

## 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

1 July 2013

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Geneva, 1 – 3 July 2013

Item 2 (a) of the provisional agenda

**Classification criteria and hazard communication:**

Work of the Sub-Committee of Experts on the Transport of Dangerous Goods  
on physical hazards

## Work of the Sub-Committee of Experts on the Transport of Dangerous Goods on its 43rd session

Note by the secretariat

### I. Introduction

1. The Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee) addressed during its forty-third session (24-28 June 2013) the following items of its programme of work as the GHS Sub-Committee focal point for physical hazards<sup>1</sup>:

- (a) Explosives and related matters, including:
  - (ii) Revision of test in Parts I and II of the Manual of Tests and Criteria (tests series 1 and 2, 6, 7 and 8)
  - (iii) Desensitized explosives (*GHS information document INF.5*)
  - (iv) Screening procedure for potential explosives (*GHS document -2013/2*)

Following preliminary consideration in the plenary, most of the questions related to explosives were referred to the Working Group on Explosives which met from 24 to 27 June in parallel to the Sub-Committee session. For ease of reference, only the issues and recommendations relevant to the GHS Sub-Committee have been summarized in this document.

The full report of the working Group (including all the issues considered by the Working group as well as its recommendations) was circulated as INF.61 (available at: <http://www.unece.org/trans/main/dgdb/dgsubc3/c3inf43.html>)

- (b) Criteria for water-reactivity
- (c) Classification of polymerizing substances
- (d) Corrosivity criteria

2. Other issues addressed by the TDG Sub-Committee which might also be of interest to the GHS Sub-Committee are:

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<sup>1</sup> Refer to the programme of work of the GHS Sub-Committee for 2013-2014 (ST/SG/AC.10/C.4/48, Annex VI)

- (a) Classification inconsistencies (application of criteria versus dangerous goods list)
  - (b) Articles as environmentally hazardous substances
  - (c) Description of labels, placards, symbols, markings and marks
3. Due to lack of time, the TDG Sub-Committee did not consider the following information documents:
- (a) INF.51 (TDG) – INF. 15 (GHS) Pyrophoric gas: proposal to include pyrophoric gas as a new hazard in the GHS
  - (b) INF.29 (TDG) - INF.10 (GHS): Comparison list between TDG and CLP regulation

## II. Outcome

### Revision of test in Parts I and II of the Manual of Tests and Criteria

#### Tests Series 1 and 2

*Informal document:* INF.10 (TDG, 43<sup>rd</sup> session)

4. The Explosives Working Group considered the proposed amendments to the specifications of the pipe used in the 1(a) and 2 (a) tests and to the type of washer used in the 1 (b) and 2 (b) tests and provided some comments. The author of the proposal noted the comments made and said that a revised proposal would be submitted for consideration at the 45<sup>th</sup> session of the TDG Sub-Committee in 2014.

*(Ref.Doc: INF.61 (TDG, 43<sup>rd</sup> session), paragraph 8)*

#### Tests Series 6

*Document:* ST/SG/AC.10/C.3/2013/17 and ST/SG/AC.10/C.3/2013/27

*Informal documents:* INF.9 (TDG, 43<sup>rd</sup> session)  
INF.27 (TDG, 43<sup>rd</sup> session)

5. The Sub-Committee adopted the amendments to sections 1 and 16<sup>2</sup> of the Manual of Test and Criteria proposed by the Working Group in Annex 3 to INF.61 with some additional modifications.

6. Proposals 1, and 7 to 11 in document -2013/27 were deferred or withdrawn pending the availability of further data and the outcome of the review of tests series 6 which is expected to be available in 2014.

*(Ref.Doc: INF.61 (TDG, 43<sup>rd</sup> session), paragraphs 5 and 6)*

#### Tests Series 7

*Informal document:* INF.40 (TDG, 43<sup>rd</sup> session)

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<sup>2</sup> Paragraphs: 1.1.2 (as amended in ST/SG/AC.10/C.3/2013/CRP.2/Add.3), 1.1.3, 16.6.1.2.2 (h), 16.6.1.3.1, 16.6.1.3.2 (as amended in ST/SG/AC.10/C.3/2013/CRP.2/Add.3), 16.6.1.3.5, 16.6.1.3.6 and 16.6.1.4.6 (ST/SG/AC.10/C.3/2013/CRP.2/Add.3).

7. The Sub-Committee adopted the amendments to paragraphs 2.1.1.4 (f) and 2.1.2.1.1 of the Model Regulations proposed by the Working Group in Annex 3 to INF.61.
8. Noting that the text of 2.1.1.4 (f) (Definition of Division 1.6 articles) is also reproduced in Chapter 2.1, paragraph 2.1.2.1 (f) of the GHS, the TDG Sub-Committee recommends that the same amendment be applied to the GHS text.

***Proposed consequential amendments to the GHS***

In Chapter 2.1, paragraph 2.1.2.1, amend the definition of Division 1.6 in subparagraph (f) as follows (new text is underlined; deleted text is strikethrough):

- “(f) Division 1.6 Extremely insensitive articles which do not have a mass explosion hazard: articles which predominantly contain ~~only~~ extremely insensitive substances or mixtures and which demonstrate a negligible probability of accidental initiation or propagation.

***[NOTE: The risk from articles of Division 1.6 is limited to the explosion of a single article.]***

*(Ref.Doc: INF.61 (TDG, 43<sup>rd</sup> session), paragraph 10)*

**Tests Series 8**

*Informal document: INF.19 (TDG, 43<sup>rd</sup> session)*

9. The Working Group on Explosives considered the recommendations for revision of the tests series to remove unnecessary or over-specifications and provided additional comments for improvement. The author of the document welcomed additional comments from the group and said that he intended to submit a formal proposal to the 45<sup>th</sup> session of the Sub-Committee in 2014.

*(Ref.Doc: INF.61 (TDG, 43<sup>rd</sup> session), paragraph 9)*

**Desensitized explosives**

*Informal document: UN/SCETDG/43/INF.13 - UN/SCEGHS/25/INF.5*

10. The working group welcomed and unanimously supported the development of a new hazard class for desensitized explosives in the GHS and suggested some editorial changes to the proposed text (refer to INF.61, paragraph 14).
11. On a comment from Belgium regarding guidance on storage provisions (including separation distances to be respected between desensitized explosives belonging to different hazard categories), the experts from Germany and the Netherlands offered to share their experience on this issue with the group.
12. The expert from the United States of America indicated that he would forward questions on the test procedures to the expert from Germany for clarification.
13. The expert from Germany welcomed additional comments before the end of August 2013, so that they can be taken into account for the development of a formal proposal for the next sessions of both sub-committees.

*(Ref.Doc: INF.61 (TDG, 43<sup>rd</sup> session), paragraph 8)*

## Screening procedure for potential explosives

*Document:* ST/SG/AC.10/C.3/2013/8 - ST/SG/AC.10/C.3/2013/2 (Sweden)

14. The working group supported the proposal from Sweden in principle, but could not agree on the way to most clearly describe when testing would not be required. After consideration of the comments received Sweden offered two alternative proposals for consideration. The working group agreed on the second of the two alternatives and noted that some consequential amendments were necessary.

15. The proposed amendments to Appendix 6 to the Manual of Tests and Criteria were adopted (refer to INF.61 (TDG), Annex 3). Consequently, paragraph 2.1.4.2.2 (c) of the GHS would also need to be amended accordingly and current references in the GHS to table A6.2 in Appendix 6 to the Manual would also have to be updated.

### *Proposed consequential amendments to the GHS*

#### **Chapter 2.1**

Replace sub-paragraph 2.1.4.2.2 (c) with the following:

“(c) For the organic substance or a homogenous mixture of organic substances containing chemical group (or groups) associated with explosive properties:

- (i) when the exothermic decomposition energy is less than 500 J/g, or
- (ii) when the onset of exothermic decomposition is 500 °C or above

as indicated by Table 2.1.3.

**Table 2.1.3: Decision to apply the acceptance procedure for Class 1 for organic substance or homogenous mixture of organic substances**

<b>Decomposition energy (J/g)</b>	<b>Decomposition onset temperature (°C)</b>	<b>Apply acceptance procedure for Class 1? (Yes/No)</b>
< 500	< 500	No
< 500	≥ 500	No
≥ 500	< 500	Yes
≥ 500	≥ 500	No

The exothermic decomposition energy may be determined using a suitable calorimetric technique; or”.

#### **Chapter 2.8**

In paragraph 2.8.4.2 (a), replace “Tables A6.1 and A6.2” with “Tables A6.1 and A6.3”.

(*Ref.Doc: INF.61 (TDG, 43<sup>rd</sup> session), paragraph 15*)

## **Criteria for water-reactivity**

*Document:* ST/SG/AC.10/C.3/2013/21 (United States of America)

*Informal documents:* INF.39 (United States of America)

16. The Sub-Committee took note of the “HM-14” project status report relating to the development of criteria for water-reactive materials. Interested experts were invited to

provide comments in writing to the project principal investigator at the address provided in INF.39.

*(Ref.Doc: ST/SG/AC.10/C.3/2013/CRP.1/Add.7, paragraph 58)*

### **Classification of polymerizing substances**

*Document:* ST/SG/AC.10/C.3/2013/33 (DGAC)

*Informal document:* INF.17 (DGAC)

17. After an exchange of views, it was decided that the issue should be further addressed by a correspondence group led by the DGAC representative who will draw up a new proposal for the next session.

*(Ref.Doc: ST/SG/AC.10/C.3/2013/CRP.1/Add.1, paragraph 12 as amended)*

### **Corrosivity criteria**

*Informal documents:* INF.26 and –26/Add.1 (CEFIC) and INF.42 (United Kingdom)

18. It was recalled that the question of corrosivity criteria would be discussed by a joint TDG-GHS Working Group in 1 July 2013.

19. The Sub-Committee noted with satisfaction the preparatory work done by CEFIC and the United Kingdom. It reiterated its commitment to respect the principles of harmonized classification but underlined that the transport sector was the only sector where sub-categories in GHS corrosivity had important downstream effects. Therefore the Sub-Committee expressed the wish that the outcome of this joint work would not substantially change the way of ensuring safety in transport of corrosive substances.

*(Ref.Doc: ST/SG/AC.10/C.3/2013/CRP.1/Add.8, paragraphs 65 and 66 as amended)*

### **Classification inconsistencies (application of criteria versus dangerous goods list)**

*Informal document:* INF.15 (CEFIC)

20. It was pointed out that the procedures for assigning a product to a UN number were explained clearly in chapter 2.0 of the Model Regulations. If a dangerous product was mentioned by name in the Dangerous Goods List, some delegates were of the opinion that the transport conditions specified for that product should be applied irrespective of whether the name and description accounted for all hazards posed by the substance. Others believed a more appropriate name and description should be selected (for example an n.o.s entry) that reflected all hazards posed by the substance.

21. It was recognized that if new data on the dangerous properties of a product mentioned by name identified additional hazards, in that case, the new data should be submitted, using the form in Figure 1 of the Recommendations, for the Sub-Committee to decide on a new classification and the appropriate transport conditions. ICCA was requested to prepare a text for the Guiding Principles to indicate the procedure to be followed until the classification was updated, particularly when there were differences between the labelling for transport and the labelling required under other regulations.

*(Ref.Doc: ST/SG/AC.10/C.3/2013/CRP.1/Add.1, paragraph 13 as amended)*

## Articles as environmentally hazardous substances

*Document:* ST/SG/AC.10/C.3/2013/3 - ST/SG/AC.10/C.4/2013/1 (Germany)

*Informal document:* INF.4 (TDG) – INF. 3 (GHS)

22. The Sub-Committee noted that the issue raised by the expert from Germany had also been submitted to the GHS Sub-Committee, and that it could also be linked to the general discussion concerning articles containing dangerous goods. It was noted that so far the provisions of the IMDG Code concerning marine pollutants did not apply to articles, and it was felt that there would be no need to change the situation unless the outcome of the global debate on articles containing dangerous goods led to another conclusion.

*(Ref.Doc: ST/SG/AC.10/C.3/2013/CRP.1/Add.8, paragraph 67 as amended)*

## Description of labels, placards, symbols, markings and marks

*Document:* ST/SG/AC.10/C.3/2013/28 (IPPIC)

23. Most experts recognized that it could be difficult to affix labels of a normal size on small packages, taking into account the number of other marks that must be affixed for commercial or logistic reasons or owing to other labelling requirements stemming from the application of the Globally Harmonized System of Classification and Labelling of Chemicals or any additional national regulatory requirements. However, they were not in favour of extending existing derogations. The issue of the labelling of small packages was also being discussed in the Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals. In such a context, it would be appropriate to recall the safety requirements for transport, in particular the principle according to which the labelling system for transport was designed to make it possible to easily recognize dangerous goods from a distance (paragraph 13 of the Recommendations). That safety requirement should not be compromised by commercial considerations and should be taken into account in the communication of hazards under the Globally Harmonized System.

The representative of IPPIC said that she would submit a new proposal.

*(Ref.Doc: ST/SG/AC.10/C.3/2013/CRP.1/Add.6, paragraphs 52 and 53)*

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