

---

---

**Freight containers — Container equipment  
data exchange (CEDEX) — General  
communication codes**

*Conteneurs pour le transport de marchandises — change de données sur  
les équipements de conteneurs (CEDEX) — Codes des communications  
générales*

iTeh STANDARD PREVIEW  
(standards.iteh.ai)

ISO 9897:1997

<https://standards.iteh.ai/catalog/standards/sist/d219e043-3e7d-476f-9c77-9d60e4ac5163/iso-9897-1997>



## Contents

Page

1	Scope.....	1
2	Normative references .....	1
3	Principle .....	1
4	Data elements and codes .....	2

## Annexes

A	Codes — Message types .....	4
B	Codes — Structural condition, repair condition, outside coating, inside coating, full/empty indicator .....	5
C	Codes — Damage location .....	6
D	Codes — Damage types .....	14
E	Codes — Material types .....	17
F	Codes — Repair type .....	19
G	Codes — Measure unit specifier: repair size dimension and work scales .....	22
H	Codes — Responsibility .....	23
J	Codes — Party identification and location .....	24
K	Codes — Components of container .....	25
L	Codes — Components of chassis .....	69
M	Alphabetical list of CEDEX codes .....	78

© ISO 1997

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization  
Case postale 56 • CH-1211 Genève 20 • Switzerland  
Internet central@iso.ch  
X.400 c=ch; a=400net; p=iso; o=isocs; s=central

Printed in Switzerland

## 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 9897 was prepared by Technical Committee ISO/TC 104, *Freight containers*, Subcommittee SC 4, *Identification and communication*.

ISO 9897:1997

This first edition of ISO 9897 cancels and replaces the first editions of ISO 9897-1:1990 and ISO 9897-3:1990, which have been technically revised.

Annexes A to H and K, L form an integral part of this International Standard.

Annexes J and M are for information only.

## **iTeh STANDARD PREVIEW** **(standards.iteh.ai)**

ISO 9897:1997

<https://standards.iteh.ai/catalog/standards/sist/d219e043-3e7d-476f-9c77-9d60e4ac5163/iso-9897-1997>

# Freight containers — Container equipment data exchange (CEDEX) — General communication codes

## 1 Scope

This International Standard specifies general communication codes for container equipment data exchange (CEDEX).

It is intended for business entities for use in communications relating to freight container transactions.

## 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 9897:1997  
<https://standards.iteh.ai/catalog/standards/sist/d219e043-3e7d-476f9c77-9167e4e51635/iso-9897-1997>

ISO 3166:1993, *Codes for the representation of names of countries*.

ISO 6346:1995, *Freight containers — Coding, identification and marking*.

UN/EDIFACT *Draft Directory and Standard Directory*.

## 3 Principle

In ISO 9897, codes are assigned to pieces of information, called "data elements", which are commonly used in transactions relating to freight containers. These data elements are named and defined, and each element is assigned a CEDEX alphabetical or alphanumeric code. Separate code lists for each type of information (damage, component, repair, location, etc.) are maintained. A code may be reused in several different code lists, but a code is never used for more than one data element within a single code list.

The data element may be phrased about material of construction of a container. For example, CEDEX code "LS" in material type code list (Annex E) stands for "wood, soft laminated plank". A code may define the component of the container that is damaged, its location, or its operating defect, depending on which data element is being defined. A selection is made from the appropriate code list to indicate which component, location, or defect, respectively, is chosen. An example of the latter is CEDEX code "MF", drawn from the damage type code list (Annex D), which stands for "motor failure". Other coded data elements indicate essential physical characteristics of the container and information pertinent to the use and management of the container, such as names and addresses of owners.

It can be seen from these examples that the text of a message can be substantially reduced in length by using the CEDEX codes instead of plain language. Use of the CEDEX codes results in messages much reduced in length, transmission time and communication cost, yet conveying information as complete as a much longer plain-language message.

Through proper programming of a computer, a CEDEX-encoded message can be printed out in plain language for the benefit of the communicators, if so desired, or it can be left in its encoded form. The personnel using the code routinely will develop the skill of being able to read messages in coded form; in fact, experience using the code has borne out this assertion. Also, many operators will not require use of all CEDEX codes assigned in ISO 9897, but only a portion of them due to the limited variety of containers and chassis in their domain.

## 4 Data elements and codes

### 4.1 Data elements

Data elements and corresponding code sets required to describe equipment components, their condition, repair methods, etc., are included in the appropriate annex shown in table 1.

### 4.2 Code assignments

#### 4.2.1 CEDEX codes

All code assignments of CEDEX shall be taken as obligatory. That is, an operator shall not pick and choose alternative codes unilaterally, nor depart from the established protocol, nor introduce new codes without having registered the codes in accordance with 4.3.

However, two trading partners may agree mutually to use alternative codes if the necessary codes are not included in this International Standard. It is strongly recommended that such codes be registered in accordance with 4.3 as soon as possible after introduction.

#### 4.2.2 EDIFACT codes

Code assignments according to Annex A shall taken as obligatory. That is, for electronic data interchange transmission, an operator shall not pick and choose alternative codes unilaterally and shall not use the message types and codes contained in Annex A of ISO 9897-1:1990 (i.e the first edition of this International Standard).

Note - Annex J is at the moment merely informative; it describes the manner in which a directory of users will eventually be developed. Until the directory is issued, annex J is not a mandatory requirement of this International Standard.

**Table 1 - Data elements and code sets**

Data elements	Code set see annex
Message type	A
Full/empty indicator (container)	B
Structural condition (container)	B
Repair condition (container)	B
Outside coating (container)	B
Inside coating (container)	B
Damage location	C
Damage type	D
Material type	E
Repair type	F
Measure unit specifier	G
Repair size dimension	G
Work scale (standard time factor)	G
Responsibility (for repair action)	H
Party identification and location	J
Component for container	K
Component for chassis	L

### 4.3 Updating data elements

The *International Intermodal Repairers (IIR)* has been nominated to act as the Registration Authority for the data elements:

International Intermodal Repairers (IIR)  
c/o CEDEX Services International  
450 Sansome St.  
San Francisco, CA 94111  
U S A

Telefax: +1 415 398 3610  
Internet: <http://www.intermodalrepairers.com>

Additional data elements will be added to table 1 at the request of international organizations, ISO/TC 104 member bodies, and approval of TC 104/SC 4. The actual process of registration will be performed by the TC 104/SC 4 Secretariat in consultation with the experts of TC 104 /SC 4/WG 3.

Each additional data element will be allocated an alphabetic or alphanumeric code, not at present used within the same code list covering a type of data.

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[ISO 9897:1997](https://standards.iteh.ai/catalog/standards/sist/d219e043-3e7d-476f-9c77-9d60e4ac5163/iso-9897-1997)

<https://standards.iteh.ai/catalog/standards/sist/d219e043-3e7d-476f-9c77-9d60e4ac5163/iso-9897-1997>

## Annex A (normative)

### Codes — Message types

(see notes below and 4.2.2)

Numerical code	Name	Description	EDIFACT code <sup>1)2)</sup>
01050	Damage/repair estimate	Description of damages and repair methods; authorization for repair work to proceed	DESTIM

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

ISO 9897:1997

<https://standards.iteh.ai/catalog/standards/sist/d219e043-3e7d-476f-9c77-9d60e4ac5163/iso-9897-1997>

#### NOTES:

1. To be used for electronic data interchange transmissions. See appropriate message descriptions published by UN/EDIFACT to determine messages to which the codes in this standard may apply. Further message types and equivalent EDIFACT codes will be added as released by EDIFACT.
2. EDIFACT codes, message standards (including the relevant message type codes) are controlled by UN/EDIFACT (Electronic Data Interchange for Administration, Commerce, and Transport), a subsidiary organization to UN/ECE/WP.4. ISO has assented to this arrangement via a memorandum of understanding between ISO and UN/ECE.



## Annex B (normative)

### Codes — Structural condition, repair condition, outside coating, inside coating; full/empty indicator

(see 4.1 and 4.2)

Numerical code	Name	Description	CEDEX code
----------------	------	-------------	------------

#### B.1 Structural condition, repair condition, outside coating, inside coating

01110	Bad	Inferior quality or state of structural parts, workmanship, surface treatment, etc.	B
01120	Poor	Poor quality or state of structural parts, workmanship, surface treatment, etc.	P
01130	Medium	Average or acceptable quality or state of structural parts, workmanship, surface treatment, etc.	M
01140	Good	Good quality or state of structural parts, workmanship, surface treatment, etc.	G
01150	Excellent	Excellent quality or state of structural parts, workmanship, surface treatment, etc.	X

iTeH STANDARD PREVIEW  
(standards.iteh.ai)  
ISO 9897:1997  
<https://standards.iteh.ai/catalog/standards/sist/d219e043-3e7d-476f-9c77-9d60e4ac5163/iso-9897-1997>

#### B.2 Full/empty indicator

01160	Empty	Empty condition of equipment	E
01170	Full	Loaded condition of equipment	F

## Annex C (normative)

### Codes — Damage location

(see 4.1 and 4.2)

#### C.1 Location coding convention

The location coding convention consists of three parts:

- a) For dry cargo, open top, thermal, tanks, and other container types:
  - A 1200 mm x 1200 mm (4 ft x 4 ft) numerical square system is used to identify damage to any face of a 20 ft or 40 ft container.
  - A 600 mm x 600 mm (2 ft x 2 ft) numerical square system is used to identify damage to any face of a 10 ft container.
  - A 900 mm x 900 mm (3 ft x 3 ft) numerical square system is used to identify damage to any face of a 30 ft container.
- b) For container ancillary equipment, which are an integral part of the container, such as reefer machinery, tank specific components, diesel generator set:
  - The location field is used to indicate the functional group to which a component belongs.
- c) For chassis:
  - As indicated in C.1.3.

#### C.2 All container bodies, refrigeration units, and generator sets (except chassis)

The container location coding convention locates damages within an area as large as a complete face of the container or as small as a nominal 1200 mm x 1200 mm (4 ft x 4 ft) square, or even less for the main components located on its edges (rails, corner posts).

The location code shall consist of four characters depending upon the area to be described. It identifies the smallest area containing the entire vertical and horizontal length of the damage.

##### C.2.1 First character

The first character shall be selected to identify the appropriate face of the container (if applied to a rectilinear closed container) or to the type of unit (if applied to a generator set, refrigeration unit, or tank container). For examples of use of codes for units other than closed containers or platforms, see C.1.2.

bottom (floor)	B
chassis	C
door end (rear)	D
container exterior	E
front end	F
generator set	G
container interior	I
left side	L
refrigeration unit	M
right side	R
tank container	A
top/roof	T
understructure	U
unspecified component	N
whole container or unit	X

### C.2.2 Second character

It shall be selected to identify the appropriate part of the container face where the damage is contained, when applied to a closed container. The vertical faces of the container are divided into top and bottom halves and upper and lower main components. The horizontal faces of the container (roof or top and floor or bottom and understructure) are divided into right and left halves when viewed from the door end.

The relevant codes for CLOSED CONTAINERS are:

both halves (i.e. top and bottom, or left and right or centre)	X
bottom half	B
higher portion (upper)	H
left half	L
lower portion (ground)	G
right half	R
top half	T

For other types of units, such as refrigeration units and generator sets, the second character designates the major assembly of the unit in which the damage is found. See C.1.2 for examples of how these codes are used. (Codes for chassis are shown in C.1.3.)

The relevant codes for REFRIGERATION UNITS are:

compressor	Q
condenser	K
electrical	E
evaporator	V
frame	F
miscellaneous	Z
pipings	P
regulation/control	C
unspecified assembly	N
whole unit	X

<https://standards.iteh.ai/catalog/standards/sist/d219e043-3c7d-476f-9c77-9d60e4ac5163/iso-9897-1997>

The relevant codes for GENERATOR SETS are:

alternator	L
electrical	E
engine (diesel)	D
frame	F
fuel system	U
miscellaneous	Z
oil system	O
unspecified assembly	N
water system	W
whole unit	X

The relevant codes for TANK CONTAINERS are:

access	A
frame	F
heating	H
insulation	I
loading/unloading	L
manhole	M
marking	D
miscellaneous	Z
pressure vessel	P
safety components	S
spill box	B
unspecified assembly	N
whole unit	X

### C.2.3 Third and fourth characters

They shall be selected to identify the section of the container part in which the damage is contained.

On all containers the front and door ends are divided into vertical sections numbered as follows when viewed from the door end from left to right:

- 1 for the left-hand side corner post
- 2 for the left half
- 3 for the right half
- 4 for the right-hand side corner post.

On all containers the right and left sides, the roof, the floor and the understructure, are divided into equal sections:

- for 10 ft and 20 ft containers, five sections numbered 1 to 5
- for 30 ft and 40 ft containers, ten sections numbered 1 to 0 ( 1, 2, 3,..., 9, 0).

When the damage covers one section only, the third character indicates the appropriate section number and the fourth character shall be N [see figure C.1a)].

When the damage covers several adjacent sections the first and last section numbers are used [see figure C.1b)].

When the damage covers several non-adjacent sections or if damage repair details are not the same, then separate line items shall be used [see figure C.1c)].

When the damage covers the entire length of the container face, the third and fourth characters shall each be X [see figure C.1d)].

The third and fourth characters of units other than closed containers, chassis and platforms, such as refrigeration units, generator sets, and tank containers, shall be "NN". No further identification of the location of components on these units is required.

### C.2.4 General location coding

When the damage/action covers *several faces of the inside* of the container such as steam cleaning, inside refurbishment, refixing or sealing of panels, then the code IXX shall be used.

When the damage/action covers *several faces of the outside* of the container such as outside refurbishment, refixing or sealing of panels, removing of cargo stickers, then the code EXXX shall be used.

When the damage/action covers *several inside and outside* faces of the container such as examinations, handling/transport, complete refurbishing, then the code XXXX shall be used.

### C.2.5 Examples of location coding for containers

Examples of location coding of components of typical containers are shown below. A diagram showing the components is shown in Figure C.1.

NOTE - LHS = left-hand side;

RHS = right-hand side;

\* = specific sequential number of component will be defined in separate free-text field.

**Reference in Figure C.1**

Reference in Figure C.1	Location code	Component code	Description
a	LT5N	PAA	Side panel, LHS, upper half, within the 5th 1200 mm (4 ft) section from rear
b	RT24	PAA	Side panel, RHS, upper half, extending through 2 <sup>nd</sup> to 4 <sup>th</sup> sections from rear
c	RB2N	PAA	Side panel, RHS, lower half, within the second section from the door
c	RB4N	PAA	Side panel, RHS, lower half, within the fourth section from rear
d	TXX	PAA	Roof panel, both sides, extending through all sections
e	UX1N	CMA	Cross-member, both sides, within first section from door
f	UR12	CMA	Several cross-members, RHS, extending through first two sections*
g	TX12	RBO	Roof bows, both sides, extending through first two sections*
h	TR1N	RBH	Roof bow holder, RHS, within first section (bow holder number will be defined in separate free-text field)
i	UL8N	CMA	Outrigger, LHS, within the eighth section from door (40 ft) (outrigger number will be defined in separate free-text field)
j	UX3N	FLW	Web (side) of forklift pocket, both sides, within third section from door (pocket number will be defined in separate free-text field)
k	UR4N	FLS	Forklift pocket strap, RHS, within fourth section from door (pocket number will be defined in separate free-text field)
l	RX1N	SBO	Side post, RHS, both halves, within the first section from door (post number will be defined in separate free-text field)
m	UX15	RLA	Centre spacer rail, extending through sections 1-5 from door
n	UR80	RLA	Tunnel rail, extending through sections 8-10 from door
o	DX2N	LBA	Locking bar, LH door, both halves (locking bar number will be defined in separate free-text field)

ISO 9897:1997

NOTE- Specific sequential number of component will be defined in separate free-text field as follows:

- Roof bows, cross-members, outriggers and forklift pocket sides are to be numbered from rear (door) end to front
- Locking bars are to be numbered from left to right.

### C.3 Ancillary equipment

The specific components of ancillary equipment which are an integral part of a container such as refrigeration machinery, diesel generator, tank fittings are identified

- firstly, by the two alpha characters selected to identify the major functional group to which the component belongs: they are the first and second characters of the location code;
- secondly, by the code NN: it forms the third and fourth characters of the location code.

#### EXAMPLES

MQNN	Reefer machinery (compressor)
APNN	Tank container (pressure vessel)
GDNN	Generator set (engine).

Components that occur more than once in an ancillary equipment or which are common or similar to other components are given the same component code but are differentiated by functional group code.

#### EXAMPLES

Location field	Component field	Description
MKNN	MAS	Refrigeration machinery - Condenser fan motor
MVNN	MAS	Refrigeration machinery - Evaporator fan motor
MPNN	VSA	Refrigeration machinery - Suction solenoid valve
ASNN	YTR	Tank - Safety relief valve

#### C.3.1 Chassis

#### C.3.2 First character

The first character of the location code for all chassis is always C.

#### C.3.3 Second character

The second character defines the major assembly of the chassis. The relevant codes are:

axle (full width)	A
bumper (rear end) area	B
frame (main)	F
frame (extension)	Y
kingpin/grid/upper coupler	K
landing gear	G
left wheel(s)	L
miscellaneous	Z
right wheel(s)	R
subframe/suspension	U
unspecified assembly	N
whole unit	X

#### C.3.4 Third and fourth characters

On all chassis, the third and fourth characters indicate the section of the relevant assembly (defined by the second location code character) affected. Acceptable characters are shown in table C.1 below:

Table C.1

Second character: Assembly (code)	Third character	Fourth character
Axle-full width (A)	N: Not applicable X: All wheels on axle	C: Centre axle (triale unit) F: Front axle N: Not specified R: Rear axle X: All axles
Bumper-rear end (B)	L: Left half N: Not specified R: Right half X: Both halves	N: Not applicable
Frame (main) (F)	Rearmost damaged section (identify left half, right half or both halves as applicable): 1: Aft section, left half (aft or forwardmost point on running gear or slider range if applicable) 2: Central section, left half (between landing gear and aft section) 3: Forward section, left half (forward of landing gear) 4: Aft section, right half 5: Central section, right half 6: Forward section, right half 7: Aft section, both halves 8: Central section, both halves 9: Forward section, both halves N: Not specified X: Entire frame	Forwardmost damaged section:  Same codes as third character, except <b>N</b> also used when damage is limited to a single section
Frame extension (Y)	L: Left half N: Not specified R: Right half X: Both halves	F: Front half N: Not specified R: Rear half X: Both halves
Kingpin/grid/upper coupler (K)	L: Left half N: Not specified R: Right half X: Both halves	F: Front half N: Not specified R: Rear half X: Both halves
Landing gear (G)	L: Left half N: Not specified R: Right half X: Both halves	N: Not applicable
Left wheel(s) (L)	I: Inside wheel N: Not applicable O: Outside wheel X: Both inside and outside wheels	C: Centre axle (triale unit) F: Front axle N: Not specified R: Rear axle X: All axles
Miscellaneous (Z)	N: Not applicable	N: Not applicable
Right wheel(s) (R)	I: Inside wheel N: Not applicable O: Outside wheel X: Both inside and outside wheels	C: Centre axle (triale unit) F: Front axle N: Not specified R: Rear axle X: All axles
Subframe/suspension (U)	L: Left half N: Not specified R: Right half X: Both halves	F: Front half N: Not specified R: Rear half X: Both halves
Unspecified assembly (N)	N: Not applicable X: Entire assembly	N: Not applicable X: Entire assembly
Whole unit (X)	X: Entire assembly	X: Entire assembly