

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

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Agenda item 2

Work of the Sub-Committee of Experts on the Transport of Dangerous Goods on its 50th session on matters of interest to the GHS Sub-Committee

Note by the secretariat

Introduction

1. At its 50th session, the Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee) considered matters of interest to the GHS Sub-Committee under items 2 (b) (Explosives and related matters), 2 (c) (Listing, classification and packing) and 7 (Issues relating to the GHS) of its agenda.
2. Most of the questions on explosives and related matters under agenda item 2, as well as the documents under agenda item 7 (g) relating to the use of the Manual of Tests and Criteria in the context of the GHS and 7 (h) addressing the review of Chapter 2.1 of the GHS were referred to the Working Group on Explosives which met from 28 November to 2 December 2016 under the chairmanship of Mr. Ed de Jong (Netherlands). The full report of the Working Group on Explosives has been circulated as INF.59 at the 50th session of the TDG Sub-Committee¹.
3. The TDG Sub-Committee endorsed the conclusions of the Explosives Working Group with some exceptions and additional comments. These conclusions will be included in the final report of the TDG Sub-Committee.

Outcome of the discussions at the TDG Sub-Committee

4. This document contains the paragraphs of the report of the Explosives Working Group and of the draft report of the TDG Sub-Committee on its 50th session on matters of interest to the GHS Sub-Committee for information of the GHS Sub-Committee. The paragraphs of the draft report of the TDG Sub-Committee on its 50th session included in this document take account of the corrections made by the TDG Sub-Committee during the adoption of the report. The final version of the report will be circulated as document ST/SG/AC.10/C.3/100.²

¹ Available at: <http://www.unece.org/trans/main/dgdb/dgsubc3/c3inf50.html>

² <http://www.unece.org/trans/main/dgdb/dgsubc3/c3rep.html>

5. For ease of reference, the proposed consequential amendments to the GHS are reproduced in Annex I to this document. Proposed amendments for the Manual of Tests and Criteria related to its use in the context of the GHS are reproduced in Annex II

Item 1 Definition of Class 1 (explosives) in Chapter 2.1 of the Model Regulations and the GHS (GHS agenda item 2 (a))

Document: ST/SG/AC.10/C.3/2016/53 - ST/SG/AC.10/C.4/2016/14 - (AEISG)

Working Group on Explosives

Discussion: The phrase “a practical explosive or pyrotechnic effect”, EXCLUDING THE COMMA, is used in several parts of the existing Model Regulations (nineteenth revised edition), the Manual of Tests and Criteria (sixth revised edition) and the GHS (sixth revised edition). The phrase “a practical, explosive or pyrotechnic effect”, WITH COMMA, appears in 51.2.2 (a) of the Manual of Tests and Criteria (sixth revised edition) and 2.17.2.1 (a) of the GHS.

These sections were amended at the forty-ninth session of the TDG Sub-Committee and at the thirty-first session of the GHS Sub-Committee to exclude the comma amongst other things (ST/SG/AC.10/C.3/98, paragraph 138 and ST/SG/AC.10/C.4/62, paragraph 23). AEISG noted that “a practical, explosive or pyrotechnic effect”, WITH COMMA, still appears in several places. Consensus of the EWG is that corrections should be made.

Conclusion: Remove the comma after the word “practical” in 2.1.1.1 (c) of the Model Regulations, 2.1.1.2 (c) of the GHS, and Note b to Table 2.1.1 of the GHS.

The proposed amendments to Chapter 2.1 of the GHS are shown in the annex to this document.

(Ref.Doc: Report of the Explosives Working Group to the TDG Sub-Committee, INF.59 (50th session), paragraph 5)

Conclusion by the TDG Sub-Committee

The TDG Sub-Committee endorsed the conclusion of the Working Group.

Item 2 Classification criteria and hazard communication for flammable gases (GHS agenda item 2 (b))

Document: ST/SG/AC.10/C.3/2016/58 - ST/SG/AC.10/C.4/2016/12 (Belgium, Japan)

Informal documents: TDG/50/INF.12 – GHS/32/INF.9 (Belgium, Japan)
 TDG/50/INF.32 – GHS/32/INF.18 (Belgium, Japan)
 TDG/50/INF.15 – GHS/32/INF.11 (Secretariat)
 TDG/50/INF.35 – GHS/32/INF.20 (EIGA)

Conclusion and remarks by the TDG Sub-Committee

“77. The Sub-Committee recommended that the GHS Sub-Committee adopt the amendments to the GHS proposed by Belgium and Japan on behalf of the informal working group on classification criteria and hazard communication elements for flammable gases in document -/C.3/2016/58 and informal document INF.32 with the modifications proposed by the Secretariat in INF.15.

78. For the options proposed in INF.32 for an explanatory note b) to table A 1.2, the Sub-Committee felt that no note was necessary since the proposed note related to the Division 2.1 transport pictogram which was required in transport for the pyrophoric gases and chemically unstable gases of the GHS hazard category 1A.

79. For the EIGA proposal in informal document INF.35, the general view was that it would be logical to amend the examples given in 2.2.5 and 2.4.4.2 to take account of the changes to ISO 10156:1996 reflected in ISO 10156:2010, but the Sub-Committee felt that it was up to the GHS Sub-Committee to decide whether the example in 2.2.5 should be updated or both examples in 2.4.4.2 and 2.2.5 should simply be deleted as recommended by EIGA.”

(Ref.Doc: Draft report of the TDG Sub-Committee on its 50th session, ST/ST/AC.10/C.4/2016/CRP.3/Add.11, paragraphs 77 to 79, as amended during the report reading)

Item 3 Classification of flammable liquids (GHS agenda item 2 (b))

Document: ST/SG/AC.10/C.3/2016/62 - ST/SG/AC.10/C.4/2016/13 (Germany)

Conclusion and remarks by the TDG Sub-Committee

“80. Some experts said that they had not had enough time to evaluate the downstream consequences of the corrections proposed by Germany. The Sub-Committee noted that the corrections were not intended to modify the current transport criteria, and if this were the case, had no objection to the corrections proposed if deemed relevant by the GHS Sub-Committee.”

(Ref.Doc: Draft report of the TDG Sub-Committee on its 50th session, ST/ST/AC.10/C.4/2016/CRP.3/Add.11, paragraph 80)

Item 4 Tests and criteria for oxidizing liquids and oxidizing solids (GHS agenda item 2 (b))

Document: ST/SG/AC.10/C.3/2016/73 - ST/SG/AC.10/C.4/2016/15 (France)

Conclusion and remarks by the TDG Sub-Committee

“83. The Sub-Committee took note of the final results of the Round Robin testing programme and adopted proposals 1 to 4. For the cellulose specifications for tests O.1 and O.3, it was noted that the apparent density of 170 kg/m³ was approximate and the texts was modified accordingly.

84. The Sub-Committee noted that some improvements in test materials and procedures might be needed as a consequence of the replacement of cellulose and therefore adopted proposal 5 to keep this item in the programme of work of the next biennium.

85. The Sub-Committee agreed that the replacement of the cellulose for future tests does not invalidate the test results obtained with the cellulose grade currently referred to in the Manual.

86. The Sub-Committee invited the GHS Sub-Committee to take note of these developments and to concur with the conclusions.”

(Ref.Doc: Draft report of the TDG Sub-Committee on its 50th session, ST/ST/AC.10/C.4/2016/CRP.3/Add.12, paragraphs 83 to 86 as amended during the report reading)

Item 5 Use of the Manual of Tests and Criteria in the context of the GHS (GHS agenda item 2 (b))

Documents: ST/SG/AC.10/C.3/2016/83 - ST/SG/AC.10/C.4/2016/16 (Chairman of the Working Group on Explosives)

Informal documents: TDG/50/INF.7- GHS/32/INF.5 and Adds. 1 – 5 (Chairman of the Working Group on Explosives)
TDG/50/INF.14 - GHS/32/INF.10 (Germany)
TDG/50/INF.17 - GHS/32/INF.14 (USA, Canada)

Working Group on Explosives

Discussion: Efforts to edit the text in sections 1 and 10 led to a discussion on the relationship between revisions to the Manual and the scope of GHS chapter 2.1 and whether the tests needed to arrive at division level should be amended to accommodate GHS if testing will only be carried out in transport packaging. After further discussion, it was decided to focus on the remainder of Part I, as well as the appendices. As suggested by the USA and Canada in INF.17, it was agreed that amendments to the introductory texts and the rest of the Manual should be addressed further in the next biennium.

Conclusion: Adopt agreed amendments to the Manual of Tests and Criteria³.

(Ref.Doc: Report of the Explosives Working Group to the TDG Sub-Committee, INF.59, 50th session, paragraph 11)

Conclusion and remarks by the TDG Sub-Committee

The Sub-Committee endorsed the conclusions of the Working Group.

It was noted that the Working Group had agreed only upon a number of amendments to the Manual concerning sections 11, 12, 13, 15, 16, 17 and 18 and appendices 5 and 6, and that this work would have to be pursued during the next biennium”.

(Ref.Doc: Draft report of the TDG Sub-Committee on its 50th session, ST/ST/AC.10/C.4/2016/CRP.3/Add.10, paragraph 67)

Item 6 Revision of Chapter 2.1 of the GHS (GHS agenda item 2)

Informal documents: TDG/50/INF.11 - GHS/32/INF.8 (Sweden)
TDG/50/INF.18 - GHS/32/INF.15 (USA)

Working Group on Explosives

Discussion: This is a continuation of the joint effort with the GHS Sub-Committee to amend Chapter 2.1 of the GHS so that it better reflects issues related to the Globally Harmonized System of Classification and Labelling of Chemicals as related to explosive products. An Intersessional Correspondence Group (ICG) has been active during this biennium working on resolution of issues unique to explosive products, and how they can be merged with aspects related to explosives transport in a safe manner without confusion. There was overall strong support for this effort. EWG members discussed a number of important matters to focus on, particularly defining the scope of the effort and the structure of proposals for the system of GHS categories and how they relate to transport divisions.

³ The amendments to the Manual of Test and Criteria recommended by the Explosives Working Group are reproduced in Annex II to this document.

There was strong awareness of the need to progress cautiously to assure that there are not unintended consequences to any sectors.

Conclusion: This effort will continue into the next biennium.

(Ref.Doc: Report of the Explosives Working Group to the TDG Sub-Committee, INF.59, 50th session, paragraph 12)

Conclusion and remarks by the TDG Sub-Committee

The Sub-Committee noted also that work on the review of Chapter 2.1 of the GHS would have to be pursued during the next biennium. The Sub-Committee felt that the involvement of experts from sectors other than transport in the work of the Working group on Explosives was highly desirable and expressed the wish that more experts from other sectors would attend its sessions in future.

(Ref.Doc: Draft report of the TDG Sub-Committee on its 50th session, ST/ST/AC.10/C.4/2016/CRP.3/Add.10, paragraph 68)

Other issues of interest to the GHS Sub-Committee considered by the TDG Sub-Committee

Item 7 Corrosivity criteria (Revision of Chapter 2.8 of the United Nations Recommendations on the Transport of Dangerous Goods, Model Regulations)

Document: ST/SG/AC.10/C.3/2016/50 (Canada, CEFIC and AISE)

Informal documents: INF.5, INF.25 and INF.49 (Canada, CEFIC and AISE)

Conclusion and remarks by the TDG Sub-Committee

“35. Further to some editorial comments on the proposals of Canada, CEFIC and AISE, the Sub-committee adopted the revised text of Chapter 2.8 presented in informal document INF.49, with the remaining square brackets deleted.

36. As for the mention of 2015 for the OECD guidelines referenced in footnotes 1-4, the Subcommittee was of the view that, in practice, for classifications done before the entry into force of those new provisions, the principles established by OECD should be upheld. According to those principles, test results obtained from a deleted guideline or from a former version of an updated guideline remained acceptable if the test had begun before the effective date of deletion of a guideline or a former edition of an updated guideline. The date of deletion became effective 18 months after the OECD Council took a decision on the deletion.

37. It was emphasized that that revised version of Chapter 2.8 reflected the effort to harmonize it with the provisions of GHS in the transport sector even if some differences remain. The Chair would explain to the GHS Sub-Committee the outstanding differences and the reasons for those differences.”

(Ref.Doc: Draft report of the TGD Sub-Committee on its 50th session, ST/SG/AC.10/C.3/2016/CRP.3/Add.6 paras. 35-37, as amended during the report reading)

Item 8 Test method for readily combustible solids (Test N.1)

Document: ST/SG/AC.10/C.3/2016/55 (Secretariat)

Informal document: TDG/50/INF.27 (Germany)

Conclusion and remarks by the TDG Sub-Committee

At its 49th session, the TDG Sub-Committee adopted the amendments proposed for paragraphs 33.2.1.4.4.1, 33.2.1.4.4.2 and 33.2.1.4.4.3 of the Manual of Tests and Criteria, but with the replacement of “(250 mm)” with “(100 mm)”. Those amendments were placed in square brackets for confirmation at the 50th session (see the report of the TDG Sub-Committee on its 49th session ST/SG/AC.10/C.3/98, paragraph 41).

The TDG Sub-Committee decided at its 50th session, that:

“...the square brackets around the paragraphs concerned in document ST/SG/AC.10/C.3/2016/55 should be deleted. The proposals made in informal document INF.27 required further consideration and should therefore be discussed at the next biennium.”

(Ref.Doc: Draft report of the TDG Sub-Committee on its 50th session, ST/SG/AC.10/C.3/2016/CRP.3/Add.7 paragraph 46)

Note by the secretariat

Although not addressed in the documents discussed by the TDG Sub-Committee, the secretariat already noted at the 49th session that in case the proposed amendment to 33.2.1.4.4.1 was accepted, **a consequential amendment to paragraph 2.7.2.2 of the GHS might be necessary, as indicated in annex I to this document.**

The GHS Sub-Committee is invited to consider whether the consequential amendment to the GHS is needed.

Annex I

Proposed amendments to the GHS

A. Working Group on Explosives (28 November - 2 December 2016) Recommended changes for the GHS (6th revised edition)

Chapter 2.1

Notes: Source of proposed change is indicated by *italicized text*

~~Red~~ indicates deleted text

Blue indicates inserted text

Amendment 1.

Section 2.1.1.2(c) – amend 2.1.1.2(c) to remove comma as shown below:

Substances, mixtures and articles not mentioned under (a) and (b) above which are manufactured with the view to producing a practical~~,~~ explosive or pyrotechnic effect.

Source: ST/SG/AC.10/C.3/2016/53, Para. 8 and Para. 5 of this report.

Amendment 2.

Note b to Table 2.1.1 – amend Note b to Table 2.1.1 to remove comma as shown below:

b This comprises substances, mixtures and articles which are manufactured with a view to producing a practical~~,~~ explosive or pyrotechnic effect.

(Ref.Doc: Report of the Explosives Working Group (TGD/INF.59), paragraph 5 and Annex 4)

B. Consequential amendment to Chapter 2.7 of the GHS resulting from the adoption of amendments to the test method for readily combustible solids (Test N.1) in the Manual of Tests and Criteria

Amend paragraph 2.7.2.2 as shown below (new text is underlined):

“2.7.2.2 Powders of metals or metal alloys shall be classified as flammable solids when they can be ignited and the reaction spreads over the whole length of the sample (100 mm) in 10 min or less”.

(Reference: item 8 in this document)

Annex II

Use of the Manual of Test and Criteria in the context of the GHS

Amendments to document ST/SG/AC.10/C.3/2016/83 - ST/SG/AC.10/C.4/2016/16 recommended by the Explosives Working Group and agreed by the TDG Sub-Committee

Ignore the changes to Sections 1 and 10 (except those listed in Amendment 5), as well as those to Part II and III.

Section 11 Amendments agreed with the following modifications:

11.4.1.2.1 Remove this amendment from the list of amendments and include it in a corrigendum to the 6th revised edition.

11.5.1.3.1 Amend to read as follows:

“In footnote 1, replace “transport conditions” with “operating conditions”

Section 12 Amendments agreed with the following modifications:

12.5.1.3.1 Amend to read as follows:

“In footnote 1, replace “transport conditions” with “operating conditions”

Section 13 Amendments agreed with the following modifications:

13.1 Replace with the following:

“Amend to read as follows:

“This test series is used to answer the questions in boxes 10 and 11 of Figure 10.2 by determining the sensitiveness of the substance to mechanical stimuli (impact and friction), to heat and to flame. The question in box 10 is answered "no" if a "+" is obtained in test type 3(c) and the substance shall be categorised as an unstable explosive; consequentially the substance is not permitted for transport. The question in box 11 is answered "yes" if a "+" is obtained in any of the test types 3(a), 3(b) or 3(d). If a "+" is obtained, the substance shall be categorised as an unstable explosive in the form in which it was tested but may be encapsulated or otherwise desensitized or packaged to reduce its sensitiveness to external stimuli.

NOTE: Although explosives categorised as unstable explosives are forbidden for transport they are not prohibited in other sectors where special precautions may be applied.”

13.3.2 Amend to read as follows:

“Replace “wetting agent provided for transport” with “wetting agent specified”.”

13.4 Replace with the following:

“Throughout the whole sub-section replace “too dangerous to transport” and “too dangerous for transport” with “an unstable explosive”.

(Applies to the following paragraphs: 13.4.1.1; 13.4.1.4.1; 13.4.1.4.2; 13.4.2.1; 13.4.2.4; 13.4.3.1; 13.4.3.4.1 (twice); 13.4.3.4.2 (twice); 13.4.4.1; 13.4.4.4; 13.4.5.1; 13.4.5.4.2; 13.4.5.4.3; 13.4.6.1; 13.4.6.4.1; 13.4.6.4.2; 13.4.7.1; 13.4.7.5.1 and 13.4.7.5.2)

- 13.4.2.3.1 (c) Replace with the following:
“Replace “are transported” with “are manufactured”.”
- 13.4.6.3.1.1 Replace with the following:
“At the end of the second sentence replace “wetting agent required for transport” with “wetting agent specified”.
- 13.4.7.3.1 Replace with the following:
“At the end of the second sentence replace “wetting agent required for transport” with “wetting agent specified”.
- 13.5 Replace with the following:
“Throughout the whole sub-section replace “too dangerous to transport” and “too dangerous for transport” with “an unstable explosive”.
(Applies to the following paragraphs: 13.5.1.1; 13.5.1.3.4; 13.5.2.1; 13.5.2.4 (twice); 13.5.3.1; 13.5.3.4; 13.5.4.1 and 13.5.4.5)
- 13.5.1.3.1 Replace with the following:
“At the end of the second sentence replace “wetting agent provided for transport” with “wetting agent specified” and in sub-paragraph (c) replace “are transported” with “are manufactured”.
- 13.5.3.3.1 Replace with the following:
“Replace “wetting agent provided for transport” with “wetting agent specified”.”
- 13.5.4.3.1 Replace with the following:
“Replace “wetting agent provided for transport” with “wetting agent specified”.”
- 13.6.1.3.1 Replace with the following:
“Amend the last sentence to read as follows: “If explosion or ignition occurs then the substance is too thermally unstable for transport and shall be categorized as an unstable explosive”.”
- 13.6.1.3.2 Remove this amendment from the list of amendments and include it in a corrigendum to the 6th revised edition.
- 13.6.1.4.2 In the proposed amendment, replace “shall be classified” with “shall be categorised”.
- 13.6.2.4.2 In the proposed amendment, replace “shall be classified” with “shall be categorised”.
- 13.7.1.3 Replace with the following:
“In the last paragraph, replace “too dangerous for transport” with “an unstable explosive”.
- Section 14** Delete all the proposed amendments to this section.
- Section 15** Amendments agreed with the following modifications:
- 15.4.1.3 In the amendment to the fourth last but one sentence, replace “which can be subjected” with “which could be subjected”.
- 15.6.1.1 Replace with the following:
“Replace “packaged as for transport” with “as packaged for transport”.”

- 15.6.1.3.1 Delete the proposed amendment.
- Section 16** Amendments agreed with the following modifications:
- 16.3.1 Delete the amendment to the first sentence.
- Replace the amendment to the second sentence with the following: “In the second sentence replace “most disadvantageous” with “most severe”.
- (The amendment to the third sentence remains unchanged)*
- 16.4.1.3.1 Delete the amendment to the first sentence.
- 16.5.1.3 Delete the amendment to the first sentence.
- 16.6.1.3.1 Delete the proposed amendment.
- 16.7.1.3.1 Replace the amendment with the following: “In the second sentence replace “are to be carried” with “are classified”.”
- Section 17** Delete all amendments except the one addressing paragraph 17.11.1.2.1.
- Section 18** Amendments agreed without modifications.
- Appendix 5** Amendments agreed with the following modification:
- Section 2 At the end of the 7th sentence (“Usually, the bursting pressure...”) do not delete the word “transport” but replace it by “operating” .
- Appendix 6** Amendments agreed with the following modification:
- 2.2 In the amendment relating to the new sentence to be added at the end, replace “during normal operation of transport, storage or use’ with “during normal operating conditions”

Source: ST/SG/AC.10/C.3/2016/83 (as amended by the working group) and item 2 in this document)
