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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-fourth session
Geneva, 1-9 December 2008
Item 2 of the provisional agenda

EXPLOSIVES AND RELATED MATTERS

Additional test for 1.4S classification

Transmitted by the expert from Canada¹

Introduction

1. At the thirty-third session of the Sub-Committee, the expert from Canada made a proposal for an additional test for determining 1.4S classification (ST/SG/AC.10/C.3/2008/11). This was a revised version of the 2006 proposal (ST/SG/AC.10/C.3/2006/62) which had been modified according to the advice of the Working Group on Explosives. The Working Group reviewed and supported this revised proposal, which was adopted by the Sub-Committee with the addition of square brackets around certain portions of the text. The present proposal contains modified text for these portions.

¹ In accordance with the programme of work of the Sub-Committee for 2007-2008 approved by the Committee at its third session (refer to ST/SG/AC.10/C.3/60 para. 100 and ST/SG/AC.10/34, para. 14).

Comments

2. The texts adopted so far by the Sub-Committee are reproduced in document ST/SG/AC.10/C.3/2008/97. Additional changes are proposed below.

Proposal

3. In 16.7.1.3.4, insert the word “donor” before “article” at the beginning of the first sentence.

4. Amend 16.7.1.4 to read as follows:

“16.7.1.4 Test criteria and method of assessing the results

Inclusion in Compatibility Group S requires that any hazardous effects arising from functioning of the articles in this test are confined within the package. Evidence of a hazardous effect outside the package includes:

- (a) Denting or perforation of the witness plate beneath the package;
- (b) A flash or flame capable of igniting an adjacent material [such as a sheet of 80 ± 3 g/m² paper at a distance of 25 cm from the package];
- (c) Disruption of the package causing projection of the explosives contents; or
- (d) [A projection which passes completely through the packaging (a projection or fragment retained or stuck in the wall of the packaging is considered as non hazardous)];

The competent authority may wish to take into account the expected effect of the initiator when assessing the results of the test, if these are expected to be significant when compared to the articles being tested. If there are hazardous effects outside the package, then the product is excluded from Compatibility Group S.”.

5. Add the following examples in 16.7.1.5:

“16.7.1.5 [Examples of results

Article	Packaging	Initiation system	Events	Result
Cartridges, power device	Fibreboard box containing 20 articles (300 g of propellant each) each in a plastic bag.	One of the articles.	Articles ignited one by one, producing flames up to 2 m high outside package.	Not consistent with Compatibility Group S.
Detonator assemblies, non-electric	Fibreboard box containing 60 assemblies each in a plastic bag with its shock tube coiled in a figure 8, with attenuators on the detonators.	One of the articles.	One out of 60 detonators fired and no visible effects outside the box.	Consistent with Compatibility Group S.
Detonators, electric	Fibreboard box containing 84 assemblies, each bundled with its wire so that the blast from a firing detonator would be attenuated.	One of the articles.	One out of 84 detonators fired. The reaction caused the box to break open and released some of the assemblies but it was judged that there were no hazardous effects outside the package.	Consistent with Compatibility Group S.
Charges, shaped (open-face 19 g perforators)	Fibreboard box containing 50 charges in two layers so that pairs of charges were focused toward each other.	Detonator with approximately 60 mm of detonating cord.	Three trials were conducted. In each of the trials, the witness plate was perforated with three to four charges reacting. The packages were blown apart scattering the remaining charges over a wide area.	Not consistent with Compatibility Group S.
Detonators, electric	Fibreboard box containing 50 detonators each with a 450-mm lead wire. Each assembly was contained in its own fibreboard inner box. The boxes were separated by fibreboard panels.	One of the articles.	One out of 50 detonators fired causing one of the box flaps to open. There were no hazardous effects outside of the package.	Consistent with Compatibility Group S

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