



**International
Standard**

ISO 830

Freight containers — Vocabulary

Conteneurs pour le transport de marchandises — Vocabulaire

**Third edition
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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 document 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).

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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*.

This third edition cancels and replaces the second edition (ISO 830:1999), which has been technically revised. It also incorporates the Technical Corrigendum ISO 830:1999/Cor 1:2001.

The main changes are as follows:

- some terms and definitions have been modified.

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.

Introduction

ISO 830 was first published in 1981 alongside many of the international standards developed for the freight container and was revised in 1999 to reflect the development of freight containers and the introduction of new container types and terms.

Since the publication of the second edition of this document there has been an increase in the number of freight container types and variations and changes to length and height variations. Details of the development of the types, variations and terminology is shown in [Annex A](#)

Concurrently with the increase of container types and variations, regional and national containers have started to develop. These too carry freight and conform to the definition of a container as described in the International Convention for Container Safety (CSC Code) and therefore can be described as “freight containers” and appear to be similar to the “series 1 freight container”. Therefore, this document defines terms and definitions from all freight containers, and [Clause 3](#) identifies the various terms that are used to describe and differentiate the various types of container used internationally and regionally.

The term “freight container” or “shipping container” is used to differentiate it from other types of containers that cannot be used intermodally. Therefore, any structure that outwardly appears to be freight container whether it is able to transport freight or not, is referred to as a “freight container”.

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Freight containers — Vocabulary

1 Scope

This document defines terms and definitions related to containers.

NOTE The different parts and components used in the construction of containers are specified in ISO 9897.

2 Normative references

There are no normative references in this document.

3 Terms related to containers

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 Terms related to container designation

3.1.1

container

article of transport equipment which is:

- of a permanent character and accordingly strong enough to be suitable for repeated use;
- specially designed to facilitate the transport of goods, by one or more modes of transport, without intermediate reloading;
- designed to be secured and/or readily handled, having corner fittings for these purposes;
- and, of a size such that the area enclosed by the four outer bottom corners is either:
 - at least 14 m² (150 sq ft) or
 - at least 7 m² (75 sq ft), if it is fitted with top corner fittings,

but does not include vehicles or packaging

[SOURCE: *International Convention for Safe Containers (CSC)*, 1972, as amended]

3.1.2

freight container

article of transport equipment which is

- a) of a permanent character and accordingly strong enough to be suitable for repeated use;
- b) specially designed to facilitate the carriage of goods by one or more modes of transport, without intermediate repacking;
- c) fitted with devices permitting its ready handling, particularly its transfer from one mode of transport to another;

- d) so designed as to be easy to pack/fill and empty;
- e) having an internal volume of at least 1 m³

Note 1 to entry: The term “freight container” includes neither vehicles nor conventional packing.

Note 2 to entry: Also known as a shipping container.

3.1.3

intermodal container

container (3.1.1) that can be moved from one transport mode to another without requiring its contents to be repacked.

3.1.4

ISO container

container (3.1.1) manufactured in compliance with applicable ISO freight container standards at the time of its manufacture.

Note 1 to entry: Relevant ISO freight container standards are listed in the Bibliography

3.1.5

Series 1 freight container

variant of an *ISO container* (3.1.4) that complies with dimensional requirements of ISO 668 and tested in accordance with the latest version of the relevant part of ISO 1496.

3.1.6

smart container

container (3.1.1) that can embed track and trace and/or monitoring systems

3.2 Terms related to container characteristics

3.2.1

container classification

alphanumeric code starting with a 1 followed by one to three uppercase letters related to the container's length and height.

Note 1 to entry: See A.3 for a list of container classifications.

3.2.2

container type

group or groups that are subdivided according to the following concepts: mode of transport, categories of cargo, and the physical characteristics of the container

Note 1 to entry: See A.2 for list of container types.

3.2.3

type code

two character code comprising an alphabetic character in the first position that indicates the *container type* (3.2.2), and a second numeric or an alphabetic character that indicates the main characteristics related to the container type

Note 1 to entry: Container type codes are given in ISO 6346.

Note 2 to entry: [Table A.1](#) and subclause 4.1 do not constitute an exhaustive list of container types.

Note 3 to entry: When the second character is a numeral, the container is designed and tested with full stacking and racking capabilities, as defined in the ISO 1496 series.

Note 4 to entry: When the second character is alphabetic, the container is designed and tested with reduced stacking and/or racking capabilities.

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Note 5 to entry: In *general cargo container* (4.1.1) and *general-purpose container* (4.1.2), where a reference is given in square brackets after the name of a container type, this identifies the document in which the specification and testing requirements are given for the type of container in question.

Note 6 to entry: When type codes are quoted with definitions, they are given as typical examples only.

3.2.4

size code

two alphanumeric characters indicating the container size, i.e. *external dimensions* (5.1.1)

Note 1 to entry: Container size codes are given in ISO 6346.

Note 2 to entry: For Series 1 containers, the size designations are given in [Table A.2](#).

Note 3 to entry: The first character is a numeric or alphabetic character representing the length.

Note 4 to entry: The second character is a numeric or alphabetic character representing the width and the height.

3.2.5

container variation

sub categories of *container type* (3.2.2) reflecting a specific use or design

4 Terms related to container types

4.1 Terms related to general cargo containers

4.1.1

general cargo container

freight container (3.1.2) that is not intended for use in air transport, nor primarily intended for the carriage of a particular category of cargo such as a cargo requiring temperature control, liquid or gas cargo, dry solids in bulk or cargoes such as automobiles (cars) or livestock

4.1.2

general-purpose container

general cargo container (4.1.1) that is totally enclosed and weatherproof, having a rigid roof, rigid side walls, rigid end walls and a floor, having at least one of its end walls equipped with doors and intended to be suitable for the transport of cargo of the greatest possible variety

Note 1 to entry: The simplest form of this type of container is given the type code G0.

4.1.3

folding container

closed box type *container* (3.1.1) designed and tested to be able to fold either vertically or horizontally

Note 1 to entry: Detailed type code numbers have been allocated to containers folding on their base structure (W0), and containers folding on their side structure (W1).

4.1.4

specific-purpose container

general cargo container (4.1.1) that has constructional features either for the “specific purpose” of facilitating packing/filling and unpacking/emptying other than by means of doors at one end of the container, or for other specific purposes such as ventilation

Note 1 to entry: The container types covered by this term are those defined from *closed ventilated container* (4.1.4.1) to *platform-based container* (4.1.4.4).

4.1.4.1

closed ventilated container

specific-purpose container (4.1.4) that is totally enclosed and weatherproof, having a rigid roof, rigid side walls, rigid end walls and a floor, at least one of its end walls equipped with doors and that has devices for ventilation, either natural or mechanical (forced)

Note 1 to entry: The type codes for the simplest forms of these containers are:

- V0 for those specifically designed for carriage of cargo where natural ventilation is required;
- V2 for those having mechanical ventilation.

4.1.4.2

open-top container

specific-purpose container (4.1.4) that has no permanent rigid roof but can have a flexible and movable or removable cover, made, for example, of canvas or plastic or reinforced plastic material, normally supported on movable or removable roof bows or a removable hard top roof structure, held in place using clips

Note 1 to entry: Such containers can have movable or removable top-end transverse members above their end doors.

Note 2 to entry: The simplest form of this type of container is given by the type code U0.

4.1.4.3

platform container

specific-purpose container (4.1.4) that has no superstructure at all, but has the same length, width, strength requirements and handling and securing features as required for interchange

Note 1 to entry: Containers of this type have type code P0.

4.1.4.4

platform-based container

specific-purpose container (4.1.4) that has no side walls, but has a base structure similar to that of a platform container

Note 1 to entry: See *platform container* (4.1.4.3).

4.1.4.4.1

platform-based containers with incomplete superstructure and fixed ends

platform-based container (4.1.4.4) without any permanently fixed longitudinal load-carrying structure between ends other than at the base

Note 1 to entry: The term “load” as used refers to a static/dynamic type load, not a cargo load.

Note 2 to entry: Containers of this type have type codes P1 and P2.

4.1.4.4.2

platform-based container with incomplete superstructure and folding ends

platform-based container (4.1.4.4) with incomplete superstructure but having folding end frames with a complete transverse structural connection between corner posts

Note 1 to entry: See *platform-based containers with incomplete superstructure and fixed ends* (4.1.4.4.1).

Note 2 to entry: Containers of this type have type codes P3 and P4.

4.1.4.4.3

platform-based container with complete superstructure

platform-based container (4.1.4.4) with a permanently fixed longitudinal load-carrying structure between ends at the top

Note 1 to entry: The term “load” as used refers to a static/dynamic type load, not a cargo load.

Note 2 to entry: Containers of this type have type code P5.

4.2 Terms related to specific cargo containers

4.2.1

specific cargo container

container (3.1.1) which is primarily intended for the carriage of particular categories of cargo

4.2.2

thermal container

freight container (3.1.2) built with insulating walls, doors, floor and roof designed to slow the rate of heat transmission between the inside and the outside of the container

Note 1 to entry: See ISO 1496-2.

Note 2 to entry: Thermal containers include containers having devices for cooling, heating or atmosphere control.

Note 3 to entry: Terminology applicable to thermal containers is given in 7.2.

4.2.2.1

insulated container

thermal container (4.2.2) having no devices for either cooling or heating, or both, either permanently installed or attached, but can be fitted with either removable cooling or removable heating device, or both

Note 1 to entry: Containers of this type have type codes H5 and H6.

4.2.2.2

mechanically refrigerated container

thermal container (4.2.2) fitted with a mechanical refrigeration unit

Note 1 to entry: Containers of this type have type codes R0 and R2.

4.2.2.3

refrigerated and heated container

thermal container (4.2.2) fitted with a refrigerating appliance (mechanical or expendable refrigerant) and heat-producing appliance

Note 1 to entry: Containers of this type have type codes R1, R3 and R5.

4.2.2.4

self-powered container

thermal container (4.2.2) fitted with an integrated power source that permits the refrigeration unit to operate for at least 12 hours independent of any other power source

4.2.2.5

integrated machinery

thermal container (4.2.2) designed so that the refrigeration plant is fitted into the front-end structure, rather than using a removable refrigeration unit

Note 1 to entry: Containers of this type have type code R5.

4.2.2.6

heated container

thermal container (4.2.2) with only heating capability, either powered by a remote or self-powered power source

4.2.2.7

refrigerated and heated container with removable equipment

thermal container (4.2.2) fitted with a removable refrigerating appliance (mechanical or expendable refrigerant) and a heat-producing appliance

Note 1 to entry: Containers of this type have type codes H0, H1 and H2.

4.2.2.8

eutectic thermal container

thermal container (4.2.2) fitted with plates designed to store energy and produce a cooling effect without the need for an external power source

Note 1 to entry: Containers of this type have type code H8.

4.2.3

tank container

freight container (3.1.2) which includes two basic elements, the tank or tanks and the framework

Note 1 to entry: Tank containers shall conform to the requirements of ISO 1496-3.

Note 2 to entry: Terminology applicable to tank containers is given in 7.3.

Note 3 to entry: Containers of this type have type codes K0 to K9.

4.2.3.1

non-pressurized tank container (liquids)

tank container (4.2.3) designed and tested to transport non-pressurized liquids

Note 1 to entry: Containers of this type have type code K0

4.2.3.2

pressurized tank container (liquids)

tank container (4.2.3) designed and tested to withstand internal pressure and to transport liquids

Note 1 to entry: Containers of this type have type codes K0 to K6.

4.2.3.3

cryogenic tank container

tank container (4.2.3) used to transport and store cryogenic liquids at extremely low temperatures, such as liquid nitrogen, helium, argon, etc.

Note 1 to entry: Containers of this type have type code K7.

Note 2 to entry: Cryogenic tank containers can include a permanently attached or removable refrigeration device.

4.2.3.4

gas tank container

pressurized tank container designed for the transport and storage of non-corrosive gases such as propane and methane

Note 1 to entry: Containers of this type have type code K8.

4.2.4

dry bulk container

container (3.1.1) for the transport of dry bulk solids, capable of withstanding the loads resulting from filling, transport motions and discharging of non-packaged dry bulk solids, having filling and discharge apertures and fittings

Note 1 to entry: Terminology applicable to dry bulk containers is given in 7.4.

4.2.4.1

non-pressurized dry bulk container

dry bulk container (4.2.4) permitting packing/filling and unpacking/emptying by gravity

Note 1 to entry: Containers of this type have no doors capable of allowing the container to be used as a general cargo container.

Note 2 to entry: Containers of this type have type codes N0 to N6.

4.2.4.2

pressurized dry bulk container (dry bulk)

dry bulk container (4.2.4) which can be loaded or unloaded by gravity or pressure discharge

Note 1 to entry: Containers of this type have type codes N7 to N9.

4.2.4.3

box type bulk container

non-pressurized container for tipping discharge, having a parallelepiped cargo space and a door opening at least at one end

Note 1 to entry: It can also be used as a general-purpose container.

Note 2 to entry: Containers of this type have type codes B0 to B9.

4.2.4.4

hopper type bulk container

non-pressurized container for horizontal discharge having no door opening

Note 1 to entry: It cannot be used as a general-purpose container.

Note 2 to entry: Containers of this type have type codes N0 to N2.

4.2.5

named-cargo container

type of containers such as automobile (car) containers, livestock containers and others, either solely or primarily for the carriage of a named cargo

Note 1 to entry: They are built in accordance with the requirements of the ISO container standards included in the Bibliography.

Note 2 to entry: Detailed type code numbers have been allocated to livestock carriers (S0), automobile carriers (S1) and live fish carriers (S2), and spare numbers exist for other "named-cargo types".

4.2.6

non-cargo carrying container

closed containers designed for the purpose of housing equipment or machinery and is not capable of carrying any cargo

4.2.6.1

generator

non-cargo carrying closed container fitted with a generator and output points for the purpose of supplying electrical power to other containers or remote facilities

Note 1 to entry: Containers of this type have type code S4.

Note 2 to entry: This does not include battery energy storage system containers (BESS).

Note 3 to entry: This does not constitute "smart containers" or constituent parts thereof.

4.2.6.2

non-cargo carrying container for sensitive installed equipment

closed container designed and fitted to carry any equipment that requires additional thermal or electrical insulation or electromagnetic protection

Note 1 to entry: Containers of this type have type code S8.

4.2.6.3

non-cargo carrying container for residential or commercial use

closed container designed and fitted for residential or commercial use

EXAMPLE An office, a laboratory or production facility.

Note 1 to entry: Containers of this type have type code S9.

5 Terms related to container characteristics

5.1 Terms related to dimensions and capacities

5.1.1

external dimensions

nominal or actual dimensions used to describe containers

5.1.1.1

nominal dimensions

dimensions, disregarding tolerances and rounded to the nearest whole number, by which a container can be identified

Note 1 to entry: Nominal dimensions are given in ISO 668 and are commonly quoted in imperial units.

5.1.1.2

actual dimensions

maximum overall external dimensions (including positive tolerances where these are applicable) for length, width and height measured along the exterior edges of the container

Note 1 to entry: Diagonal tolerances, applicable to any of the six “faces” of a container are expressed in terms of the allowable difference between the lengths of the diagonals (measured between the centres of the corner fitting apertures) of the face in question. These diagonal tolerances are allowable even when the edge dimensions for the surface in question are at their maximum values.

5.1.2

internal dimensions

dimensions of the largest unobstructed rectangular parallelepiped which can be inscribed in the container if inward protrusions of the top corner fittings are disregarded

Note 1 to entry: Except where otherwise stated, the term “internal dimensions” is synonymous with the term “unobstructed internal dimensions”.

Note 2 to entry: Some requirements governing internal dimensions are given in ISO 668, ISO 1496-1 and ISO 1496-2.

5.1.3

door opening

size of the (end) door aperture, i.e. the width and height dimensions of the largest unobstructed parallelepiped which can possibly be entered into the container via the door aperture in question

Note 1 to entry: Minimum door openings are prescribed in ISO 1496-1 for some general-purpose containers and in ISO 1496-2 for thermal containers.

Note 2 to entry: See *opening* (6.1.13).

5.1.4

internal volume

volume determined by multiplying the *internal dimensions* (5.1.2) of length, width and height

Note 1 to entry: Except when otherwise stated, the term “internal volume” is synonymous with the terms “unobstructed internal volume”, “capacity” or “unobstructed capacity”.

5.2 Terms related to ratings and masses

5.2.1

rating

R

gross mass of a container which is both, the maximum mass for operation and the minimum mass for testing

Note 1 to entry: In some countries, in order to conform to current commercial practice, the term “weight” is used (incorrectly) instead of “mass”.

Note 2 to entry: Ratings are given in ISO 668.

5.2.2

tare mass

T

mass of empty container including all fittings and appliances associated with a particular type of container in its normal operating condition

EXAMPLE A mechanically refrigerated container with its refrigeration equipment installed and, where appropriate, full of fuel.

Note 1 to entry: The term “tare” is synonymous with the term “tare mass”. The term “tare weight” is often used to refer to “tare mass” which is incorrect as weight would indicate a force.

5.2.3

payload

P

maximum permitted mass of freight or cargo, including either such cargo securement arrangements or dunnage, or both, that are not associated with the container in its normal operating condition, and can be calculated using the following equation:

$$P = R - T$$

Note 1 to entry: *R*, *P* and *T*, by definition, are expressed in units of mass. Where test requirements are based on the gravitational forces derived from these values, those forces, which are inertial forces, are indicated thus:

$$R_g, P_g, T_g$$

which are expressed in newtons or multiples thereof.

Note 2 to entry: The word “load”, when used to describe a physical quantity to which units can be ascribed, implies mass.

Note 3 to entry: The word “loading”, for example, as in “internal loading”, implies force.

5.3 Terms related to capabilities

5.3.1

stacking capability

ability of a container to support a certain number of fully packed containers of the same nominal length and the same rating under the accelerating conditions encountered in ship cell structures, taking into account relative eccentricities between containers due to cell structure clearances

Note 1 to entry: It is expressed as a numeric value of mass (kg) or force (kN).

5.3.2

restraint capability

ability of a *container* (3.1.1) to withstand those longitudinal accelerations which can be encountered in service when a container is secured by features in its base structure to an item of transport equipment

5.3.3

floor load capacity

maximum static or dynamic loading imposed by the payload

5.3.4

floor loading capability

ability of a *container* (3.1.1) floor to withstand the concentrated dynamic loading imposed during cargo operations involving powered wheeled equipment having defined characteristics

5.3.5

rigidity

ability of a *container* (3.1.1) to withstand either transverse or longitudinal racking loads of stated amounts, resulting particularly from ship movement

5.3.6

reduced stacking and/or racking capabilities

where the designed and tested stacking and/or racking values are:

- a) less than the stated stacking and racking capabilities in the applicable version of the appropriate part of the ISO 1496 series; or
- b) less than 192,000 kg and 150 kN, respectively, built before 2022

Note 1 to entry: Containers built after 2022 shall be marked in accordance with the applicable version of ISO 6346.

Note 2 to entry: For information about either reduced stacking and/or racking capabilities, see Reference [12].

5.3.7

weatherproofness

ability to withstand a defined weatherproofness test

6 Terms related to container components and structures

6.1 Terms related to container components

6.1.1

corner fitting

fitting located at the corner of a *container* (3.1.1) providing means of supporting, stacking, handling and securing the container

6.1.2

intermediate fitting

fitting located along the length of the top and bottom side rail of a *container* (3.1.1) providing means of supporting, stacking, handling and securing the container

Note 1 to entry: Typically located at the 1AAA/1AA/1A position to permit lifting with a 40 ft spreader.

6.1.3

top- and bottom-end transverse members

structural components at the top and bottom of the container end frames

6.1.3.1

top-end transverse member

transverse structural member at the top of an “end frame” of a *container* (3.1.1) joining the top *corner fittings* (6.1.1) of the end in question

Note 1 to entry: See *end frame* (6.2.3).

Note 2 to entry: Where mounted above end doors, these members are commonly known as “door headers”, and in open-top containers such headers are often movable (“swinging” or “hinged”) and sometimes completely removable.

Note 3 to entry: Platform-based containers with free-standing (corner) posts do not have top-end transverse members.

6.1.3.2

bottom-end transverse member

transverse structural member at the bottom of an “end frame” of a container joining the bottom *corner fittings* (6.1.1) of the end in question

Note 1 to entry: See *end frame* (6.2.3).

Note 2 to entry: Where mounted below end doors, these members are commonly known as “door sills”.

6.1.3.3

ladder catwalk

area designated for safe access to the loading area or roof of unit

6.1.4

top- and bottom-intermediate transverse members

structural components at the top and bottom of the container intermediate frames

6.1.4.1

top-intermediate transverse member

transverse structural member at the top of an "intermediate frame" of a container joining the top intermediate fittings of the frame

Note 1 to entry: See *intermediate frame* (6.2.5).

6.1.4.2

bottom-intermediate transverse member

transverse structural member at the bottom of an "intermediate frame" of a container joining the bottom intermediate fittings of frame

Note 1 to entry: See *intermediate frame* (6.2.5) and *top and bottom side rails* (6.1.5).

6.1.5

top and bottom side rails

structural components at the top and bottom of the container side walls

6.1.5.1

top side rail

longitudinal structural member at the top of a side of a *container* (3.1.1), joining top corner fittings of the side in question

Note 1 to entry: In platform-based containers which are open-sided and open top, these longitudinal members can be removable, and are not necessarily intended to take longitudinal loadings. In open top containers, they can be used to support removable (or sliding) roof bows, which in turn support a canvas or plastic cover.

6.1.5.2

bottom side rail

longitudinal structural member at the bottom of a side of a container joining the bottom corner fittings of the side in question

6.1.6

corner post

vertical structural member at either side of an "end frame" of a container joining a top and a bottom corner fitting (and thereby forming a "corner structure")

Note 1 to entry: See *corner structure* (6.2.4).

6.1.7

intermediate post

vertical structural member at either side of an "intermediate frame" of a container joining a top and a bottom intermediate fitting (and thereby forming a "corner structure")

Note 1 to entry: See *intermediate frame* (6.2.5).

6.1.8

floor

component supporting payload of container

Note 1 to entry: The floor is generally constructed from a number of planks or panels. In certain categories of thermal container, floor components can be especially designed to allow air (or gas) to be passed underneath the cargo.

6.1.9

floor bearer

component in the "base structure" of a container which supports the floor

Note 1 to entry: See *base structure* (6.2.1).

Note 2 to entry: In general cargo containers, such components are commonly laid transversely. In such cases, they are also known as "cross members" or "intermediate transverse members", i.e. transverse members in the base structure, intermediate between the "bottom end transverse members" in the "end frame".

Note 3 to entry: In platform-based containers, transverse floor planking is sometimes supported on additional longitudinal members, in which case these can also be regarded as floor bearers.

6.1.10

roof bow

member mounted transversely across the top of a container and either forming part of a rigid roof structure or supporting flexible, removable covers, in which case the member is commonly removable, or so designed as to slide to facilitate the loading of cargo through the top of the *container* (3.1.1)

6.1.11

fork pocket

fork lift pocket

reinforced pocket running transversely across the "base structure" of a *container* (3.1.1), piercing the bottom side rail at prescribed positions to permit the entry of the tine of a fork lift device for lifting and carrying the container

6.1.12

gooseneck tunnel

recess at one end (commonly the "front" end) of the *container* (3.1.1) designed to accommodate the raised portion of a gooseneck chassis

Note 1 to entry: In certain types of containers, gooseneck tunnels are provided at each end.

6.1.13

opening

aperture closed by a movable or removable panel of a *container* (3.1.1) designed as a load-bearing structure and to be weatherproof and reasonably airtight

Note 1 to entry: The term "open" is applied where one or more of the sides, ends or the roof of a container is permanently open. This description is still applicable even when flexible covers are provided.

6.1.14

end door

load-bearing panel assembly located in an end wall or door frame, arranged to open or close an aperture having specified minimum width and height

Note 1 to entry: See *payload* (5.2.3).

Note 2 to entry: The end door performs a vital role in maintaining the transverse strength of the container, therefore, operating the container with one door open or removed compromises that strength and should only be undertaken if the container has been tested in such a condition and within the tested parameters.

6.1.15

side door

load-bearing panel assembly located in a side wall, arranged to open or close an aperture of unspecified dimensions but at least big enough to allow a person to walk through

6.1.16

cover

flexible, removable sheet usually intended to provide a weatherproof closure to either an open top, side or end of a *container* (3.1.1), or all

EXAMPLE Sheet of canvas, plastic or plastic-coated cloth.

Note 1 to entry: Covers are commonly called "tarpaulins" or its derivative "tarp".

6.1.17

hard top

removable roof cover for open top containers constructed from steel and secured in place using retaining clips or locks

Note 1 to entry: See *roof* (6.2.9).

6.1.18

vent

ventilator

aperture which permits the exchange of air between the inside of the *container* (3.1.1) and the outside atmosphere

6.1.19

load-transfer area

part of the base structure of the *container* (3.1.1) specifically designed to transmit a proportion or all of the container mass to the longitudinal members of the carrying vehicle

6.1.20

load-transfer zone

zone within which the load transfer area can be expected to lie

6.1.21

doubler plate

horizontal reinforcing plate adjacent to top and bottom corner fittings to protect relevant container parts against possible misalignment of either fixing or lifting devices or both

6.2 Terms related to structures

6.2.1

base structure

rigid assembly in which the components most commonly found are:

- a) four bottom corner fittings;
- b) two bottom side rails;
- c) two bottom-end transverse members;
- d) a floor and floor bearers (except in tank types);
- e) such optional features as fork lift pockets or a gooseneck tunnel, or both

Note 1 to entry: See Note 1 to entry in *end frame* (6.2.3).

Note 2 to entry: Base structures also include load-transfer areas [see also *end door* (6.1.14)]. These are at specified positions to allow for load transfer between the container and a carrying vehicle.

6.2.2

platform-based base structure

typical design characteristic of having extra-heavy structural beams or deep-webbed beams on the deck of containers that have no side walls in order that they can achieve the longitudinal bending limits specified for all *ISO containers* (3.1.4)

6.2.3

end frame

assembly at each end of a container, each consisting of two top and two bottom corner fittings, two corner posts, a top and a bottom transverse member

Note 1 to entry: This commonly used term overlaps with the term "base structure" to the extent that the bottom corner fitting and the bottom-end transverse member appear in both. Caution should be used in the employment of these terms to avoid possible confusion.

6.2.4

corner structure

assembly consisting of a top and a bottom corner fitting and a corner post

6.2.5

intermediate frame

assembly at the 1AAA/1AA/1A position each consisting of two top and two bottom intermediate fittings, two intermediate posts and a top and bottom transverse member

6.2.6

intermediate structure

assembly consisting of a top and a bottom intermediate fitting and an intermediate post

6.2.7

end wall

end closure of a container bounded by and affixed to, but not including, the end frame

Note 1 to entry: This is assumed, unless otherwise stated, to be fully load-bearing to the minimum extent required for the type of container in question.

Note 2 to entry: Reference to "equivalent structures" means structures having the same strength as end walls but not necessarily having the same weatherproofness.

Note 3 to entry: Reference is sometimes made to the "rear" or "front" end of a container. The "rear" end is normally taken to mean the door end and the "front" end is taken to mean the end opposite to the door end. Such terms should be avoided where a container has similar ends. If it is necessary to differentiate between the two ends, then this should be done by reference to some feature which clearly distinguishes one end from another (for example, features such as markings, plates, discharge facilities, etc.).

6.2.8

side wall

side closure of a container bounded by and affixed to, but not including, top and bottom side rails and corner or intermediate structures

Note 1 to entry: See Note 1 to entry in *end frame* (6.2.3).

Note 2 to entry: Side walls are assumed, unless otherwise stated, to be load-bearing to the minimum extent required for the type of container in question.

Note 3 to entry: Reference to "equivalent structures" means structures having the same strength as side walls but not necessarily the same weatherproofness.

Note 4 to entry: The term "side frame" is occasionally used, but since it cannot be defined without considerable overlap with the much more commonly used terms "end frame" and "base structure", its use is to be discouraged except for tank containers.

6.2.9

roof

rigid weatherproof structural assembly forming the top closure of a container, bounded and supported by the top end transverse members, top side rails and top corner fittings

Note 1 to entry: Although they are rigid assemblies, roofs can in some cases be removable.

7 Terms related to certain container types

7.1 Terms related to platform-based containers

7.1.1

interlocked pile

number of platform containers or folding platform-based containers, with ends folded down, which are interlocked with each other to form a unit (module)

7.1.2

incomplete superstructure

lack of any permanently fixed longitudinal load-carrying structure between the ends, other than at the base

7.1.3

fixed complete end structure

non-folding end frame with transverse structural connection between corner posts

7.1.4

folding complete end structure

folding end frame with a transverse structural connection between corner posts

7.1.4.1

folding end wall assembly

end wall assembly that can be folded flush with the cargo deck

7.1.4.1.1

hinge

device that permits the folding of the end wall assembly including pin and locking apertures

7.1.4.1.2

end wall posts

vertical structural member at either side of a "folding end wall assembly" joining a top corner fitting with the hinge

Note 1 to entry: In certain designs, the end wall consists solely of two folding end wall posts.

7.1.4.2

folding end sill assembly

end assembly which is attached to the side beams

7.1.4.3

stub post

vertical structural member at either side of a "folding end sill assembly" joining a bottom corner fitting with the upper heel plate

7.1.4.4

hinge locking device

pin or block that engages with the hinge and the stub post by sliding, rotating or swinging into the locked position and retains the folding end wall assembly in the vertical position

7.1.4.5

stacking cone

attached device that permits interlocking of folded flatracks for empty positioning

Note 1 to entry: Also known as a flip-lock.

Note 2 to entry: When not in use, the stacking cone can be "flipped" into a recess adjacent to the upper heel plate.

Note 3 to entry: Twistlocks or other devices not permanently attached shall not be used to interconnect folded flatracks.

7.1.5

counterbalance spring

leaf or coiled spring that is used to counterbalance the mass of the folding end wall assembly

7.1.6

head lock

device to retain the folding end wall in the folded position that engages automatically when the end wall is folded down

Note 1 to entry: The head lock required manual withdrawal to allow the folded end wall to be erected.

Note 2 to entry: The head lock device should be painted a contrasting colour and shall be visible if the folding end wall is folded but the head lock is not partially or fully engaged.

7.2 Terms related to thermal containers

7.2.1

removable equipment

refrigerating, heating equipment, power generation unit or other equipment designated primarily for attaching to or detaching from the (thermal) container

Note 1 to entry: See *refrigerated and heated container with removable equipment* (4.2.2.7).

Note 2 to entry: It can be an integral part of the appliance or a separate member.

7.2.1.1

located internally

totally within the external dimensional envelope of the (thermal) container

Note 1 to entry: It is as defined in ISO 668.

7.2.1.2

located externally

partially or totally outside the external dimensional envelope of the (thermal) container

Note 1 to entry: It is as defined in ISO 668.

Note 2 to entry: It is implicit in this definition that any appliance located externally be removable or retractable to allow or facilitate transport in certain modes.

7.2.2

batten

member protruding from an inside wall of the (thermal) container to hold the cargo away from the wall to provide an air passage

Note 1 to entry: A batten can be integral with the wall, fastened to the wall or added during cargo packing.

7.2.3

bulkhead

partition in a (thermal) container providing either a plenum chamber or air passage, or both, for either return or supply air

Note 1 to entry: It can be an integral part of the equipment or a separate member.

7.2.4

ceiling air duct

passage or passages in a (thermal) container located in proximity to the ceiling to direct air flow

7.2.5

floor air duct

passage or passages in a (thermal) container located beneath the cargo support surface to direct air flow

7.2.6

pin mounting

mounting system using two vertical pins engaging mating sockets which are built into the top-end transverse member such that the entire mass of the removable equipment is supported by the top-end transverse member

7.2.7

lower mounting points

threaded receptacles to which the lower two corners of the removable equipment are fastened

7.2.8

modified-atmosphere fitting

appliance located in a thermal container which allows replacement of the natural atmosphere within the container by an artificial one after loading and closing the container

7.2.9

controlled-atmosphere fitting

appliance located in a thermal container which allows continuous maintenance of a more desirable atmosphere within the container

7.3 Terms related to tank containers

7.3.1

framework

tank mountings, end structure and all loadbearing elements not present for the purposes of containing cargo, but which transmit static and dynamic forces arising out of the lifting, handling, securing and transporting of the tank container as a whole

7.3.2

tank

vessel and associated piping and fittings which are designed to confine the cargo carried

7.3.3

compartment

section of the *tank* ([7.3.2](#)) formed by the shell, ends or complete bulkheads

Note 1 to entry: Baffles, surge plates or other perforated plates do not form tank compartments within the meaning of this definition.

7.3.4

gas

fluid substance having a vapour pressure greater than an absolute pressure of 300 kPa at 50 °C, or as otherwise defined by the *competent authority* ([7.3.6](#))

7.3.5

liquid

fluid substance having a vapour pressure not greater than an absolute pressure of 300 kPa at 50 °C, or as otherwise defined by the *competent authority* ([7.3.6](#))

7.3.6

competent authority

authority (or authorities) designated as such in each country and in each specific case by the governments concerned for the approval of tank containers

Note 1 to entry: This definition is also applicable to dry bulk containers (see 7.4).

7.3.7

dangerous goods

substances classified as dangerous by the United Nations Committee of Experts on the Transport of Dangerous Goods, or by the *competent authority* (7.3.6)

Note 1 to entry: This definition is also applicable to dry bulk containers (see 7.4).

7.3.8

maximum allowable working pressure

pressure assigned for operation by either a *competent authority* (7.3.6) or other responsible person to a particular tank and above which that tank is not intended to be operated

7.3.9

test pressure

gauge pressure at which the *tank* (7.3.2) is tested

7.3.10

total capacity

volume of water which will completely fill the *tank* (7.3.2) at 20 °C

7.3.11

ullage

portion of the “total capacity” of the *tank* (7.3.2) not occupied by its cargo

Note 1 to entry: It is expressed as a percentage of that total capacity.

7.3.12

interface

identifiable area adjacent to an external area

7.3.13

connection

specific point within an interface area used to join to a similar external point

7.4 Terms related to dry bulk containers

7.4.1

dry bulk

assemblies of separate solid particles, normally in contact with one another, which are or can be made capable of fluid flow

7.4.2

opening for cargo loading

opening provided in a *container* (3.1.1) for the filling of dry bulk solids

7.4.3

opening for cargo discharging

opening provided in a *container* (3.1.1) for the discharge of dry bulk solids

7.4.4

interface for external fumigation device

point(s) at which the *container* (3.1.1) and any external fumigation device is connected or disconnected

7.4.5

bulk density

mass per unit volume of a dry bulk solid, measured when the dry bulk solid is in loose or non-compacted condition

7.4.6

cargo space

space bounded by the *container* (3.1.1) walls or shell when all apertures are closed

8 Terms related to container handling and securing, visual identification and automatic identification

8.1 Terms related to the handling and securing of containers

8.1.1

empty container

container (3.1.1) in *tare mass* (5.2.2) condition

8.1.2

packed container

container (3.1.1) in condition other than *tare mass* (5.2.2)

8.1.3

eccentricity of centre of gravity

either longitudinal or lateral horizontal differences, or both, between the centre of gravity of any container (empty or packed, with or without fittings and appliances) and the geometric centre of the diagonals of the centres of the four bottom corner fittings

8.1.4

mobile centre of gravity

centre of gravity of a *container* (3.1.1) packed with liquid, bulk, hanging or similar cargo which is liable to shift under dynamic conditions

8.2 Terms related to visual identification of containers

8.2.1

identification system

code comprising thirteen alphanumeric characters consisting of all, and only, the following:

- owner code: three letters;
- equipment category identifier: one letter;
- serial number: six numerals;
- check digit: one numeral

8.2.2

owner code

code consisting of three capital letters which is unique and is registered with the Registration Authority

Note 1 to entry: The name and contact information of the Registration Authority for this document can be found at www.iso.org/maintenance_agencies.

8.2.3

equipment category identifier

identifier consisting of one capital letter of the Latin alphabet as follows:

- U for all containers;
- J for detachable container-related equipment;
- Z for trailers and chassis

8.2.4

serial number

identification number consisting of six Arabic numerals

Note 1 to entry: 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 significant series of numerals is 1234, the serial number should be 001234.