INTERNATIONAL STANDARD

ISO 3874

Sixth edition
2017-10

Series 1 freight containers — Handling and securing

Conteneurs de la série 1 — Manutention et fixation

Reference number
ISO 3874:2017(E)

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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 104, *Freight containers*, SC 1, *General purpose containers*.

This sixth edition cancels and replaces the fifth edition (ISO 3874:1997), which has been technically revised.

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

— the terminology has been aligned to match those that are used in the CTU Code and the “load distribution” guidance figure has been removed in Clause 4;

— Clause 9 and the associated figures have been updated to reflect the current practice and equipment used;

— Annex A has been updated to include securing devices in the current common usage including, fully automatic twistlocks, midlocks, multi-purpose twistlocks, and automatic container locks;

— the dimensions for all locks have been reviewed and revised, where appropriate, to reflect current practice;

— the dimensions for locks not previously included have been added;

— the strength requirement for all locks has been reviewed and revised to reflect current practice and maximum vessel sizes;

— the test requirements have been reviewed and revised as above to match ISO 17905 and class requirements;

— the old Annex B has been removed, reflecting lack of common usage;

— Annex C, now Annex B, has been updated, as well as strength and test requirements, to reflect the current practice and equipment used;

— Annex D, now Annex C, has been updated, as well as strength and test requirements, to reflect the current practice and equipment used;

— Annex D types and requirements have been added in accordance with ISO 17905;

— Annex E has been added in accordance with ISO 17905;

— ISO 1161:1984, Annex C, included as Annex F, has been updated to include ISO 1161:1984/Amd. 1:2007 45 ft containers.

It also incorporates the Amendments ISO 3874:1997/Amd. 1:2000, ISO 3874:1997/Amd. 2:2002, ISO 3874:1997/Amd. 3:2005 and ISO 3874:1997/Amd. 4:2007.

Series 1 freight containers — Handling and securing

1 Scope

This document specifies the methods of handling and securing series 1 freight containers built and tested to comply with ISO 1496 (all parts).

Methods of handling and securing are described for both loaded and empty containers. The conditions for lifting different types of loaded and empty containers are laid down in Clause 6.

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 668, *Series 1 freight containers — Classification, dimensions and ratings*

ISO 830, *Freight containers — Vocabulary*

ISO 1496 (all parts), *Series 1 freight containers — Specification and testing*

ISO 1161, *Series 1 freight containers — Corner and intermediate fittings — Specification*

IMO/ILO/UNECE *Code of Practice for Packing of Cargo Transport Units*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 830 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1 General

3.1.1
empty container
container in the tare condition

3.1.2
packed container
container in a condition other than the tare condition

3.1.3
asymmetry of the centre of gravity
longitudinal and/or lateral horizontal differences between the centre of gravity of any container [*empty* (3.1.1) or *packed* (3.1.2), with or without fittings and appliances] and the geometric centre of the diagonals of the centres of the four bottom corner fittings

3.1.4
mobile centre of gravity
centre of gravity of a container packed with liquid, bulk, hanging or similar cargo which is liable to move under dynamic conditions