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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-fifth session  
Geneva, 22-26 June 2009  
Item 2 of the provisional agenda

**EXPLOSIVES AND RELATED MATTERS**

2.1.3.5. Assignment of fireworks to hazard divisions

Shot tube

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

**Introduction**

1. Considering incongruities posed in the assignment of hazard division to the firework designated “shot tube”, a modification of the current text is proposed. The deciding factor would be the flash composition in the shot tube according to this proposal.

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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(a) and ST/SG/AC.10/36, para. 14)

## Proposal

2. Amend the entry for “short tube” in the default fireworks classification table of 2.1.3.5.5 to read as follows:

Type	Includes/Synonym	Definition	Specification	Classification
Shot tube	Single shot Roman candle, small preloaded mortar	Tube containing a pyrotechnic unit consisting of pyrotechnic composition, propellant charge with or without transmitting fuse	≤30 mm inner diameter and “ <del>pyrotechnic unit &gt; 25 g, or &gt; 5% and</del> ” ≤25% flash composition	1.3 G
			≤30 mm inner diameter, pyrotechnic unit ≤25g and ≤5% flash composition	1.4 G

## Justification

3. According to the current table, a tube with more than 25% flash composition can be classified as 1.3G if it contains more than 25 g of pyrotechnic composition. However it must be classified as 1.1G if it contains less. For an equal amount of flash composition, the tube with a greater amount of pyrotechnic composition is classified as less dangerous.

4. This can be illustrated by the following examples:

- (a) Fireboard tube which forms part of a battery, with a 30mm diameter. The tube contains 22.34 g of pyrotechnic composition and 6.34 g of flash composition (28.38%). As the tube contains more than 25% flash composition but at the same time less than 25 g pyrotechnic composition, it would be classified as 1.1G.
- (b) Same tube with 60 g pyrotechnic composition and 20 g flash composition (33.3%). As it contains more than 25 g pyrotechnic composition, it would be assigned to 1.3G on the basis of the pyrotechnic composition only, irrespective of the amount of flash composition.

5. The modification of the text proposed consists in eliminating the possibility that the pyrotechnic composition be determining for the assignment of the hazard division. It is considered that the limit for assignment to 1.1G is, in addition to the diameter (greater than 30mm), solely the flash composition; in this way, if this one is more than 25% it is assigned to 1.1G directly. This criterion of 25% is the one used in many other families like shells, rockets, roman candles, etc.

## Transitional measures.

6. They are not necessary.
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