INTERNATIONAL STANDARD

ISO 6346

Third edition
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Freight containers — Coding, identification and marking

Conteneurs pour le transport de marchandises — Codage, identification et marquage

Reference number
ISO 6346:1995(E)

Contents

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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 6346 was prepared by Technical Committee ISO/TC 104, *Freight containers*, Subcommittee SC 4, *Identification and communication*.

This third edition cancels and replaces the second edition (ISO 6346:1984), which has been technically revised.

Annexes A, B, C, D, E and F form an integral part of this International Standard. Annex G is for information only.

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Freight containers — Coding, identification and marking

1 Scope

1.1 This International Standard provides a system for the identification and presentation of information about freight containers. The identification system is intended for general application, for example in documentation, control and communications (including automatic data processing systems), as well as for display on the containers themselves.

The methods of displaying identification and certain other data (including operational data) on containers by means of permanent marks are included.

1.2 This International Standard specifies:

a) a container identification system, with an associated system for verifying the accuracy of its use, having:

   — mandatory marks for the presentation of the identification system for visual interpretation, and

   — features to be used in optional Automatic Equipment Identification (AEI) and electronic data interchange (EDI);

b) a coding system for data on container size and type, with corresponding marks for their display;

c) operational marks, both mandatory and optional;

d) physical presentation of marks on the container.

1.3 The terms "mandatory" and "optional" in this International Standard are used to differentiate those ISO marking provisions which shall necessarily be fulfilled by all containers from those which are not required of all containers. The optional marks are included to further comprehension and promote uniform application of the optional mark. If a choice has been made to display an optional mark, the provisions laid down in this International Standard relating to the mark shall be applied. The terms "mandatory" and "optional" do not refer to requirements of any regulatory body.

1.4 This International Standard applies to all freight containers covered by International Standards ISO 668, parts 1 to 5 of ISO 1496, ISO 8323 and should, wherever appropriate and practicable, be applied:

— to containers other than those covered by the International Standards mentioned in clause 2;

— to container-related and/or detachable equipment.

NOTE 1 Containers marked according to previous editions of ISO 6346 need not be re-marked.

1.5 This International Standard does not cover temporary operational marks of any kind, permanent marks, data plates, etc. which may be required by intergovernmental agreements, national legislation or nongovernmental organizations other than ISO.

NOTE 2 Some of the major international conventions whose container-marking requirements are not covered in this International Standard are as follows:

— *International Convention for Safe Containers* (UN/IMO 1992);

— *Customs Convention on Containers* 1956 and 1972;

— *Customs Convention on International Movement of Goods under Cover of TIR Carnets (TIR Convention)* 1959 and 1975.

It should not be assumed that this list is exhaustive.

This International Standard does not cover the display of technical data on tank containers (see ISO 1496-3), nor does it, in any way, include identification marks or safety signs for items of cargo which may be carried in freight containers.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 668:—[1], *Series 1 freight containers — Classification, dimensions and ratings.*

ISO 1496-1:1990, *Series 1 freight containers — Specification and testing — Part 1: General cargo containers for general purposes.*

ISO 1496-2:—[2], *Series 1 freight containers — Specification and testing — Part 2: Thermal containers.*

ISO 1496-3:1995, *Series 1 freight containers — Specification and testing — Part 3: Tank containers for liquids, gases and pressurized dry bulk.*

ISO 1496-4:1991, *Series 1 freight containers — Specification and testing — Part 4: Non-pressurized containers for dry bulk.*

ISO 1496-5:1991, *Series 1 freight containers — Specification and testing — Part 5: Platform and platform-based containers.*

ISO 8323:1985, *Freight containers — Air/surface (intermodal) general purpose containers — Specification and tests.*

ISO 10374:1991, *Freight containers — Automatic identification.*

1) To be published. (Revision of ISO 668:1988)

2) To be published. (Revision of ISO 1496-2:1988)

3 Identification system and its associated marks

3.1 Identification system

The identification system shall consist only of the following elements, all of which shall be included:

— owner code: three letters;

— equipment category identifier: one letter;

— serial number: six numerals;

— check digit: one numeral.

3.1.1 Owner code

The container owner's code shall consist of three capital letters, shall be unique and shall be registered with the International Container Bureau (BIC — Bureau International des Conteneurs), either through an affiliated national registration organization (see annex G) or directly with:

Bureau International des Conteneurs
167, rue de Courcelles
75017 Paris
FRANCE

3.1.2 Equipment category identifier

The equipment category identifier consists of one capital letter of the Latin alphabet as follows:

— U for all freight containers;

— J for detachable freight container-related equipment;

— Z for trailers and chassis.

3.1.3 Serial number

The container serial number shall consist of six Arabic numerals. If the series of significant numerals does not total six, they shall be preceded by sufficient zeroes to make up six numerals. (For example, if the series of significant numerals is 1234, the serial number is 001234.)

3.1.4 Check digit

The check digit provides a means of validating the transmission accuracy of the owner code and serial number and shall be determined as in annex A. The check digit shall validate the owner code, equipment category identifier and serial number of the container.

3.2 Identification marks

The use of marks in accordance with the identification system specified in 3.1, i.e. owner code, equipment category identifier, serial number and check digit, is mandatory for freight containers and recommended for all equipment as stated in 3.1.2. The characteristics (size, shape, layout, etc.) detailed in 6.1 and 6.2.1 shall be displayed as nearly as practicable in accordance with clause 6, i.e. legible to the human eye.

4 Size and type codes and their associated marks

4.1 Purpose

The type and main external dimensions of the container shall be identified with codes marked on the container. Only those freight containers which comply with both the ISO top-handling capability and structural stacking requirements set forth in ISO 1496 shall be marked with size and type codes in accordance with 4.2.1 and 4.2.2.

4.2 Size and type codes

This information is mandatory for the marking of containers covered by the International Standards listed in clause 2 and shall be coded as in 4.2.1 and 4.2.2.

The size and type codes, when displayed on the container, shall be used as a whole, i.e. the information must not be broken into its component parts.

The size and type codes shall be displayed in accordance with clause 6.

4.2.1 Size: two alphanumeric characters

The container size (i.e. external dimensions) shall be indicated by two characters as follows:

— First character: numeric or alphabetic character representing the length.

— Second character: numeric or alphabetic character representing the width and the height.

These two characters shall be determined in accordance with annex D.

4.2.2 Type: two characters

The container type and main characteristics shall be indicated by two characters as follows:

— First character: alphabetic character representing the container type.

— Second character: numeric character representing main characteristics related to the container type.

These two characters shall be selected in accordance with annex E.

NOTE 3 For the purpose of exchanging data when indication of the main characteristics is not essential, the "type group code designation" as shown in annex E can be used.

5 Operational marks

The marks in this section are not intended to correspond to any particular code (e.g. for use in data transmission or any other purpose). They are solely intended as markings for use on freight containers to convey certain information or give visual warnings.

5.1 Mandatory operational marks

5.1.1 Maximum gross and tare masses

The maximum gross and tare masses shall be marked on a container as:

MAX GROSS	00 000 kg 00 000 lb
TARE	00 000 kg 00 000 lb

For safety reasons, containers tested in compliance with the approved methods specified in that part of ISO 1496 applicable to the type of container in question, i.e. parts 1, 2, 3, 4 or 5 of ISO 1496, shall be uniformly marked with the maximum gross mass used for those tests.

Furthermore, the "maximum gross mass" marked on the container in accordance with this International Standard shall be identical to that shown on the CSC[3] Safety Approval Plate.

3) *International Convention for Safe Containers* (CSC), UN/IMO.

As indicated above, the masses shall be expressed in both kilograms (kg) and pounds (lb)[4].

5.1.2 Air/surface container symbol

All air/surface containers shall display the symbol specified in annex B.

5.1.3 Warning sign of overhead electrical danger

All containers equipped with ladders shall display a warning sign in accordance with the details given in annex C.

5.1.4 Height mark for containers higher than 2,6 m (8 ft 6 in)

All containers higher than 2,6 m (8 ft 6 in) shall bear the following mandatory marks:

a) on both sides, a height mark similar to that described in annex F;

b) an area of alternating black and yellow stripes on the top members of each end frame and side wall at each corner adjacent to the corner fitting, of 300 mm (12 in) minimum length, that can be seen from the ground or from the top (see figure 5).

In addition, any other optional marks, such as a mirror image of the mark described in annex F, may be displayed at any convenient location (e.g. front wall).

5.2 Optional operational mark (maximum net mass)

It is common industry practice to mark containers with maximum payload, or net mass, in addition to maximum gross and tare masses.

If used, the maximum net mass should be marked on a container in accordance with the requirements of 5.1.1, positioned after the maximum gross and tare masses as follows:

MAX GROSS	00 000 kg 00 000 lb
TARE	00 000 kg 00 000 lb
NET	00 000 kg 00 000 lb

4) 1 kg = 2,204 6 lb

6 Physical display of marks

6.1 Size and colour of marks

The letters and numerals of the owner code, equipment category identifier, serial number and check digit shall be not less than 100 mm (4 in) high.

The letters and numerals for MAX GROSS and TARE shall be not less than 50 mm (2 in) high.

All characters shall be of proportionate width and thickness, they shall be durable and in a colour contrasting with that of the container.

6.2 Layout and location of marks

The requirements of this clause are particularly applicable to containers of the "closed box" type. For containers of other types, all possible practicable steps should be taken to follow the marking layout and location given for the "closed box" type of container.

6.2.1 Layout of marks

6.2.1.1 Mandatory identification marks

The layout of the owner code, equipment category identifier, serial number and check digit on containers shall preferably be in one single horizontal line (see figure 1). Where constructional features of the container dictate otherwise, the layout may be vertical (see figure 2).

The layout of size and type codes should, as far as practicable, be in a single horizontal line underneath the horizontal line giving the owner code, equipment category identifier, serial number and check digit (see figure 1).

When the owner code, equipment category identifier, serial number and check digit are displayed vertically, the size and type codes should be placed adjacent to the other mandatory marks (see figures 2 and 3).

If, on some special-purpose containers, a fully horizontal or fully vertical layout is not possible, the layout of the other mandatory identification marks shall be maintained in the horizontal or vertical groupings as specified below (see figures 3 and 4).

On those special-purpose containers where a fully horizontal or fully vertical layout is not possible and

the layout of the other mandatory identification marks is horizontal, the size and type codes should be placed beneath the other mandatory marks (see figure 4).

The size and type codes should be used as a whole (see 4.2).

The owner code and equipment category identifier shall be joined and shall be separated from the serial number by at least one character space. The serial number shall be separated from the check digit by one character space and the check digit shall be displayed in a box.

EXAMPLE

A general purpose container in accordance with ISO 1496, having passive vents at the upper part of the cargo space, a length of 6 068 mm, a width of 2 438 mm, a height of 2 591 mm, having a unique registered owner code of ABZ, an equipment category identifier of U and a serial number of 001234 will have the layout as shown in figures 1 to 4.

Figure 1 — Mandatory identification marks — Preferred horizontal layout

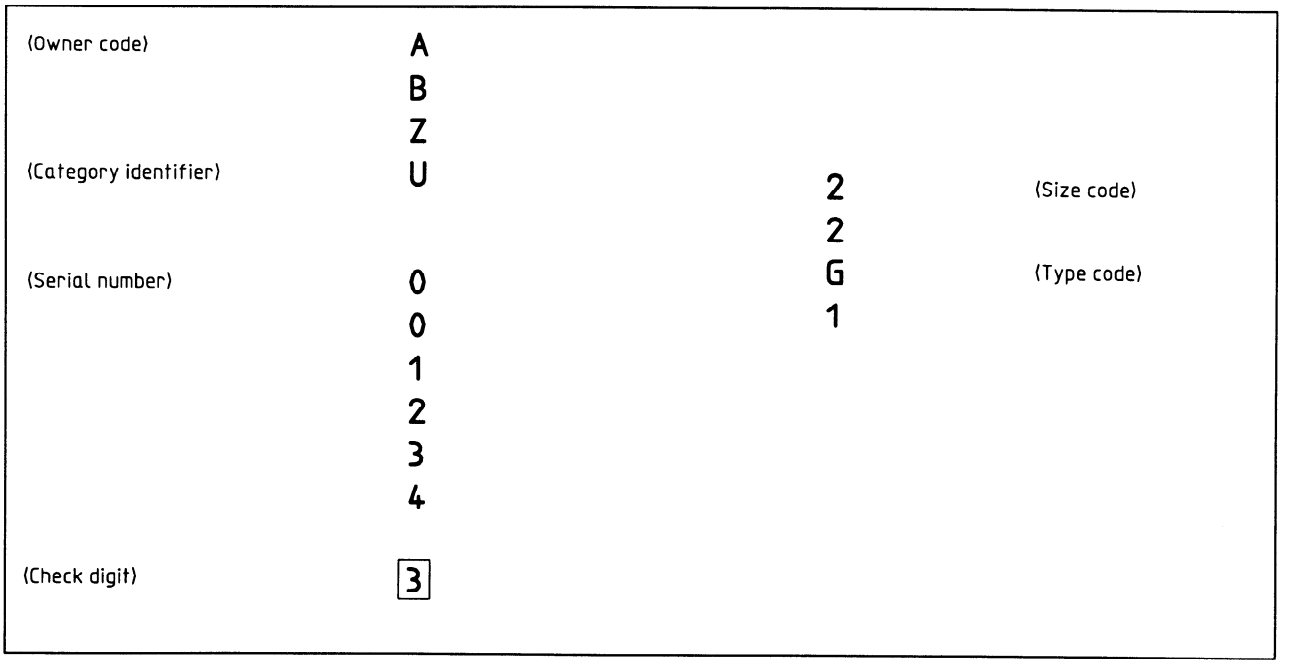

Figure 2 — Mandatory identification marks — Preferred vertical layout

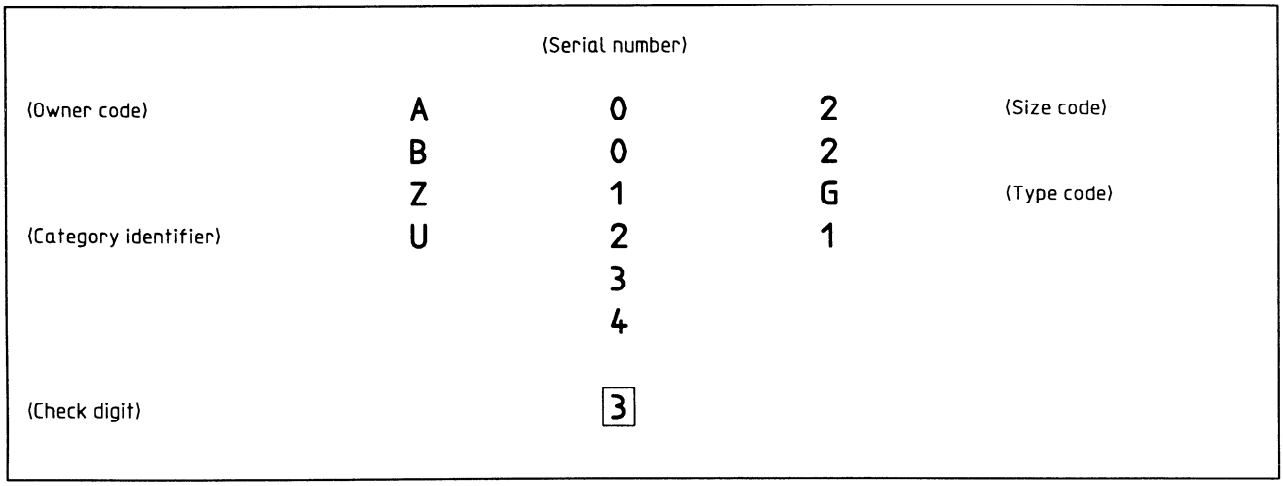

Figure 3 — Mandatory identification marks — Alternative (multiple column) vertical layout

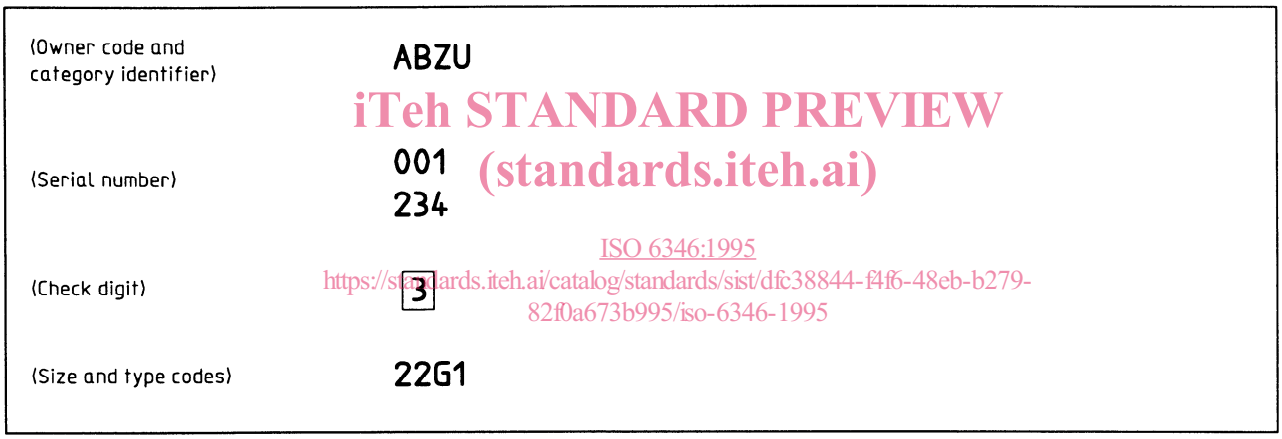

Figure 4 — Mandatory identification marks — Alternative horizontal grouping layout

6.2.1.2 Mandatory operational marks

The layout of maximum gross and tare masses shall be as stated in 5.1.1.

The layout of the air/surface container symbol shall be as shown in annex B.

The layout of the sign warning of overhead electrical danger shall be as shown in annex C.

The layout of the height mark for containers having a height greater than 2,6 m shall be as stated in annex F.

6.2.1.3 Optional operational mark (maximum net mass)

Where marked, the layout of net mass shall be as stated in 5.1.1.

6.2.2 Location of marks

6.2.2.1 Mandatory identification marks

The mandatory marks of 3.1 and 4.2, i.e. owner code, equipment category identifier, serial number, check digit, and size and type codes, shall be positioned on the container as far as practicable as shown in figure 5.

6.2.2.2 Operational marks

The mandatory operational marks of 5.1.1, i.e. maximum gross and tare masses, shall be positioned on the container as far as practicable as shown in figure 5.

The location of the air/surface container symbol shall be as given in annex B.

The location of the symbol warning of overhead electrical danger shall be as given in annex C.

The location of the height warning symbol shall be as given in annex F.

The optional operational mark of 5.2, i.e. maximum payload or net mass, shall be positioned on the container as far as practicable as shown in figure 5.

6.2.2.3 Other marks and devices

Marks other than those stipulated by this International Standard shall be displayed on the container so that they do not in any way interfere with the marks described in this International Standard.

For the Automatic Equipment Identification (AEI) system, the AEI tag shall be positioned on the container as specified in ISO 10374.