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

The International Standard ISO 9897:1997 has the status of a Swedish Standard. This document contains the official English version of ISO 9897:1997.

This standard supersedes the Swedish Standard SS-ISO 9897-1 and SS-ISO 9897-3.

Swedish Standards corresponding to documents referred to in this Standard are listed in "Catalogue of Swedish Standards", issued by SIS. The Catalogue lists, with reference number and year of Swedish approval, International and European Standards approved as Swedish Standards as well as other Swedish Standards.

## Containrar – Datautbyte avseende containerutrustning (CEDEX) – Allmänna kommunikationskoder

Den internationella standarden ISO 9897:1997 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av ISO 9897:1997.

Standarden ersätter SS-ISO 9897-1 och SS-ISO 9897-3.

Motsvarigheten och aktualiteten i svensk standard till de publikationer som omnämns i denna standard framgår av "Katalog över svensk standard", som ges ut av SIS. I katalogen redovisas internationella och europeiska standarder som fastställts som svenska standarder och övriga gällande svenska standarder.

ICS 55.180.10

**ISO 9897:1997(E)**

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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

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

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.



# 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 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**

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

### 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.

## Annex A (normative)

### Codes — Message types

(see notes below and 4.2.2)

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

#### 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>B.1 Structural condition, repair condition, outside coating, inside coating</b>			
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
<b>B.2 Full/empty indicator</b>			
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
pipng	P
regulation/control	C
unspecified assembly	N
whole unit	X

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