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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

Twenty-seventh session, 4-8 July 2005 Item 3 (a) of the provisional agenda

#### EXPLOSIVES, SELF-REACTIVE SUBSTANCES AND ORGANIC PEROXIDES

### Test series 8

Proposed changes to Test Series 8;
Changes to Figure 10.4 in the Manual of Tests and Criteria
Procedure for Ammonium Nitrate Emulsion, suspension or gel, intermediate for blasting explosives

### Transmitted by the expert from the United Kingdom

- 1. The expert from the United Kingdom draws the attention of the Sub-Committee to the report of the informal working group on Ammonium Nitrate Emulsions (ANE), Suspensions and Gels and Test Series 8 which was held in Madrid on the 14th and 15th February 2005. Paragraph 46 of the report, (ST/SG/AC.10/C.3/2005/6) outlines details of the discussion on the flow diagrams in Figures 10.2, 10.3 and 10.4. Following these discussions the flow diagram in Figure 10.4 was revised and the wording of the "yes" box from Test 8(b) was changed.
- 2. The expert from the United Kingdom believes however that a further change to Figure 10.4 may be needed. This change involves the "yes" box from Test 8(c) "Substance to be considered as a candidate for Division 1.5 and proceed with test series 5.".
- 3. Carrying out Test Series 5 could result in ANE candidate substances being classified as "NOT CLASS 1". These ANE formulations may eventually be classified as Division 4.1, or 5.1, or as non hazardous, see paragraph 2.4.2.3.1.1 (b) of the Model Regulations as amended in ST/SG/AC.10/C.3/50/Add.1, Page 2, Chapter 2.4.
- 4. Test 8(c), the Koenen test, is carried out on ANE candidate substances with a limiting diameter of 2mm or more. The Manual of Test and Criteria lists only two substances which gave positive results with a 2mm orifice (18.6.1.5). This same test is used in Test Series 2 and the following table lists substances which have been tested which give a positive result with a 2mm or more orifice.

Substance	Limiting Diameter	Result
Ammonium perchlorate	3.0 mm	+
Ammonium picrate (crystalline)	2.5 mm	+
1,3 Dinitroresorcinol (crystalline)	2.5 mm	+
Picric acid (crystalline)	4.0 mm	+
PETN/wax 95/5	5.0 mm	+

5. The substances listed above are classified as 1.1D. The flow diagram (Figure 10.4) directs that the substance giving a positive result in the Keonen test should be considered as a candidate for Division 1.5 and proceed with Test series 5. However, ANE's which fail the Keonen test may also be candidates for Division 1.1.

# 6. **Proposal**

The expert from the United Kingdom proposes that ANE substances giving a "yes" answer to Test 8(c) should be directed the most appropriate UN numbers, e.g.:

UN 0241 Explosive, blasting explosive, Type E, 1.1D, or

UN 0332 Explosive, blasting explosive, Type E, 1.5D.

The box from the "yes" decision from Test 8(c) in Figure 10.4 should be amended as follows:

"Substance to be considered as a candidate for Division 1.5 and proceed with test series 5. If the answer to box 21 of Figure 10.3 is "yes" the substance shall be classified as UN 0332, if "no" the substance shall be classified as UN 0241."

Figure 10.4 should also be amended to include numbers, or letters, for the decision boxes.

## **Annex**

