

## 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

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### PROPOSALS OF AMENDMENTS TO THE MODEL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS

#### Note 2 to 2.1.3.5.5 Firework Classification

Transmitted by the expert from the United Kingdom

#### **Introduction**

*The experts from Canada and Netherlands have submitted informal papers (UN/SCETDG/30/INF.31 & UN/SCETDG/30/INF.24 respectively) putting forward proposals for additions or amendments to the United Kingdom proposal of Note 2 to 2.1.3.5.5 (ST/SG/AC.10/C3/2006/84).*

#### **Comments**

The expert from the United Kingdom has discussed the wording of the proposed definition with the expert from Canada and has agreed the following revised form of words for a new Note 2; "Flash composition" in this table refers to pyrotechnic compositions in powder form or as pyrotechnic units as presented in the fireworks, that are used to produce an aural effect in fireworks devices, unless demonstrated to give a minimum time/pressure value of more than 4ms for 0.5g of pyrotechnic composition in Test 2(c)(i) "Time/pressure test".

*The expert from the Netherlands has suggested carrying out 6 tests and the criterion changed to 8ms. The concerns over the Standard Deviation values obtained during the UK tests are understandable. However, the variation is not particularly relevant if the 'worst case' value is taken, i.e. the shortest rise time. The UK expert suggests the three tests should be retained in the proposal for the immediate future.*

The United Kingdom's Health and Safety Laboratory is looking at possible changes to the test method such as the replacement of cambric used to ignite the composition. We believe that the variation in results is not only due to the size of the sample but also the efficiency of the ignition system. Work is already underway to develop a simple modification to the current test which will alleviate this problem.

The pyrotechnic composition should be tested in the form as found in the firework. The United Kingdom's working paper recognized that particle size was a significant factor in the speed of reaction (para 4) and this is reflected in the proposed definition "pyrotechnic compositions in powder form or as pyrotechnic units as presented in the fireworks."

We believe that the 4ms criteria will allow the use of most black powders and also limit more energetic substances such as flash powders, black powder/flash powder mixtures and powdered whistles. To set the criteria at 8ms would limit the use of many firework compositions and have significant repercussions for the fireworks industry.

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