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Packaging — Bar code and two-dimensional symbols for shipping, transport and receiving labels

Emballage — Codes à barres et symboles bidimensionnels pour l'expédition, le transport et les étiquettes de réception

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 122, *Packaging*.

This third edition cancels and replaces the second edition (ISO 15394:2009), which has been technically revised.

The main changes compared to the previous edition are as follows:

— 5.4 has been restructured;

— 5.5 has been added;

— additional information on label design has been added in 7.1;

— a new Figure E.7 has been added and succeeding figures have been renumbered accordingly;

— E.3 has been added;

— Figures E.11, E.12, and E.13 have been added;

— Tables E.1 and E.2 have been added.

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Introduction

The use of electronic data interchange (EDI) in association with the physical transport and handling of packages and when traceability is appropriate, such as that described in ISO 9000, requires a clear and unique identifier linking the electronic data and the transport unit.

Bar code-marked transport labels are in widespread use in global industries. Several different standards exist, each designed to meet the requirements of the specific industry sector. For effective and economic use within and between industry sectors, one common multi-industry standard is a necessity.

A bar code-marked transport label is designed to facilitate the automation of shipping and handling of administrative operations. The bar code information on the transport label may be used as a key to access the appropriate database that contains detailed information about the transport unit, including information transmitted using EDI. In addition, a transport label may contain other information as agreed between the trading partners.

Two-dimensional symbols may be included to assist in moving large amounts of shipping label or EDI data from sender to recipient and to assist the transportation carrier automated sortation and tracking systems.

This document incorporates the technology, data structure and conformance standards of ISO/IEC JTC 1/SC 31 with the user requirements for shipping labels into a single application standard.

While this document provides an international shipping label standard, ISO 22742 provides guidance for product packaging. This document and ISO 22742 are complementary.

On the other hand, ISO 17365 covers the use of RF tags on shipping/transport units and was prepared by ISO/TC 122.

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Packaging — Bar code and two-dimensional symbols for shipping, transport and receiving labels

1 Scope

This document:

— specifies the minimum requirements for the design of labels containing linear bar code and two-dimensional symbols on transport units to convey data between trading partners;

— provides for traceability of transported units using a unique transport unit identifier (licence plate);

— provides guidance on the formatting on the label of data presented in linear bar code, two-dimensional symbol or human-readable form;

— provides specific recommendations regarding the choice of bar code symbologies, and specifies quality requirements;

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

— provides guidance on the selection of the label material.

This document is not applicable to the direct printing on to kraft coloured corrugated surfaces.

NOTE Guidance on the direct printing of bar code symbols on to kraft coloured corrugated surfaces are provided in references such as *The Fibre Box Handbook*[10].

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/IEC 15415, *Information technology — Automatic identification and data capture techniques — Bar code symbol print quality test specification — Two-dimensional symbols*

ISO/IEC 15416, *Automatic identification and data capture techniques — Bar code print quality test specification — Linear symbols*

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

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

ISO/IEC 15438:2015, *Information technology — Automatic identification and data capture techniques — PDF417 bar code symbology specification*

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

ISO/IEC 15459-2, *Information technology — Automatic identification and data capture techniques — Unique identification— Part 2: Registration procedures*

ISO/IEC 16023:2000, *Information technology — International symbology specification — MaxiCode*

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

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

ISO/IEC 19762, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary*

ISO 17365, *Supply chain applications of RFID — Transport units*

ISO 21067, *Packaging — Vocabulary*

ANSI MH10.8.2, *Data Identifier and Application Identifier Standard*

GS1 General Specifications.

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[2] ISO/IEC 15419, *Information technology — Automatic identification and data capture techniques — Bar code digital imaging and printing performance testing*

[3] ISO/IEC 15421, *Information technology — Automatic identification and data capture techniques — Bar code master test specifications*

[4] ISO/IEC 15424, *Information technology — Automatic identification and data capture techniques — Data Carrier Identifiers (including Symbology Identifiers)*

[5] ISO 22742, *Packaging — Linear bar code and two-dimensional symbols for product packaging*

[6] ISO/IEC 24728, *Information technology — Automatic identification and data capture techniques — MicroPDF417 bar code symbology specification*

[7] ISO 646, *Information technology – ISO 7-bit coded character set for information interchange*

[8] ISO 9000, *Quality management systems — Fundamentals and vocabulary*

[9] ISO/IEC/TR 24729-1, *Information technology — Radio frequency identification for item management — Implementation guidelines — Part 1: RFID-enabled labels and packaging supporting ISO/IEC 18000-6C*

[10] *The Fibre Box Handbook*, Fibre Box Association, 25 Northwest Point Blvd. Suite 510, Elk Grove Village, IL 60007, USA, http://www.fibrebox.org/

[11] *D-U-N-S® Number Users' Guide*, Available from Dun & Bradstreet, 1 Diamond Hill Road, Murray, NJ, 07974

[12] *GS1 Standards*, GS1 AISBL, Blue Tower, Avenue Louise, 326 BE 1050 Brussels Belgium (V): +32 2 788 7800 (F): +32 2 788 7899

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