a sufficient period of time has passed so that the first number has ceased to be of significance to any user of this European Standard;

— contains only numeric and uppercase alphabetic characters (not including lower case characters or punctuation marks);

— does not contain more than 20 characters;

— does not contain more characters than identified in 7.3.4 (Table 1) of ISO 15394:2009.

A unique transport unit identifier shall be assigned to each individual transport unit. The unique transport unit identifier shall be represented in one of the following formats:

— The unique transport unit identifier beginning with an alphabetic IAC. This should be preceded by the ASC MH10 Data Identifier "J"; or may be preceded by other appropriate data identifiers in the "J" series, provided that the choice is clearly specified in an application standard or by an Issuing Agency. This complete string shall be encoded in either Code 39 or Code 128.

— The GS1 Serial Shipping Container Code (SSCC), effectively the unique transport unit identifier beginning with a numeric IAC. This shall be preceded by the GS1 application identifier "00". This complete string shall be encoded in ISO compliant Code 128 symbol.

Annex A shows example labels that comply with this requirement.

ISO 15394 permits the use of data encoded in two linear bar codes, using different data identifiers, to be combined to create the unique transport unit identifier. This practice shall not be compliant with this European Standard.

NOTE ISO 15394 was developed based on rules originally defined in EN 1572, which only supported the use of the unique transport unit identifier as a single contiguous data string.

5.3 Basic shipping, transport and receiving data elements

In addition to the unique transport unit identifier, the following information (as defined in 4.4.1 of ISO 15394:2009) should be provided on the transport label:

— "Ship to" name and address (for shipment delivery).

— "Ship from" name and address (to be able to return the shipment in the event that delivery was not possible).

— Key to carrier's database (if the unique transport unit identifier is not this data element).

— Key to customer's database (if the unique transport unit identifier is not this data element).

These data elements are defined in 5.2.2 to 5.2.5 of ISO 15394:2009. A.2 shows example labels that comply with this recommendation. A.3 shows example labels that support additional encoded data, with the mutual agreement of trading partners.

5.4 Structured data files

5.4.1 General

Structured data files, such as documentation supporting the handling of the transport units or complete EDI messages, may be included, for example, delivery note, quality certificate, insurance certification. High capacity two-dimensional symbols shall be used to represent this data, as described in the following sub-clauses.

5.4.2 Shipping and receiving data

It is possible to combine all the data from the linear bar codes on the multi-industry transport label additional into one single two-dimensional symbol to facilitate more efficient data capture. This symbol may also incorporate additional data not represented in the linear bar codes on the transport label (e.g. data represented in text). When this data are presented in a two-dimensional symbol, PDF417 symbology (as defined in EN ISO/IEC 15438) or QR Code (as defined in ISO/IEC 18004) or Data Matrix (as defined in ISO/IEC 16022) shall be used with the following conditions:

— macro PDF417 shall not be used, and

— compact PDF417 shall not be used.

The structure and syntax of the encoded message shall conform to ISO/IEC 15434.

The basic requirement of this European Standard, to provide the unique transport unit identifier in a linear bar code (see 5.2), still persists with the use of PDF417 or QR Code or Data Matrix. The unique transport unit identifier may be additionally encoded in the PDF417 or QR Code or Data Matrix symbol, so that all the data can be captured from that symbol.

ISO 15394:2009, D.2 provides additional technical specifications for the use of PDF417 symbols for encoding shipping and receiving data as part of a transport label. These requirements apply to this European Standard whenever the PDF417 or QR Code or Data Matrix symbology is used for encoding shipping and receiving data.

ISO 15394:2009, D.4 provides advice on features to consider in the design and printing of labels that incorporate PDF417 or QR Code or Data Matrix symbols. These are relevant in determining the parameter values used to produce the symbol.

5.4.3 Supporting documentation application

The transport of goods often requires supporting documentation to be provided such as a bill of lading, manifest, packing slip, customs data, or information that might be transmitted in EDI or other message formats. In some systems, there is an advantage of having this supporting documentation incorporated as an item-attendant two-dimensional symbol on the transport label. For example, this could facilitate the immediate processing of a transport unit because the relevant "documentation" can be scanned by a transport company or at the point of receipt.

Whenever this type of message is presented in a two-dimensional symbol, PDF417 (as defined in EN ISO/IEC 15438) or QR Code or Data Matrix should be used. The structure and syntax of the encoded message shall conform to ISO/IEC 15434.

ISO 15394:2009, D.3 provides additional technical specifications for the use of PDF417 or QR Code or Data Matrix symbols for encoding supporting documentation data as part of a transport label. These requirements apply to this European Standard whenever the PDF417 or QR Code or Data Matrix symbology is used for encoding supporting documentation data.

ISO 15394:2009, D.4 provides advice on features to consider in the design and printing of labels that incorporate PDF417 or QR Code or Data Matrix symbols. These are relevant in determining the parameter values used to produce the symbol.

5.4.4 Carrier sorting and tracking applications

Automated Sorting is a process where transport units are automatically sorted and routed in a warehouse or distribution centre.

Tracking is a process by which physical events related to the transport unit are recorded in databases.