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**Packaging – Linear Bar Code and Two-Dimensional
Symbols for Product Packaging**

(ISO 22742:2010, MOD)

包装 产品包装用的一维条码和二维条码

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 *Directives for Standardization – Part 1: Rules for the Structure and Drafting of Standardizing Documents*.

This Document modified and adopted ISO 22742:2010 *Packaging – Linear Bar Code and Two-Dimensional Symbols for Product Packaging*.

Compared with ISO 22742:2010, this Document made the following structural adjustments:

- Add the numbering structure of the clause to conform to the writing habits of Chinese standards.

The technical differences and causes between this Document and ISO 22742:2010 are as follows:

- Change the scope description stipulated in the Document (see Clause 1); and adjust the relevant content to the Introduction (see Introduction) to conform to the scope description method of Chinese standard.
- Regarding the normative references, this Document has made adjustments with technical differences to adapt to the technical conditions of China. The adjustments are reflected in Clause 2 "Normative References". The specific adjustments are as follows:
 - Use GB/T 4122.1 to replace ISO 21067;
 - Use GB/T 12905 to replace ISO/IEC 19762;
 - Use ISO/IEC 15418 to replace ANS MH10.8.2;
 - Add GB/T 1988, GB 12904, GB/T 12908, GB/T 15425, GB/T 16830, GB/T 16986, GB/T 18347, GB/T 21049, GB/T 37056 (see Clause 2).
- Because the terms and definitions listed in ISO 22742:2010 define barcodes, packaging, coding rules, etc., China has corresponding normative content, so the terms and definitions defined in ISO 22742:2010 are deleted.
- Add "3.2 Symbols" to describe the symbols appearing in the text.
- Change "GS1 GTIN" into "GS1 GTIN-14" to avoid ambiguity (see Table 3).
- Delete the DUNS code identifying the manufacturer, the data identifier of the US Department of Defense or the North Atlantic Treaty Organization (see Table 9) to adapt to the actual situation in China.
- Adjust the "39 barcode width-to-narrow ratio 2.5:1~3.0:1" into "39 barcode narrow-to-

width ratio 2.0:1~3.0:1" (see 4.6.3.5) to be consistent with the requirements of GB/T12908.

- Add the "mil" expression corresponding to the measurement aperture unit in the grade requirements for the printing quality of the barcode symbol on the product packaging label (see Table 15) for easy reference. Adjust the level "1.5(C)" corresponding to the ITF-14 (X-size $\geq 0.635\text{mm}$) barcode system into "0.5(D)" (see Table 15) to be consistent with the requirements of the current *GSI General Specification*.
- Complete the significant figures of the target X-size and the maximum X-size corresponding to the EAN-13, EAN-8, UPC-A, UPC-E barcode code system (for manual scanning) from 2 digits to 3 digits, so that they are consistent with other data in the table (see Table 16).
- Complete the significant figures of the target X size and the maximum X size corresponding to the EAN-13, EAN-8, UPC-A, UPC-E barcode code system (only for automatic scanning of general delivery) from 2 to 3 digits, so that they are consistent with other data in the table (see Table 17).
- Change the symbol height (including the height of human-recognizable characters) of EAN/UPC barcode symbols and their modules under different magnification factors into the current bar height (excluding the height of human-recognizable characters) (see Table 18).
- Add the related content of Hanxin Code (see 4.6.4) to be consistent with China's bar code system.
- Add the label example of Hanxin Code (see Figure 10).
- Delete the relevant description Annex A "Direct printing of linear bar code symbols on corrugated fiberboard" and Annex B "Organizations relevant to this Document" of ISO 22742:2010.

Please note some contents of this Document may involve patents. The issuing agency of this Document shall not assume the responsibility to identify these patents.

This Document was proposed by and under the jurisdiction of National Technical Committee on Packaging of Standardization Administration of China (SAC/TC 49).

Drafting organizations of this Document: Xiamen Products Quality Supervision & Inspection Institute [National Testing Center for LED Application Products; Motor Vehicle Quality Supervision and Inspection Center in National Field (Factory)], Xiamen Institute of Standardization; China Article Coding Center; China Packaging Research & Test Center; Xiamen Jinbar Information Technology Co., Ltd.; Jinhua Jit Packaging Co., Ltd.; Nanping Product Quality Inspection Institute; Shenzhen Printing Association; Jimei University; and Chongqing Institute of Quality and Standardization.

Packaging – Linear Bar Code and Two-Dimensional Symbols for Product Packaging

1 Scope

This Document specifies the data content and requirements of the linear bar code and two-dimensional symbols for product packaging.

This Document is applicable to the design, printing and reading of barcode labels on product packaging between trading partners.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates indicated are applicable to this Document; for the undated documents, only the latest version (including all the amendments) is applicable to this Document.

GB/T 1988 Information Technology - 7-Bit Coded Character Set for Information Interchange (GB/T 1988-1998, eqv ISO/IEC 646:1991)

GB/T 2659 Codes for the Representation of Names of Countries and Regions (GB/T 2659-2000, eqv ISO 3166-1:1997)

GB/T 4122.1 Packaging Terms - Basic Terms

GB 12904 Bar Code for Commodity - Retail Commodity Numbering and Bar Code Marking (GB 12904-2008, ISO/IEC 15420:2000, NEQ)

GB/T 12905 Bar Coding Terminology

GB/T 12908 Information Technology - Automatic Identification and Data Capture Technique -Bar Code Symbology Specifications - Code 39 (GB/T 12908-2002, ISO/IEC 16388:1999, MOD)

GB/T 15425 Bar Code for Commodity - 128 Bar Code

GB/T 16830 Bar Code for Commodity - Dispatch Commodity Numbering and Bar Code Marking

GB/T 16986 Bar Code for Commodity - Application Identifier (GB/T 16986-2018, ISO/IEC 15418:2016, NEQ)

GB/T 18284 QR Code (GB/T 18284-2000, neq ISO/IEC 18004:2000)

GB/T 18347 Code 128 (GB/T 18347-2001, idt ISO/IEC 15417:2000)

GB/T 21049 Hanxin Code

GB/T 23704 Two-Dimensional Bar Code Symbol Print Quality Test (GB/T 23704-2017, ISO/IEC 15415:2011, MOD)

GB/T 37056 Article Numbering Terminology

GB/T 41208 Data Matrix Code (GB/T 41208-2021, ISO/IEC 16022:2006, NEQ)

ISO/IEC 15418 Information Technology – Automatic Identification and Data Capture Techniques – GS1 Application Identifiers and ASC MH10 Data Identifiers and Maintenance

NOTE: GB/T 16986-2018 Bar Code for Commodity - Application Identifier (ISO/IEC 15418:2016, NEQ)

ISO/IEC 15434 Information Technology – Automatic Identification and Data Capture Techniques – Syntax for High-Capacity ADC Media

ISO/IEC 15438 Information Technology – Automatic Identification and Data Capture Techniques - PDF417 Bar Code Symbol Specification

GS1 General Specification

3 Terms, Definitions and Symbols

3.1 Terms and definitions

For the purposes of this Document, the terms and definitions given in GB/T 4122.1, GB/T 12905 and GB/T 37056 apply.

3.2 Symbols

The following symbols are applicable to this Document.

a - alphabetic character;

an - alphanumeric character;

i - the number of characters;

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