



---

**Committee of Experts on the Transport of Dangerous Goods  
and on the Globally Harmonized System of Classification  
and Labelling of Chemicals****Sub-Committee of Experts on the Transport of Dangerous Goods****Sixty-first session**

Geneva, 28 November-6 December 2022

Item 3 of the provisional agenda

**Listing, classification and packing****Amendments to packing instructions****Note by the secretariat\*****I. Introduction**

1. During the sixtieth session of the Sub-Committee of Experts on the Transport of Dangerous Goods, the secretariat agreed to coordinate with the European Industrial Gases Association (EIGA) to bring a proposal to the next session with editorial amendments that could help prevent misinterpretations of the tables in P200 (ST/SG/AC.10/C.3/120, para. 75). Proposal 1 below has been discussed between EIGA and the secretariat to address this issue.

2. Furthermore, the secretariat has reviewed all packing instructions in the Model Regulations (4.1.4.1, 4.1.4.2, 4.1.4.3 and 4.2.5.2.6), identifying possible areas of improvement. Some of these improvements, such as correcting small mistakes and using consistent spacing and indentation throughout all packing instructions, are purely editorial and, as such, have been addressed directly by the secretariat and are not detailed in this document. However, there are several issues which, although mostly editorial in nature, are slightly more substantial or would benefit from the review of the Sub-Committee. Proposals 2 to 10, explain the specific issues identified and contain appropriate amendments for the consideration of the Sub-Committee.

3. Finally, the secretariat has reproduced in informal document INF.3 the full set of packing instructions after applying all these editorial improvements and proposals. The packing instructions reproduced in informal document INF.3, however, do not contain other amendments that have been adopted so far by the Sub-Committee during the current biennium.

---

\* A/75/6 (Sect.20), para. 20.51

## II. Proposals

### 1. Amendments to the tables in P200

4. Currently, when an entry contains several subsidiary hazards, they are listed in multiple rows. Since some entries also have several rows to indicate multiple test pressures, one could erroneously interpret that each subsidiary hazard corresponds to a different test pressure. To avoid this, it is proposed to pluralize the word “hazard” in the heading, to separate hazards with commas instead of with multiple rows and to separate entries corresponding to different test pressure with a horizontal dashed line spanning the last three columns of the table.

5. Special packing provisions are currently already separated by commas, but due to the narrow width of their column, they sometimes span several rows too, allowing for a similar misinterpretation as described above. To avoid this, the column width has been tweaked to ensure that all entries fit into a single row.

6. Finally, there are several UN numbers with multiple entries which are currently treated in inconsistent ways (see entries for UN Nos. 1010, 1012, 1060 and 2073 in table 2). The secretariat proposes to treat them consistently in a similar manner as above, with a dashed line spanning all columns except the first one.

#### Proposal 1

4.1.4.1, P200 In tables 1, 2 and 3, in the heading of the fourth column, replace “hazard” by “hazards”. In all entries with multiple hazards, separate each hazard with a comma. In all entries with multiple test pressures, separate each row with dashed line spanning the last three columns. For UN Nos. 1010, 1012, 1060 and 2073, separate the different entries with a different “name and description” with a dashed line spanning all columns except the first one.

### 2. Composite packagings

7. Composite packagings are considered as a type of single packagings in the Model Regulations. The formatting of some packing instructions reflects this (P010, P403, P505), but the formatting of others seems to imply otherwise (P001, P002, P410, P501, P502, P504). The secretariat proposes to adapt the formatting of this latter group of packing instructions so that composite packagings are shown as a category of single packagings.

#### Proposal 2

4.1.4.1, P001, P002, P410, P501, P502 and P504 Amend the formatting as needed to display composite packagings as a category of single packagings.

### 3. Footnotes

8. Currently, footnotes in packing instructions are shown in a variety of ways:
- (a) P001 and P002 at the bottom of the page.
  - (b) P101, T1-T22, T23 and T50 directly underneath the packing instruction.
  - (c) P200 has two different footnotes. The one in table 1 appears at the bottom of the page and the one in table 3 appears under the packing instruction. Although the footnotes are different, they both have the same letter.
  - (d) P410 in its first page has footnotes at the bottom of the page and in its second page it has them below a line underneath the packing instruction.
  - (e) P520 inside the packing instruction, under an internal table.
  - (f) P911 below a line underneath the packing instruction.

(g) LP906 has a long footnote that starts at the bottom of a page and continues at the top of the following page.

9. The secretariat proposes to adopt the following convention for all packing instructions. Footnotes are always “per packing instruction”, that is, the numbering of footnotes restarts for each packing instruction, if a packing instruction has the same footnote in different parts or pages of the packing instructions, it will have the same letter, but if a packing instruction has different footnotes in different parts or pages of the packing instruction, they will have different letters. Footnotes appear directly below each packing instruction. When packing instructions span multiple pages, footnotes appear only on the pages where they are used.

### Proposal 3

4.1.4.1, P001, P002, P410, P520, P911 Place the footnotes directly below the packing instruction, in those pages in which they appear.

4.1.4.1, P200 In table 1, place footnote <sup>a</sup> directly below the packing instruction (two times). In table 3, renumber footnote <sup>a</sup> as footnote <sup>b</sup> (entries for UN Nos. 1745, 1746 2495, as well as the footnote itself).

4.1.4.3, LP02 and LP906 Place the footnotes directly below the packing instruction, in those pages in which they appear.

## 4. Table in P520

10. The table inside P520 is formatted in a nonstandard way and is unnecessarily cumbersome. We propose to simplify it slightly while maintaining the same information.

11. Furthermore, the table specifies the maximum mass per packaging/package. Although most packing instructions specify net mass, there are some that specify gross mass. It is therefore not clear whether this instance refers to net or gross mass. **The Sub-Committee is requested to clarify this ambiguity.**

### Proposal 4

4.1.4.1, P520 Amend the table under (3) to read as follows:

...								
The maximum quantities per packaging/package for packing methods OP1 to OP8 are:								
	<b>OP1</b>	<b>OP2<sup>a</sup></b>	<b>OP3</b>	<b>OP4<sup>a</sup></b>	<b>OP5</b>	<b>OP6</b>	<b>OP7</b>	<b>OP8</b>
Maximum [net/gross] mass (kg) for solids and for combination packagings (liquid and solid)	0.5	0.5/10	5	5/25	25	50	50	400 <sup>b</sup>
Maximum contents in litres for liquids	0.5	-	5	-	30	60	60	225 <sup>d</sup>

## 5. Numbered and lettered lists

12. Packing instructions have been developed by a wide range of experts during a long stretch of time. This has made adhering to consistent formatting conventions difficult. In this proposal we attempt to bring the whole series of packing instructions closer to a set of consistent conventions regarding the use of numbered and lettered lists, where doing this wouldn't result in a loss of clarity. Broadly speaking the convention is that numbers with parentheses are used to structure different sections or requirements in the main body of packing instructions, letters with parentheses are used for enumerations and numbers with a dot are used to number additional requirements.

**Proposal 5**

- 4.1.4.1, P200 In (4), renumber the first list with bullets as (a) to (e) and delete the bullets from the second one.
- In (5) s, renumber the list with bullets as (a) to (b).
- In (5) t, renumber (i), (ii) as (a), (b).
- 4.1.4.1, P203 In (9), renumber the list with bullets as (a) to (e).
- 4.1.4.1, P501 Under "Combination packagings", before "Boxes", delete "(1)" and before "Fibreboard", delete (2).
- 4.1.4.1, P520 In PP94, renumber 1. to 5. as (a) to (e). In PP95, renumber 1. to 6. as (a) to (f).
- 4.1.4.1, P601 In (1), renumber the list with bullets as (a) to (c).
- 4.1.4.1, P602 In (1), renumber the list with bullets as (a) to (c).
- 4.1.4.1, P804 In (1), renumber the list with bullets as (a) to (c).
- 4.1.4.1, P902 In the second row under the heading, insert "(1)" before "**Packaged articles:**" and remove the boldface, and insert "(2)" before "**Unpackaged articles:**" and remove the boldface.
- 4.1.4.1, P908 In the second row under the heading, before the numbered list, insert a new paragraph reading "Packagings shall also meet the following requirements:". In the list, renumber 1. to 5. as (a) to (e).
- 4.1.4.1, P909 In additional requirement 2, renumber the list with bullets as (a) to (d).
- 4.1.4.1, P910 In the additional requirement, renumber the list with bullets as (a) to (d).
- 4.1.4.2, IBC02, IBC03, IBC05, IBC06, IBC07, IBC08, IBC100 Delete the numbers in front of the list in the row below the heading.
- 4.1.4.3, LP902 In the second row under the heading, insert "(1)" before "**Packaged articles:**" and remove the boldface, and insert "(2)" before "**Unpackaged articles:**" and remove the boldface.
- 4.1.4.3, LP904 In the second row under the heading, before the numbered list, insert a new paragraph reading "Large packagings shall also meet the following requirements:". In the list, renumber 1. to 5. as (a) to (e).

**6. Redundant subtitle in the additional requirement of P904**

13. The additional requirement in P904 contains a subtitle reading "Ice, dry ice and liquid nitrogen". This is the only packing instruction with such a subtitle. Furthermore, it is redundant, as the text in the additional requirement clearly specifies that it applies to ice, dry ice and liquid nitrogen. Therefore, the secretariat proposes to delete the subtitle.

**Proposal 6**

- 4.1.4.1, P904 In the additional requirement, delete the first line reading "Ice, dry ice and liquid nitrogen".

**7. Restructuring of P600 and P803**

14. P600 is very similar in content to P803 but is laid out with a big block of running text instead of in a more structured way as in P803. We propose to amend the second paragraph of the second row under the heading to match the structure of other packing instructions in general and of P803 in particular. This includes some slight modifications to the existing text, but the intention is to keep the same meaning as before in a way that is visually clearer and more rapidly understandable.

15. For consistency, the secretariat proposes to slightly modify P803 by moving the line on maximum net mass to the end of the packing instruction and removing the numbers (see rationale in II.5 above).

#### **Proposal 7**

4.1.4.1, P600 Amend the second row under the heading to read as follows:

The following packagings are authorized, provided that the general provisions of **4.1.1** and **4.1.3** are met:

Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G);

Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2).

Outer packagings shall meet the packing group II performance level.

Articles shall be individually packaged and separated from each other using partitions, dividers, inner packagings or cushioning material to prevent inadvertent discharge during normal conditions of transport.

Maximum net mass: 75 kg

4.1.4.1, P803 Amend the second row under the heading to read as follows:

The following packagings are authorized, provided that the general provisions of **4.1.1** and **4.1.3** are met:

Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);

Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2).

Articles shall be individually packaged and separated from each other using partitions, dividers, inner packagings or cushioning material to prevent inadvertent discharge during normal conditions of transport.

Maximum net mass: 75 kg.

## **8. Layout of the section on combination packagings in P505**

16. Packing instructions with specifications for combination packagings generally follow a standard layout (see for instance P001, P002, P010 and P110(a) to P144). One exception is P505. Although the layout in P505 is more compact, the secretariat believes that the standard layout used in other packing instructions is visually clearer and more rapidly understandable. There is also benefit in applying consistent layouts throughout the regulations as much as possible. We therefore propose to restructure the section on combination packagings in P505 to match the standard layout. Furthermore, we propose to unify the header for maximum capacity/net mass in combination packagings and single packagings, as is done in other packing instructions with combination packagings and single packagings such as P001, P002 and P010.

**Proposal 8**

4.1.4.1, P505 Amend rows 3 and 4 under the heading to read as follows:

		Maximum capacity/maximum net mass
<b>Combination packagings</b>		
<b>Inner packagings</b>	<b>Outer packagings</b>	
glass 5 l	<b>Boxes</b>	
plastics 5 l	aluminium (4B)	125 kg
metal 5 l	natural wood, ordinary (4C1)	125 kg
	natural wood, sift-proof walls (4C2)	125 kg
	plywood (4D)	125 kg
	fibreboard (4G)	125 kg
	plastics, solid (4H2)	125 kg
	<b>Drums</b>	
	aluminium, removable head (1B2)	125 kg
	fibre (1G)	125 kg
	other metal, removable head (1N2)	125 kg
	plastics, removable head (1H2)	125 kg
	plywood (1D)	125 kg
	<b>Jerricans</b>	
	aluminium, removable head (3B2)	125 kg
	plastics, removable head (3H2)	125 kg
<b>Single packagings</b>		

**9. Special packing provision in P603**

17. P603 is the only packing instruction in the Model Regulations which contains a special packing provision without a code. P603 only applies to UN 3507 URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE, less than 0.1 kg per package, non-fissile or fissile-excepted. The special packing provision reads: "In the case of fissile-excepted material, limits specified in 2.7.2.3.5 shall be met."

18. According to the guiding principles (part 4, A.2, §9), special packing provisions are used for provisions which are relevant only for a small number of substances or articles among many others that are assigned to a particular packing instruction. On one hand, since P603 only applies to one UN number, one could argue that it would be better to include this provision as an additional requirement instead of as a special packing provision (see proposal 9a below). On the other hand, since this provision applies to fissile-excepted material but not to non-fissile material, one could argue that a special packing provision is warranted. In this case, however, there seems to be no reason not to assign it a code (proposal 9b below). This would be similar to the case of P207, which only applies to UN 1950 AEROSOLS but has a special packing provision (PP87) which only applies to waste aerosols.

19. **The Sub-Committee is requested to decide which of the following two proposals, if any, are more adequate.**

**Proposal 9a**

4.1.4.1, P603 Add a new additional requirement reading "4. In the case of fissile-excepted material, limits specified in 2.7.2.3.5 shall be met.". Delete the entire row for special packing provisions.

**Proposal 9b**

3.2.2, UN 3507 In column (9), insert “PPXX”.

4.1.4.1, P603 Assign code “PPXX” to the existing special packing provision.

**10. Other amendments**

20. Proposal 10 contains a collection of minor amendments to improve consistency and readability.

**Proposal 10**

4.1.4.1, P208 In table 1, remove the header row containing column numbers.

4.1.4.1, P404 Amend the second row under the heading to read as follows:

The following packagings are authorized, provided that the general provisions of **4.1.1** and **4.1.3** are met:

## (1) Combination packagings:

Outer packagings:

Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G);

Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G or 4H2).

Inner packagings:

Metal receptacles with a maximum net mass of 15 kg each. Inner packagings shall be hermetically sealed;

Glass receptacles, with a maximum net mass of 1 kg each, having closures with gaskets, cushioned on all sides and contained in hermetically sealed metal cans.

Outer packagings shall have a maximum net mass of 125 kg.

Inner packagings shall have threaded closures or closures physically held in place by any means capable of preventing back-off or loosening of the closure by impact or vibration during transport.

## (2) Metal packagings:

Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2);

Jerricans (3A1, 3A2, 3B1 and 3B2).

Maximum gross mass: 150 kg

## (3) Composite packagings:

Plastics receptacle in a steel or aluminium drum (6HA1 or 6HB1).

Maximum gross mass: 150 kg

## (4) Pressure receptacles, provided that the general provisions of 4.1.3.6 are met.

4.1.4.1, P520 In (1), replace “, jerricans” by “and jerricans”.

4.1.4.1, P910 In the additional requirement, at the end of the first sentence, replace the semicolon by a full stop and delete the paragraph break so that the first two sentences are displayed in a single paragraph.

4.1.4.2, IBC520 For UN 3109, in the entry for “tert-Butyl hydroperoxide, not more than 72 % with water”, remove the horizontal line between the rows for IBC types “31A” and “31HA1”.

4.1.4.3, LP906 In the second row under the heading, in the second sentence, replace “For a batteries” by “For batteries”.