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Working Party on the Transport of Dangerous Goods

Geneva, 11-21 September 2007
Item 5 of the provisional agenda

**HARMONIZATION WITH THE UN RECOMMENDATIONS
ON THE TRANSPORT OF DANGEROUS GOODS */**

2.1.3.5.5 Definition of flash composition

Transmitted by the Governments of Norway and the Netherlands

Introduction

1. On 1.1.2007, amendments to ADR and RID came into force. One of the new subjects is the classification of fireworks and the incorporation of the default table (see 2.2.1.1.7.5). This text is in line with the text adopted by the UN Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals in December 2004 and includes a definition of flash composition in note 2 to 2.1.3.5.5. This definition is implemented in ADR/RID/ADN as amended on 1.1.2007 in par. 2.2.1.1.7.5 Note 2 .

Definition of flash composition

2. The existing definition reads as follows:

*/ Circulated by the Intergovernmental Organization for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2007/25.

NOTE 2: "Flash composition" in this table refers to pyrotechnic compositions containing an oxidizing substance, or black powder, and a metal powder fuel that are used to produce an aural effect or used as a bursting charge in fireworks devices

3. This definition is based on chemical composition and intended use of the composition. In the last biennium new, and sometimes dangerous compositions, are encountered in fireworks in an attempt to circumvent the flash composition definition and thus a more stringent default classification. Examples of these compositions are black powder where the potassium nitrate has been (sometimes: partly) replaced by potassium perchlorate; black powder enriched with antimony sulphide and nitrocellulose based compositions.

Text adopted by the UN Committee

4. Using a performance based approach would screen out hazardous and too energetic compositions, based on test results. On that basis the United Kingdom submitted document ST/SG/AC.10/C.3/2006/84 which was discussed together with several information papers in the UN Subcommittee session of December 2006 and the following text was adopted:

Note 2 to 2.1.3.5.5 Amend to read:

"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, or are used as a bursting charge or a lifting charge, unless the time taken for the pressure rise is demonstrated to be more than 8 ms for 0,5 g of pyrotechnic composition in Test series 2(c)(i) "Time/pressure test".

For the report, see the annex.

Situation in ADR/RID/ADN

5. It should be stressed that whether or not a composition is considered a flash composition may have serious consequences for the classification of the article in which the composition is contained. Therefore this change in the definition is considered to be a real safety issue and should come into force immediately. However according to the work procedures this text will only be implemented in ADR/RID/ADN the first of January 2009.

Proposal

6. In the meantime we would like to find a solution for the present situation as follows:

2.2.1.1.7.2 of ADR/RID/ADN reads:

"Assignment of fireworks to UN Nos. 0333, 0334, 0335 and 0336 may be made on the basis of analogy, without the need for Test Series 6 testing, in accordance with the default fireworks classification table in 2.2.1.1.7.5. Such assignment shall be made with the agreement of the competent authority. Items not specified in the table shall be classified on the basis of test data derived from Test Series 6".

7. This means that making use of the default classification table always needs the agreement of the competent authority.

8. In case of doubt there is also special provision 645 as amended as from 1.1.2007 following a proposal by Denmark which states that:

"When assignment to a division is made in accordance with the procedure in 2.2.1.1.7.2, the competent authority may require the default classification to be verified on the basis of test data derived from Test Series 6 of the Manual of Tests and Criteria, Part I, Section 16."

Proposal

9. Norway and the Netherlands propose that for the authorization of the classification of fireworks by a ADR/RID/ADN Member State, the new definition of flash composition as adopted by the UN Committee in December 2006 shall be applied by each Member State.

Annex

The discussion and the decision was reflected in the report of the Subcommittee (ST/SG/AC.10/C.3/60, par. 48-50) as follows:

“ Firework classification

Document: ST/SG/AC.10/C.3/2006/84 (United Kingdom)

Informal documents: INF.3 (United Kingdom)
INF.24 (Netherlands)
INF.31 (Canada)
INF.52 (United Kingdom)
INF.60 (Germany)

48. It was recalled that fireworks should normally be classified on the basis of Series 6 tests. The possibility of default classification according to 2.1.3.5 was introduced to permit classification by analogy, without recourse to tests, on the basis of the pyrotechnic composition and size of fireworks so as to enable competent authorities that lack the means to carry out tests to authorize classification within an acceptable margin of safety.

49. It was noted, however, that in some cases, the industry was getting around these new rules by altering the pyrotechnic composition of the fireworks.

50. To address this problem, the Sub-Committee decided to amend Note 2 to 2.1.3.5.5 in line with the proposal in informal document INF.52, and to replace the time for the pressure rise of 4ms to 8ms (see annex). “.

In the Annex the following adopted text reads:

"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, or are used as a bursting charge or a lifting charge, unless the time taken for the pressure rise is demonstrated to be more than 8 ms for 0,5 g of pyrotechnic composition in Test series 2(c)(i) "Time/pressure test"."
