

## 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 Globally Harmonized  
System of Classification and Labelling of Chemicals

24 June 2011

Twenty-first session

Geneva, 27–29 June 2011

Items 2 (a) and 4(c) of the provisional agenda

### Work of the Sub-Committee of experts on the Transport of Dangerous Goods on its thirty-ninth session

#### Note by the secretariat

1. The Sub-Committee of experts on the Transport of Dangerous Goods (TDG Sub-Committee) considered during its thirty-ninth session (20–24 June 2011) the following matters of concern to the GHS Sub-Committee:

- (a) classification and testing of explosives; and
- (b) work of the joint (TDG-GHS) informal correspondence group on corrosivity criteria.
- (c) Description of labels, placards, symbols, marking and marks;

#### I. Explosives and related matters

2. Following a preliminary discussion, most of the questions regarding explosives and related matters were assigned to the Working Group on Explosives, which met from 20 to 22 June. The report of the Working Group was circulated as INF.58 (TDG Sub-Committee) and the recommendations contained therein were approved by the TDG Sub-Committee (see TDG CRP.1/Add.5, paras. 59 and 60).

##### (a) Review of Test Series 8 (Manual of Tests and Criteria, Part I, Section 18)

3. Test Series 8 is used to assess whether a candidate for “ammonium nitrate emulsion or suspension or gel, intermediate for blasting explosives (ANE)” is insensitive enough to be classified as an oxidizing liquid (GHS, Chapter 2.13) or an oxidizing solid (GHS, Chapter 2.14). References to these test series can be found in GHS Chapter 2.1 (paragraph 2.1.4.1 and figures 2.1.2 and 2.1.4).

4. After discussion, the working group **agreed** that:

(a) The calibration data for the ANE Gap Test in Table 18.5.1.1 need to be corrected (*Ref.Doc: TDG INF.4, section 3.3 and TDG INF.58 paragraph 3*)

(b) The mechanical specifications for mild steel of the witness plate in 18.5.1.2.1 (f) should be deleted; (*Ref.Doc: TDG INF.4, section 3.2 and TDG INF.58 paragraph 4*)

(c) Sub-paragraph 18.5.1.2.1 (g) requiring a cardboard tubing should be deleted (*Ref.Doc: TDG INF.4, section 3.3*)

(d) The reference in sub-paragraph 18.5.1.2.1 (b) to the type of pentolite donor to be used in the test should be amended (*Ref.Doc: TDG INF.5 and TDG INF.58, section 4*)

(e) The specifications for the steel tube in sub-paragraph 18.5.1.2.1 (c) need to be revised and include values for minimum wall thickness and minimum inside diameter. (*Ref.Doc: TDG INF.6 and TDG INF.58 paragraph 5*).

(f) The reference to “shock pressure” and to “cast polymethyl methacrylate” (PMMA) in sub-paragraph 18.5.1.2.1 (e) should be amended to refer to an incident at the ANE interface in the first case and to allow for the use of either casts or extruded PPMA rods in the test. (*Ref.Doc: TDG INF.7 and TDG INF.58 paragraph 6*).

5. Proposals related to the amendments in (a) to (f) above will be submitted to the 41st session of the TDG Sub-Committee (June 2012).

6. In respect of the proposal of AEISG to substantially review test series 8 as indicated in INF.24, some experts considered during the preliminary discussion in plenary that a mandate should be first defined. The issue was then addressed by the working group who did not agree on the need to review test series 8. The comments made by the working group on the issues raised in INF.24 are summarized in paragraph 7 of INF.58.

**(b) Screening test for substances that may have explosive properties  
(Manual of Tests and Criteria, Part II, Section 20)**

7. This test is part of the classification procedure for self-reactive substances and mixtures (Chapter 2.8 of the GHS) and organic peroxides (Chapter 2.15 of the GHS) and is used (for safety of laboratory workers) as a preliminary test to ascertain the stability and sensitivity of the substance or mixture prior to it being submitted to other tests.

8. The working group **agreed that** paragraph 20.3.3.3 (in Part II, section 20 of the Manual of Tests and Criteria) should be revised as regards the most effective procedure to optimize the calorimetric measurements in the screening test. A proposal will be submitted to the 41st session of the TDG Sub-Committee. (*Ref.Doc: TDG INF.21 and TDG INF.58 paragraph 8*).

**(c) Additional criteria for classification of explosives in Division 1.4**

9. The working group **did not support** the proposal in TDG INF.23 for a risk based approach for the classification of division 1.4 explosives and assignment of compatibility groups. The views of the working group on this proposal are summarized in paragraph 11 of TDG INF.58. The authors of the document may consider submitting a revised proposal to the 41st session of the TDG Sub-Committee.

**(d) Difficulties in carrying out TDG classification tests**

10. Canada reported in TDG INF.25 on a survey regarding problems performing TDG tests. The main problems identified were those related to the difficulty in obtaining the materials specified in the test procedures of the Manual and Tests and Criteria.

11. The working group agreed that the problem of specifications in the test procedures was real and should be corrected; that there could be other problems such as errors in procedure, incorrect use of the examples in the procedures, and difficulties in identifying

the key parameters of the tests. The working group also agreed on the interpretation that the examples provided in the Manual of Tests and Criteria are only intended as examples and not as requirements or test criteria.

12. As an interim solution to the problem, the working group referred to Section 1.1.2 of the Manual of Tests and Criteria that advises that the Competent Authority can and should use its discretion in applying the tests and allowing variations in test materials and procedures described therein.

13. Finally, the working group **agreed** on the review of the tests in Parts I and II of the manual with a view to:

- (a) better defining their specifications,
- (b) better defining the tolerances associated with those specifications, and
- (c) removing any unnecessary or over-specifications.

14. It was agreed that the review should first be focused on identifying errors and defining key parameters, tolerances and acceptable alternative materials. An additional review may be necessary to evaluate the appropriateness of the tests and procedural details.

15. Australia offered to coordinate a survey of experts on the basis of permitted variations to Test Series 8 and IME offered to coordinate the work, along with USA and Canada, on Test Series 6. Many other members of the working group expressed their willingness to work on this review with the chairperson (Mr. De Jong) coordinating all the activities.

*(Ref.Doc: TDG INF.25 and TDG INF.58 paragraph 13).*

**(e) Substances and mixtures with explosive properties which are exempted from classification as explosives**

16. The working group **noted** the proposal in GHS INF.11 **and agreed** to consider it further at 41st session of the Sub-Committee).

*(Ref.Doc: GHS INF.11 and TDG INF.58 paragraph 20).*

**(f) Other issues**

17. The Working Group also **examined** the following issues for which it was considered that further work was needed:

- (a) DDT flash composition test for pyrotechnic mixtures *(Ref.Doc: TDG INF.44 and TDG INF.58 paragraph 10);*

*Work will continue during the biennium to refine and prove the reliability of the proposed test.*

- (b) Definition for explosives of Division 1.4, compatibility group S *(Ref.Doc: TDG INF.26 and TDG INF.58 paragraph 14); Authors will consider preparing a proposal in the future*

- (c) Issues regarding packing instructions and/or packing provisions

*(Ref.Doc: TDG INF.35 and TDG INF.58 paragraph 15; and ST/SG/AC.10/C.3/2011/11 and TDG INF.58 paragraph 18);*

(d) *Exclusion of explosives for Class 1 inland transport regulations (RID/ADR/ADN)*

*(Ref.Doc: TDG INF.28 and TDG INF.58 paragraph 19);*

(e) *Comments on the Koenen test (used to determine the sensitiveness of solids and liquids to the effect of intense heat under confinement)*

*(Ref.Doc: TDG INF.53 and TDG INF.58 paragraph 21);*

## **II. Work of the joint (TDG-GHS) informal correspondence group on corrosivity criteria**

18. The Sub-Committee took note with satisfaction of the progress made by the group and expressed its commitment to further involvement as the work evolves in the future.

*(Ref.Doc: TDG INF.14 and TDG CRP.1/Add.7 paragraph 103)*

## **III. Description of labels, placards, symbols, marking and marks**

19. There was general support for the principle of improving the requirements concerning specifications of marks, labels and placards in chapters 3.4, 3.5, 5.2, 5.3, 5.5, 6.5 and 6.6 of the UN Model Regulations. Nevertheless several experts felt that the requirements should not be too specific and should remain reasonably flexible to avoid fines and penalties by too zealous enforcement authorities for infringements that would not jeopardize safety. It was also suggested that cooperation with the GHS Sub-Committee should be sought at the relevant stage of discussions.

*(Ref.Docs: Document: ST/SG/AC.10/C.3/2011/5; TDG INF.38 (Switzerland) and TDG INF.48 (Norway))*

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