UIC CODE 920-15

2nd edition, January 2004

Original

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Standard numerical coding of unit loads and transport packaging

Codification numérique unifiée des unités de chargement et des emballages de transport
Einheitliche nummerische Codierung der Ladeeinheiten und Transportverpackungen

UNION INTERNATIONALE DES CHEMINS DE FER
INTERNATIONALER EISENBAHNVERBAND
INTERNATIONAL UNION OF RAILWAYS

Leaflet to be classified in Volume :

IX - Information Technology - Miscellaneous

Application :

With effect from January 2004
All members of the International Union of Railways

Record of updates

1st edition, June 1988	First Issue
2nd edition, January 2004	Addition of appendices B, C and D

The person responsible for this leaflet is named in the UIC Code

Contents

Summary

This leaflet defines the codification to indicate the standard numerical coding of unit loads and transport packaging.

This coding system is based on *ECE Recommendation 21* of March 1986 and should be used by all participants in international trade.

1 - General

1.1 - International context

In international trade, movement of goods across frontiers requires broad harmonisation of procedures and expressions used to describe, identify, contain and protect goods conveyed.

Automation of transport procedures has further increased the need for harmonisation.

This leaflet fulfils this purpose by providing an adaptation of new international multi-user standards[1] (see Bibliography - page 23), which are by definition of a very general nature, to specifically railway requirements, while observing the principles laid down.

The standard numerical coding system described in this leaflet shall be compulsory for use in automatic interchange of data concerning transport packaging and unit loads.

1.2 - Terms and definitions

- The term "transport packaging" is used to denote packaging used for carriage, handling and storage. The provisions of this leaflet do not apply to consumer packaging insofar as it is not used as a covering for goods during transport and is generally not suited for carriage, handling and storage without additional packaging.

- Subjective characteristics of goods conveyed, e.g. fragility, temperature sensitivity, etc. are not taken into account in this context.

- This coding system is not designed to provide details concerning the components or size of packaging. These are aspects related mainly to manufacturing technology and consumer requirements.

1. ECE/Trade/158 Recommendation 21 (Geneva, March 1986)

2 - Purpose of this coding system

- The purpose of this coding system is to provide a simple dedicated numerical code to identify the various unit loads and packaging types most commonly used when freight is tendered for carriage.

- In addition to the main objective mentioned under point 1.1 - page 2, this coding system will also:

  - simplify planning of vehicle loading operations, storage and supervision for freight transport handlers,
  - provide a basis for compilation of statistics and for economic studies in order to urge packaging manufacturers to adapt packaging to transport conditions and thereby contribute to damage control.

3 - Basis of coding system

3.1 - The coding system shall be used exclusively to prepare and carry out transport operations and for associated settlements.

3.2 - The coding system is based on *ECE Recommendation 21* and should be used by all participants in international trade insofar as possible. It is intended as a framework for a standard code to be used by all carriers, forwarding agents and customers.

3.3 - The coding system identifies:

Unit loads

A unit load consists of individual goods (with or without packaging) which are generally of the same type and are grouped for the purpose of transport, and especially for handling as well as to provide additional protection. A unit load is not recognised as packaging in the usual commercial sense.

Transport packaging

Transport packaging is used to cover goods or a group of goods temporarily during handling, transport and storage to protect them from external elements and to simplify these handling, transport and storage operations.

In practice, packaging is the visible outer covering of goods tendered for carriage.

Transport packaging materials

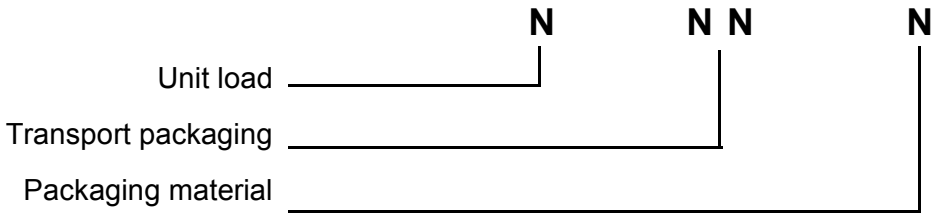
These are most commonly used materials which can provide information on packaging solidity and strength particularly for purposes of transport and handling.

3.4 - The coding system must include the concept of "no packaging" (or unpacked) in order to meet the objective mentioned under point 2 - page 3.

4 - Code structure

4.1 - The code system for unit loads and transport packaging denotes successively the three concepts specified under point 3.3 - page 4. It is sub-divided into three separate parts:

- the first digit on the left denotes the unit load,
- the second and third digits denote the transport packaging although only the second digit describes the packaging type,
- the last digit denotes the packaging material.



The first, second and fourth digits of the code are identical to those in *ECE Recommendation 21* with the exception of a few minor differences described in point 5 - page 7, of this leaflet.

The third digit is optional in the *ECE Recommendation 21* and has been added to provide a more detailed description of transport packaging for railway requirements (see point 5.2 - page 7).

4.2 - In the transport packaging code (2nd and 3rd digit), each of the tens positions describes the type of packaging according to shape:

00	to	09	no packaging - bulk
10	to	19	no packaging-loose
20	to	29	rigid case-type packaging (parallelepiped)
30	to	39	rigid cylindrical packaging
40	to	49	rigid spherical or convex packaging
50	to	59	rigid packaging, other shapes (other than codes 20 to 49)
60	to	69	flexible bag-type packaging
70	to	79	not allocated
80	to	89	reserved
90	to	99	other packaging or special packaging

The units position describes transport packaging within each packaging type.

4.3 - The coding system is given in table form described in Appendix A - page 10.

4.4 - For the convenience of users, in Appendices B, C and D information is given, containing:

- a list of unit loads, definitions and pictograms (see Appendix B - page 11),
- transport packaging codes, detailed descriptions and pictograms (see Appendix C - page 13),
- an alphabetical list of all transport packaging and the packaging types under which they are classified in the coding system (see Appendix D - page 21). It explains with concrete examples how the table described in Appendix A has to be used.

5 - Differences by comparison with *ECE Recommendation 21*

5.1 - There are minor differences in the code for the first digit (unit load):

Code	*UIC Leaflet 920-15*	*ECE Recommendation 21*
0	No unit load (loose, bulk)	No cargo unit (liquid, bulk)
1	Not allocated	No cargo unit (solid, bulk)

The distinction made in the *ECE Recommendation 21* between liquid bulk and solid bulk duplicates the second and third digit of the coding table. It is for this reason that only code zero has been allocated to bulk in this leaflet. It also includes loose unpacked articles.

5.2 - The third digit which is optional in the *ECE Recommendation 21* has been allocated in this leaflet in order to identify packaging types in finer detail.

The ECE prefers to make a distinction in the size of packaging and specifies each category: very small, small, medium, large and very large and allows for use of volume (m^3), weight (kg) and contents (litre) parameters. For the railways this general description of transport packaging cannot be used to allocate any one code nor to define a type of packaging distinctly.

The third digit in this code will continue to be used to describe commonly-used packaging types such as case, basket, bottle. The code allocated for these packaging types is based on the *ECE Recommendation 21*.

Example:

Code	*UIC Leaflet 920-15*	*ECE Recommendation 21*
32	Box	Rigid, drum-type - small
33	Can	Rigid, drum-type - medium
34	Drum, cylindrical	Rigid, drum-type - large
35	Tank	Rigid, drum-type - very large

It is not possible however for the same code to have exactly the same meaning in both documents.

6 - Application of the coding system

The conditions of use of the standard numerical coding system for transport packaging and unit loads shall be set by the relevant UIC and OSJD Committees for each particular case.

7 - Management of the coding

7.1 - The standard numerical coding of unit loads and transport packaging shall be managed at railway level by the UIC/OSJD Joint Group "Information Technology and Coding".

7.2 - For the UIC, requests from the UIC for amendments to this leaflet shall be examined by the Information Technology Committee which shall place them on the agenda for work of the UIC/OSJD Joint Group "Information Technology and Coding".

For the OSJD, requests from the OSJD for amendments to this leaflet shall be examined by the OSJD Committee which shall place them on the agenda for work of the UIC/OSJD Joint Group "Information Technology and Coding".

7.3 - Amendments concerning the fundamental principles of this leaflet shall be examined in liaison with the ECE and international organisations representing carriers.

Appendix A - Coding table of unit loads and transport packaging

Unit Load (1st digit)		Transport Packaging (3rd digit) → / Type of Transport Packaging (2nd digit)↓		0	1	2	3	4	5	6	7	8	9	MATERIAL (4th digit)	
0	No unit Load	0	Bulk		Powders	Fine granular particles	Large granular particles	Liquid (normal pressure and temperature)	Liquefied goods	Gases		RESERVED	Not Otherwise Enumerated (N.O.E.)	0	No packaging
1	Not allocated	1	Loose / unpacked	Empty packaging	Tubes, pipes	Rolls, bolts	Coil of rolled flat material	Coils of rolled liner material	Plates, boards	Ingots			N.O.E.	1	Plastics
2	ISO Containers	2	Rigid case-type packaging (parallelepiped)			Carton	Suitcase	Chest	Case	Crate	Fruit-crate		Bottle-crate	2	Cardboard
3	Containers other than ISO	3	Rigid cylindrical packaging		Jar	Box	Can	Drum	Tank					3	Wood
4	Palletized Load	4	Rigid spherical or convex packaging			Pot	Bottle ≤ 5 L (not protected)	Carboy > 5 L (not protected)	Barrel	Bottle ≤ 5 L (protected)	Carboy > 5 L (protected)			4	Not allocated
5	Pre-slung	5	Rigid packaging (other than 2, 3, 4)		Pail	Basket	Cage	Jerrican						5	Metal
6	Self-powered Vehicles	6	Flexible bag-type packaging			Packet	Bag	Compressed bale[a]	Non-compressed bale[a]	Net	Sheet, cover		Envelope	6	Glass, porcelain, ceramics
7	Unpowered Vehicles	7	Not allocated										N.O.E.	7	Textile
8	Reserved	8	Reserved											8	Reserved
9	Other Unit Load	9	Other or special packaging	Special packaging for radioactive material	Reel	Temperature-controlled unit powered	Temperature-controlled unit insulated	Pressure-controlled receptacle	Composite packaging[b]				N.O.E. or not known	9	N.O.E.

a. These descriptions are not packaging descriptions in the strict sense of the term.
b. Packaging forming an inseparable entity, and which is filled, stored, forwarded and emptied as such.

Appendix B - Unit loads: one-digit code, descriptions with pictograms

0 **No Unit Load**

Solid Bulk Goods: **includes** fine powders, granular particles, large, lumpy, dry solids, suitable for continuous mechanical handling, for transport by fixed installations (other than pipeline) or loose in a hold or other compartment integral to a means of transport. Liquid Bulk Goods: **includes** liquids, liquefied gases, molten or slurried solids, suitable for continuous mechanical handling, for transport by pipeline or loose in a hold, tank or other compartment integral to a means of transport.

2 **ISO Containers**

Goods loaded in/on a freight container 20 ft. (6 m) or more in external length; includes lift van, flat, moveable tank or similar articles of transport equipment.

3 **Other than ISO**

Goods loaded in/on a freight container less than 20 ft. (6 m) in external length; includes rigid Intermediate Bulk Containers.

4 **Palletized Load**

Goods loaded on a deck; includes disposable one-way pallets, slip-sheets, sea or land mode box-, tank-, post-, rack-pallets, bricks, ingots, etc suitably assembled for fork-lift truck handling.

5 **Pre-slung**

Goods (one or more items) supplied with a sling (or slings) of various materials (natural/artificial fibre, steel wire etc.) and of various designs (loop, ring, cloverleaf etc.); includes "packaged" timber, flexible Intermediate Bulk Containers.

6 **Self-powered Vehicles**

Includes road motor vehicles (lorries, buses, cars) and accompanying trailers, semi-trailers, caravans engaged in goods/passenger transport, motorised road, agricultural, industrial, etc. vehicles moving in trade, live animals "on the hoof", passengers on foot.

7 **Unpowered Vehicles**

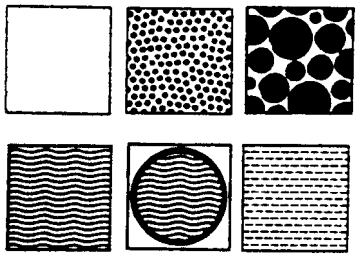
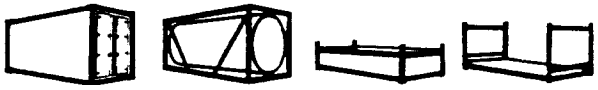
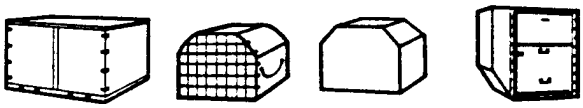
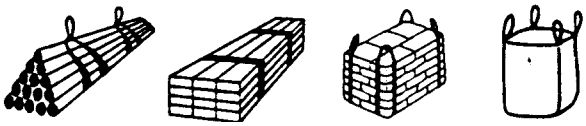
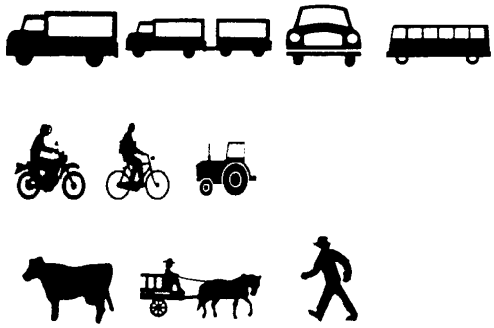
Non-self-powered vehicles and equipment on wheels; **includes** unaccompanied trailers, semi-trailers, caravans and other road, agricultural, industrial etc. vehicles.

8 **Reserved**

9 **Other Unit Loads**

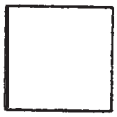
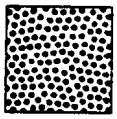
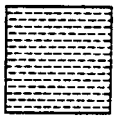
All cargo not elsewhere enumerated (i.e. the residual types of cargo carried in transport: "break-bulk" or "general" cargo, e.g. boxes, drums, bags etc. and loose, unpacked items such as pipes, rods, etc.).

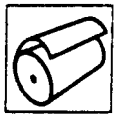
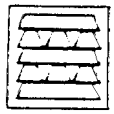
UNIT LOAD PICTOGRAMS

Solid and liquid bulk	0	
Not allocated	1	
ISO containers	2	
Containers other than ISO	3	
Palletized	4	
Pre-slung	5	
Self-powered vehicles	6	
Unpowered vehicles	7	
(Reserved)	8	
Other unit loads	9	

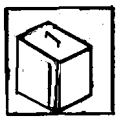
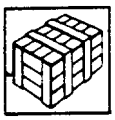
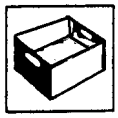
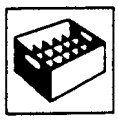
Appendix C - Type of transport packaging

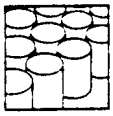
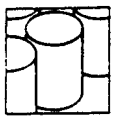
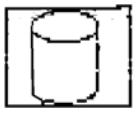
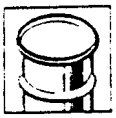
2-DIGIT CODES, PICTOGRAMS AND NAMES

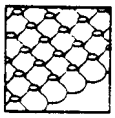
0 BULK		
01		Solid, fine particles (powders)
02		Solid, granular particles (grains)
03		Solid, large granular particles (nodules)
04		Liquid (at normal pressure/ temperature)
05		Liquefied goods
06		Gas
07		
08		(Reserved)
09		N.O.E. (not otherwise enumerated)

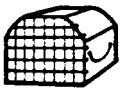
1 LOOSE, UNPACKED (excluding bulk)		
10		Empty packaging
11		Cylinder, long, hollow (tubes, pipes in bundle/bunch/truss)
12		Cylinder, solid (bolts, rods in bundle/bunch/truss)
13		Cylinder, hollow, formed by flat material wound on itself (rolls)
14		Cylinder, hollow, formed by linear material wound on itself (rings, coils)
15		Rectangle, superficial or linear (bars, boards, plates, sheets in bundle/bunch/truss)
16		Rectangle, dense (ingots in bundle/bunch/truss)
17		
18		(Reserved)
19		N.O.E.

2 RIGID, CASE-TYPE, (PARALLELEPIPED)

22		Complete, small 1 < KGM ≤ 5; 1 < LTR ≤ 5; 0,001 < MTQ ≤ 0,1 (carton, rectangular can)
23		Complete, medium 5 <KGM ≤ 50; 5 < LTR ≤ 50; 0,1 < MTQ ≤ 0,5 (suitcase, footlocker, jerrycan)
24		Complete, large 50 < KGM ≤ 300; 50 < LTR ≤ 300; 0,5 > MTQ ≤ 1 (chest, coffer, trunk)
25		Incomplete, skeletal framework (skeleton-case, cage)
26		Incomplete on top (crate, shallow crate, tray)
27		Incomplete on top (fruit crate, traypack)
28		(Reserved)
29		Incomplete on top with internal divisions (bottle-crate, bottle-rack)

3 RIGID, CYLINDRICAL		
31		Small 1 < KGM ≤ 5; 1 < LTR ≤ 5; 0,001 < MTQ ≤ 0,1 (jar)
32		Medium 5 < KGM ≤ 50; 5 < LTR ≤ 50; 0,1 < MTQ ≤ 0,5 (cylindrical box)
33		More than medium 50 < KGM ≤ 100; 50 < LTR ≤ 100; 0,5 < MTQ ≤ 0,75 (cylindrical can, jerrycan)
34		Large 50 < KGM ≤ 300; 50 < LTR ≤ 300; 0,5 > MTQ ≤ 1 (drum)
35		Very large 300 < KGM; 300 < LTR; 1 < MTQ (tank, vat)
36		
37		
38		(Reserved)
39		

4 RIGID, SPHERICAL OR CONVEX		
41		
42		Very small, wide opening KGM < 1; LTR < 1; MTQ < 0,001 (pot, jug, pitcher)
43		Small, narrow opening 1 < KGM ≤ 5; 1 < LTR ≤ 5; 0,001 < MTQ ≤ 0,1 (bottle, not protected)
44		Medium, narrow opening 5 < KGM ≤ 50; 5 < LTR ≤ 50; 0,1 < MTQ ≤ 0,5 (carboy, not protected)
45		Large, truncated ends 50 < KGM ≤ 300; 50 < LTR ≤ 300; 0,5 < MTQ ≤ 1 (barrel)
46		Small, narrow opening 1 < KGM ≤ 5; 1 < LTR ≤ 5; 0,001 < MTQ ≤ 0,1 (bottle, protected)
47		Medium, narrow opening 5 < KGM ≤ 50; 5 < LTR ≤ 50; 0,1 < MTQ ≤ 0,5 (carboy, protected)
48		(Reserved)
49		

5 RIGID, (other)		
51		Cone, truncated, normally with handle (pail, tub, bucket)
52		Cone, wicker, normally with handle (basket)
53		Box-type, barred (cage)
54		Case-type, normally with screw-up cover and handle (jerrycan)
55		
56		
57		
58		(Reserved)
59		

6 FLEXIBLE, BAG-TYPE

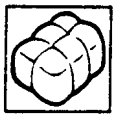
61

62 

Complete, small
1 < KGM ≤ 5; 1 < LTR ≤ 5; 0,001 < MTQ ≤ 0,1
(packet, collapsible tube)

63 

Complete, medium
5 < KGM ≤ 50; 5 < LTR ≤ 50; 0,1 < MTQ ≤ 0,5
(bag)

64 

Complete, large
50 < KGM ≤ 300; 50 < LTR ≤ 300; 0,5 < MTQ ≤ 1
(compressed bale)

65 

Complete, large
KGM ≤ 300; LTR ≤ 300, MTQ ≤ 1
(non-compressed bale)

66 

Incomplete, open-mesh
(net)

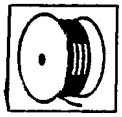
67

68 (Reserved)

69 Envelope

7 NOT ALLOCATED	
71	
72	
73	
74	
75	
76	
77	
78	(Reserved)
79	N.O.E.

8 RESERVED	

9 OTHER OR SPECIAL PACKAGING		
90		Special, for radioactive material
91		Cylinder with rims on which goods are wound (reel, bobbin, spindle)
92		Temperature-controlled unit (powered)
93		Pressure-controlled unit (insulated)
94		Pressure-controlled receptacle
95		Composite
96		
97		
98		(Reserved)
99		N.O.E. or not known

Appendix D - Packaging type, name and codes

Aerosol	43	Butt	45
Ampoule, non-protected	31	Cage	25
Ampoule, protected	31	Can, cylindrical	32
Atomizer	43	Can, rectangular	22
Bag	63	Canister	54
Bale, compressed	64	Canvas	67
Bale, non-compressed	65	Carboy, non-protected	44
Balloon, non-protected	43	Carboy, protected	47
Balloon, protected	46	Carton	22
Bar	16	Case	23
Barrel	45	Cask	45
Bars, in bundle/bunch/truss	16	Chest	24
Basket	52	Churn	33
Beer crate	29	Coffer	24
Bin	24	Coffin	54
Board	15	Coil	14
Board, in bundle/bunch/truss	15	Cover	67
Bobbin	91	Crate	26
Bolt	12	Creel	25
Bottle, non-protected, bulbous	43	Cup	51
Bottle, non-protected, cylindrical	33	Cylinder	12
Bottle, protected bulbous	46	Demijohn, not protected	44
Bottle, protected cylindrical	33	Demijohn, protected	47
Bottle crate, bottle rack	29	Drum	34
Box	22	Envelope	69
Bucket	51	Filmpack	67
Bulk, gas (at 1031 mbar and 15°C)	06	Firkin	42
Bulk, liquefied gas (at abnormal temperature/pressure)	05	Flask	43
Bulk, liquid	04	Footlocker	23
Bulk, solid, fine particles (powders)	01	Frame	25
Bulk, solid, granular particles (grains)	02	Framed crate	26
Bulk, solid, large particles (nodules)	03	Fruit crate	27
Bunch	66	Gas bottle	33
Bundle	63	Girder	15

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