
**Series 1 freight containers —
Specification and testing —**

**Part 2:
Thermal containers**

*Conteneurs de la série 1 — Spécifications et essais —
Partie 2: Conteneurs à caractéristiques thermiques*





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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 of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 104, *Freight containers, SC 2, Specific purpose containers*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

This sixth edition cancels and replaces the fifth edition (ISO 1496-2:2008) which has been technically revised. The main changes compared to the previous edition are as follows:

- an easy reference for containers dimensions has been included in [Table 1](#);
- the $-18\text{ °C}/+38\text{ °C}$ cooling capacity test has been reinstated;
- the 50 °C ambient functionality test has been added;
- energy consumption tests have been added;
- an airflow requirement has been added;
- integrated front containers has been added;
- a clip on MRU units has been removed;
- a floor height and load line requirement has been added;
- design temperatures have been changed to reflect modern MRU's;
- tests described in ISO 1496-1 have been removed and referenced;
- new Annexes H and I have been added;
- the old annex D has been removed and referenced to ISO 668;
- the test procedure for heat leakage has been revised;

— the heat-leakage rate for 1CCC has been included in [Table 2](#).

A list of all parts in the ISO 1496 series can be found on the ISO website.

Series 1 freight containers — Specification and testing —

Part 2: Thermal containers

1 Scope

This document gives the basic specifications and testing requirements for ISO series 1 thermal containers for international exchange and for conveyance of goods by road, rail and sea, including interchange between these forms of transport.

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 1496-1, *Series 1 freight containers — Specification and testing*

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

ISO 6346, *Freight containers — Coding, identification and marking*

ISO Guide 51, *Safety aspects — Guidelines for their inclusion in standards*

IEC 60309-2, *Plugs, socket-outlets and couplers for industrial purposes — Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories*

3 Terms and definitions

For the purposes of this standard, the terms and definitions given in ISO Guide 51, ISO 668, ISO 1161, ISO 6346, ISO 1496-1, IEC-60309-2 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

thermal container

insulated container

freight container having insulating walls, doors, floor and roof designed to delay the rate of heat transmission between the inside and the outside of the container

3.2

refrigeration container

<expandable refrigerant> thermal container served by a unit using a means of cooling such as liquefied gases, with or without evaporation control (ERU)