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**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

Thirty-sixth session  
Geneva, 30 November – 9 December 2009  
Item 5 of the provisional agenda

**MISCELLANEOUS PROPOSALS OF AMENDMENTS TO THE MODEL  
REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS**

6.1.4 Requirements for packagings

4.1.4.1 Packing instructions concerning the use of packagings

Transmitted by the expert from Italy<sup>1</sup>

**Introduction**

1. The requirements for the manufacturing of packagings mentioned in Chapter 6.1 do not give the opportunity to build the boxes with metals other than steel or aluminum (code 4N).
2. In 4.1.4.1, in the packing instructions for explosives (P 110a to P144) 1N2 removable head drums are not listed.
3. Titanium is a metal that has mechanical properties equal if not superior to those of other metals that are explicitly provided for in Chapter 6.1 as steel and aluminum, in terms of hardness and mechanical resistance to traction. Moreover, unlike steel, titanium is non-magnetic, a feature essential for its use on board military vehicles, such as minesweepers.

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<sup>1</sup> In accordance with the programme of work of the Sub-Committee for 2009-2010 approved by the Committee at its fourth session (refer to ST/SG/AC.10/C.3/68, para. 118 (d) and ST/SG/AC.10/36, para. 14).



9. In 4.1.4.1

1N2 should be added after 1A2 and/or 1B2 in the following packing instructions (Packing instructions for Class 1 explosives):  
P110a), P110b), P111, P112a), P112b), P112c), P113, P114, P114b), P115, P116, P130, P131, P132a), P132b), P133, P134, P135, P136, P137, P138, P139, P140, P141, P142, P143, P144.

10. If necessary, in the Packing Instructions for explosives, the code N can be assigned exclusively to Titanium by adding a note as follows:

4N<sup>(a)</sup>

1N2<sup>(a)</sup>

where N stands for Titanium.

Examples:

<b>P001 PACKING INSTRUCTION (LIQUIDS)</b>				
<b>P001</b>				
The following packagings are authorized provided that the general provisions of <b>4.1.1</b> and <b>4.1.3</b> are met:				
		Maximum capacity/Net mass (see 4.1.3.3)		
		Packing group I	Packing group II	Packing group III
<b>Combination packagings</b>				
Inner packagings	Outer packagings			
Glass 10 l	<b>Drums</b>			
Plastics 30 l	steel (1A2)	250 kg	400 kg	400 kg
Metal 40 l	aluminium (1B2)	250 kg	400 kg	400 kg
	other metal(1N2)	250 kg	400 kg	400 kg
	plastics (1H2)	250 kg	400 kg	400 kg
	plywood (1D)	150 kg	400 kg	400 kg
	fibre (1G)	75 kg	400 kg	400 kg
	<b>Boxes</b>			
	steel (4A)	250 kg	400 kg	400 kg
	aluminium (4B)	250 kg	400 kg	400 kg
	other metal(4N)	250 kg	400 kg	400 kg
	natural wood (4C1, 4C2)	150 kg	400 kg	400 kg
	plywood (4D)	150 kg	400 kg	400 kg
	reconstituted wood (4F)	75 kg	400 kg	400 kg
	fibreboard (4G)	75 kg	400 kg	400 kg
	expanded plastics (4H1)	60 kg	60 kg	60 kg
	solid plastics (4H2)	150 kg	400 kg	400 kg
	<b>Jerricans</b>			
	...	....	...	...
	...	....	...	...
<b>Single packagings</b>				
...		...	...	...

<b>P131 PACKING INSTRUCTION</b>		
<b>P131</b>		
The following packagings are authorized, provided that the general packing provisions of <b>4.1.1</b> , <b>4.1.3</b> and special packing provisions of <b>4.1.5</b> are met:		
<b>Inner packagings</b>	<b>Intermediate packagings</b>	<b>Outer packagings</b>
<b>Bags</b> paper plastics  <b>Receptacles</b> fibreboard metal plastics wood  <b>Reels</b>	Not necessary	<b>Boxes</b> steel (4A) aluminium (4B) other metal (4N)(a) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) <b>Drums</b> steel, removable head (1A2) aluminium, removable head (1B2) other metal, removable head (1N2)(a) fibre (1G) plastics, removable head (1H2) plywood (1D)
<b>Special packing provision:</b> <b>PP68</b> For UN Nos. 0029, 0267 and 0455, bags and reels shall not be used as inner packagings.		

<sup>(a)</sup> Only titanium