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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 41977-2022

**Packaging - Labelling and direct product marking with linear
bar code and two-dimensional symbols**

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foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents"

drafted.

This document is modified to adopt ISO 28219.2017 "Labeling and direct product marking of 1D and 2D barcodes on packaging".

This document has the following structural adjustments compared to ISO 28219.2017.

--- Added abbreviations, adjusted the term GTIN to an abbreviation, and added EDIFACT to an abbreviation (see 3.2);

--- Changed the numbering of the entries in 4.4.2, since there are overhanging segments in 4.4.2 in ISO 28219.2017, the overhanging segments are numbered

For 4.4.2.1, the subsequent entries are modified in turn;

---4.2.2.2, 4.2.2.3, 4.2.4, 4.4.3.1 are the parts of ISO 28219.2017 4.2.2.2, 4.2.2.3, 4.2.4,

The paragraphs in 4.4.3.1 are sorted and merged to be more in line with the expression of Chinese language description;

---4.4.3.1 corresponds to 4.4.3.1, 4.4.3.2.1, 4.4.3.2.8, 4.4.3.4.1, 4.4.3.4.8 and 4.4.3.5.1 in ISO 28219.2017;

---Appendix H corresponds to Appendix A in ISO 28219.2017, Appendix E corresponds to Appendix G and Appendix F in ISO 28219.2017

Corresponds to Annex E in ISO 28219.2017, Annex G corresponds to Annex F in ISO 28219.2017, Annex A corresponds to

Annex H in ISO 28219.2017.

The technical differences between this document and ISO 28219.2017 and their reasons are as follows.

--- Changed the description of the scope, adjusted the scope in ISO 28219.2017 to the introduction except "applies to"

section (see Introduction and Chapter 1).

---Added GB/T 4122 (all parts), GB/T 8170, GB 12904, GB/T 12905, GB/T 17172, GB/T 21049 and GB/T 37056 (see Chapter 2) to adapt to the technical conditions of our country.

--- Changed normative references, ISO /IEC 16388 was changed to GB/T 12908, ISO /IEC 15416 was changed to

GB/T 14258, ISO /IEC 15415 are changed to GB/T 23704, the degree of consistency of these documents is adopted for modification;

ISO /IEC 18004 is changed to GB/T 18284, and the degree of consistency of these two documents is non-equivalent; ISO /IEC 15417 is changed to

Changed to GB/T 18347, the degree of consistency of these two documents is equivalent; part of the "GS1 General Specification" is changed to

GB/T 15425 and GB/T 16986, the degree of consistency between some contents of "GS1 General Specification" and GB/T 15425 is modified

Adopted, the degree of consistency between some contents of "GS1 General Specification" and GB/T 16986 is non-equivalent, in order to adapt to my country's technical regulations components to improve operability (see Chapter 2).

--- Delete the term "cell" and add "module", which is more consistent with the description of domestic professional fields in my country

(see 3.1).

--- Delete the term "DUNS code", because it has no directivity, it is applied to the nine-digit number of enterprise identification, business information organization and collation

The coding system is not all about DUNS codes.

--- Deleted the term "one-level/modular component" because it constitutes a circular definition with "component" and the domestic coding system does not use this expression.

--- Deleted the term "product", there is ambiguity in the interpretation of the original text.

---Added the expression method of measuring aperture in the "Printing Quality" clause, using mil is more convenient to measure and use, no need to convert (see

4.4.2.6, 4.4.3.2.6 and 4.4.3.5.5).

--- Delete the provisions of visible light range (660nm), GB/T 14258 has detailed provisions

on wavelength.

--- Deleted the related content of MicroPDF417, this kind of label is not used in China.

---Add the relevant content of Chinese letter code (see 4.4.3.1 and 4.4.3.3), because Chinese letter code is used more in China, it is in line with the domestic two-dimensional code

code requirements.

---Remove the relationship between the US Department of Defense (DoD) and the North Atlantic Treaty Organization (NATO) in 4.2.3.2 of ISO 28219.2017

off data.

--- Deleted the relevant data of the Health Industry Business Communication Committee (HIBCC) in 4.2.3.4 of ISO 28219.2017 to suit my

national conditions.

The following editorial changes have been made to this document.

--- Deleted ISO /IEC 15418 and ISO /IEC 15424 in the references and added them to normative references (see Section 2

Chapter), which is a change to comply with the requirements of the requirements clauses in GB/T 1.1-2020;

--- Corrected footnote a of Table A.1 in ISO 28219.2017, deleted footnote b, and deleted footnote b of Table A.2;

--- Deleted the US Department of Defense (DoD) and NATO in Appendix B and Appendix E of ISO 28219.2017

(NATO) related data;

--- Delete the example "1P" in G.2 in ISO 28219.2017, there is no corresponding schematic diagram in the text;

--- Deleted a) in H.3.4.8 of ISO 28219.2017, because the products that can be used for testing are not unique and do not need to involve specific companies

product.

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

This document provides a method for marking products, parts and components using fixed or hand-held scanning on manufacturer equipment, or

To be used by the customer who purchased the product for subsequent manufacturing or for end use. Can be used for inventory, distribution, manufacturing, quality control, purchasing,

Supply chain processes such as transportation, supply, repair and handling. To enable all trading partners to use labels in internal management and supply chains, there are

Common techniques, data structures, consistency, and applicability of the necessary specification label usage. There are many standards for product labeling and marking, each

Each standard is developed to meet the requirements of a specific industry. For efficient and economical use within and across industries, it is necessary to

Develop a common standard across industries.

1D or 2D barcodes on products or parts used to identify products, parts and assemblies machine readable and human readable direct product

The marked content also contains other information agreed between trading partners. Labels and direct product labels for such barcodes and other standardized documents

The requirements in mind can be combined into one label for use, or can be used alone, which helps to achieve automated management. Paste Location and Use of Markers

The method is self-negotiated between suppliers, manufacturers and trading partners.

This document is designed to meet minimum packaging requirements for various industries and does not replace or supersede any marking or labelling provisions applicable to safety or regulation.

Therefore, it can be widely applied to various industries, and these industries can develop specific implementation guidelines for this document.

In this document, DI is derived from ANSMH10.8.2 (ASC MH10), abbreviated as DI; AI is derived from GS1AI, abbreviated as AI.

ISO /IEC 15418 adopts GS1AI and ASCMH10DI; GB/T 16986 adopts ISO /IEC 15418.128 barcodes are one

GS1-128 barcode is an application subset of 128 barcodes.

The graphics provided in this document are examples only and may not correspond to actual scale and quality requirements.

Packaging 1D and 2D barcode labels and
direct product marking

1 Scope