



**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**

**Report of the Sub-Committee of Experts on the Globally
Harmonized System of Classification and Labelling of
Chemicals on its thirty-second session**

held in Geneva from 7 to 9 December 2016

Contents

	<i>Paragraphs</i>	<i>Page</i>
I. Attendance.....	1-6	4
II. Adoption of the agenda (agenda item 1)	7	4
III. Classification criteria and related hazard communication (agenda item 2).....	8-36	5
A. Recommendations made by the Sub-Committee at its twenty-ninth, thirtieth and thirty-first sessions.....	8-9	5
1. Review of draft amendments adopted by the Sub-Committee at its twenty-ninth, thirtieth and thirty-first sessions.....	8	5
2. Definition of explosives in Chapter 2.1, paragraph 2.1.1.2 (c).....	9	5
B. Work of the Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee) on matters of interest to the GHS Sub-Committee.....	10-25	5
1. Classification criteria and hazard communication for flammable gases	10-11	5
2. Classification of flammable liquids.....	12-13	6
3. Test and criteria for oxidizing liquids and oxidizing solids.....	14	6
4. Use of the Manual of Tests and Criteria in the context of GHS.....	15-17	6
5. Revision of Chapter 2.1 of the GHS.....	18-21	7
6. Other matters of interest	22-25	7
(a) Revision of Chapter 2.8 of the United Nations Model Regulations on the Transport of Dangerous Goods	22-23	7
(b) Test method for readily combustible solids (Test N.1)	24-25	8

C.	Dust explosion hazards	26-27	8
D.	Practical classification issues	28-30	8
E.	Aspiration hazard.....	31	9
F.	Nanomaterials	32	9
G.	Miscellaneous	33-36	9
1.	Chemicals under pressure.....	33-35	9
2.	Use of non-animal testing methods for the classification of health hazards....	36	9
IV.	Hazard communication issues (agenda item 3)	37-51	9
A.	Labelling of small packagings	37-38	9
1.	Example for fold-out labels	37	9
2.	Development of examples for sets and kits	38	10
B.	Improvement of annexes 1 to 3 and further rationalization of precautionary statements	39-44	10
1.	Work of the informal correspondence group	39-41	10
2.	Precautionary statements addressing medical advice/attention	42-44	10
C.	Miscellaneous	45-51	11
1.	Amendments to Annex 4, sub-section A4.3.14.7	45	11
2.	Amendments to Annex 4, sub-section A4.3.3.2.3	46-48	11
3.	Examples of precautionary pictograms in Annex 3, section 5	49	11
4.	Presentation of the information in the Safety Data Sheets	50-51	11
V.	Implementation of the GHS (agenda item 4)	52-63	12
A.	Development of a list of chemicals classified in accordance with the GHS	52-53	12
B.	Reports on the status of implementation.....	54-61	12
1.	Information about the status of implementation worldwide	54	12
2.	Canada.....	55	12
3.	Russian Federation	56	12
4.	South Africa	57	13
5.	Australia	58-61	13
C.	Cooperation with other bodies or international organizations	62	13
D.	Miscellaneous	63	13
VI.	Development of guidance on the application of GHS criteria (agenda item 5).....	64	14
	Guidance on the applicability of the GHS to classification and labelling of pesticides ...	64	14
VII.	Capacity building (agenda item 6)	65	14
VIII.	Programme of work for the biennium 2017-2018 (agenda item 7)	66-67	14
IX.	Draft resolution 2017/... of the Economic and Social Council (agenda item 8)	68	14
X.	Election of officers for the biennium 2017-2018 (agenda item 9)	69	15
XI.	Other business (agenda item 10)	70	15
XII.	Adoption of the report (agenda item 11)	71	15

Annexes

I.	Draft amendments to the sixth revised edition of the GHS (ST/SG/AC.10/30/Rev.6)	16
II.	Draft amendments to the sixth revised edition of the Manual of Tests and Criteria (ST/SG/AC.10/11/Rev.6)	21
III.	Programme of work of the Sub-Committee for 2017-2018.....	22

I. Attendance

1. The Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals held its thirty-second session from 7 to 9 December 2016, with Ms. Maureen Ruskin (United States of America) as Chairperson and Mr. Robin Foster (United Kingdom) as Vice-Chairperson.
2. Experts from the following countries took part in the session: Australia, Austria, Belgium, Brazil, Canada, China, Finland, France, Germany, Italy, Japan, Netherlands, Poland, Portugal, Qatar, Republic of Korea, Russian Federation, South Africa, Sweden, United Kingdom and United States of America.
3. Under rule 72 of the rules of procedure of the Economic and Social Council, observers from Malta and Switzerland also took part.
4. A representative of the United Nations Institute for Training and Research (UNITAR) was also present.
5. The following intergovernmental organizations were also represented: European Union and Organization for Economic Co-operation and Development (OECD).
6. Representatives of the following non-governmental organizations took part in the discussion of items of concern to their organizations: American Cleaning Institute (ACI); Australian Explosives Industry and Safety Group Incorporated (AEISG); Compressed Gas Association (CGA); Croplife International; Dangerous Goods Advisory Council (DGAC); European Chemical Industry Council (CEFIC); Federation of European Aerosol Associations (FEA); Grain and Feed Trade Association (GAFTA); Industrial Federation Paints and Coats of Mercosul (IFPCM); International Association for Soaps, Detergents and Maintenance Products (AISE); International Bulk Terminals Association (IBTA); International Council of Chemical Associations (ICCA); International Council of Mining and Metals (ICMM); International Paint and Printing Ink Council (IPPIC); International Petroleum Industry Environmental Conservation Association (IPIECA); Institute of Makers of Explosives (IME); Responsible Packaging Management Association of Southern Africa (RPMASA); and Sporting Arms and Ammunition Manufacturers' Institute (SAAMI).

II. Adoption of the agenda (agenda item 1)

Documents: ST/SG/AC.10/C.4/63 (Provisional agenda)
ST/SG/AC.10/C.4/63/Add.1 (List of documents and annotations)

Informal documents: INF.1, INF.2 (List of documents)
INF.7 (Provisional timetable and calendar of meetings of GHS informal working groups)

7. The Sub-Committee adopted the provisional agenda prepared by the secretariat after amending it to take account of informal documents INF.1 to INF.44.

III. Classification criteria and related hazard communication (agenda item 2)

A. Recommendations made by the Sub-Committee at its twenty-ninth, thirtieth and thirty-first sessions

1. Review of draft amendments adopted by the Sub-Committee at its twenty-ninth thirtieth and thirty-first sessions

Document: ST/SG/AC.10/C.4/2016/11 (Secretariat)

8. The Sub-Committee confirmed the amendments in document ST/SG/AC.10/C.4/2016/11 with some editorial corrections to the definitions of the health hazards in chapters 3.1 and 3.7 (only for the French version), 3.4, 3.6, 3.8, 3.9 and 3.10. It was noted that the definitions in Chapter 1.2 would have to be amended accordingly, where applicable (see annex I).

2. Definition of explosives in Chapter 2.1, paragraph 2.1.1.2 (c)

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

Informal document: INF.36, item 1 (Secretariat)

9. The Sub-Committee noted that the TDG Sub-Committee adopted a correction to the definition of explosives in paragraph 2.1.1.1 (c) of the United Nations Model Regulations and agreed to correct the corresponding text in paragraph 2.1.1.2 (c) and note b to table 2.1.1 in the GHS (see annex I).

B. Work of the Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee) on matters of interest to the GHS Sub-Committee

1. Classification criteria and hazard communication for flammable gases

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

Informal documents: INF.9 and INF.18 (Belgium, Japan)
INF.11 and INF.36, item 2 (Secretariat)
INF.20 (EIGA)

10. Concerning the options for a new note to table A1.2 listed in INF.18, most experts considered that the tables in Annex 1 of the GHS should not address aspects related to transport conditions as these are covered by the UN Model Regulations. In light of the comments made, the Sub-Committee concluded that no additional note was necessary. Other experts considered that the tables in Annex 1 of the GHS should be reviewed to ensure a consistent approach in the display of transport pictograms or related information. The Sub-Committee invited the informal correspondence group on the improvement of annexes 1 to 3 to consider this issue.

11. The Sub-Committee adopted the proposal in document ST/SG/AC.10/C.4/2016/12 with the corrections listed in INF.11, the correction to the example of classification of a flammable gas mixture in paragraph 2.2.5 of the GHS shown in INF.20, paragraph 3, and the table A1.2 in INF.18 with the deletion of note b (see annex I).

2. Classification of flammable liquids

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

Informal document: INF.36, item 3 (Secretariat)

12. The Sub-Committee adopted the amendment to the introductory sentence in 2.6.4.2.2 and the consequential amendment to appendix 6, paragraph 4.1, of the Manual of Tests and Criteria (see annex I).

13. There was some support for the proposal for amendment to note 2 in section 2.6.2 and the footnotes to the decision logic. However, after some discussion the Sub-Committee could not reach consensus on how to accommodate all the comments made and address the concerns expressed by some delegations. It felt that more time was needed to consider the changes and the alternative solutions proposed and concluded that work should continue during the next biennium.

3. Test and criteria for oxidizing liquids and oxidizing solids

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

Informal document: INF.36, item 4 (Secretariat)

14. The Sub-Committee noted that the TDG Sub-Committee had agreed to amend the Manual of Tests and Criteria in accordance with proposals 1 to 4 in document ST/SG/AC.10/C.4/2016/15 and concurred with this decision. It also noted that in accordance with proposal 5 the TDG Sub-Committee would continue working on this subject during the next biennium.

4. Use of the Manual of Tests and Criteria in the context of GHS

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

Informal documents: INF.5 and Adds 1-5 (Chairman of the Working Group on Explosives)
INF.10 (Germany)
INF.14 (United States of America, Canada)
INF.21 and INF.36, item 5 (Secretariat)

15. The Sub-Committee noted the progress made and concurred with the TDG Sub-Committee on its decisions as regards the amendments in Annex II to INF.36 and the corrections in INF.21. The Sub-Committee fully supported continuing work on the review of the Manual of Tests and Criteria to take account of the GHS and hoped that it could be completed during the next biennium.

16. Some experts considered that adoption of further amendments to the Manual of Tests and Criteria in the context of the GHS should be postponed until the revision of Chapter 2.1 of the GHS was completed. Others did not share that view. The Sub-Committee concluded that this question could be addressed later during the next biennium.

17. Experts from the GHS Sub-Committee were invited to participate in the work of the Working Group on Explosives on this issue to ensure that GHS aspects relevant for sectors other than transport are correctly addressed. Interested experts were invited to contact the Chairman of the Working Group on Explosives, Mr. Ed de Jong (Netherlands).

5. Revision of Chapter 2.1 of the GHS

Informal documents: INF.8 and INF.41 (Sweden)
INF.15 (United States of America)
INF.36, item 6 (Secretariat)

18. The Sub-Committee noted that work on the revision of Chapter 2.1 continued and that the experts participating in the informal correspondence group had expressed support for the development of categories for the class of explosives and their related hazard communication elements. They recognised that the classification into divisions developed for transport purposes was not only based on the intrinsic properties of the explosives but also on additional factors such as quantity or the type of packaging used. They felt that the proposed new categories were promising and would address the needs of sectors other than transport. However, it was pointed out that given that the existing classification into divisions is appropriate for transport purposes and is also being used in some jurisdictions for additional purposes, its removal from the GHS could have unintended consequences.

19. The Sub-Committee also noted the concerns expressed by some delegations on whether the revision of Chapter 2.1 should also consider other aspects such as those listed in INF.15.

20. The Sub-Committee invited the expert from Sweden to develop, in cooperation with other interested experts, a way forward for the work of the informal correspondence group for the next biennium taking into account the comments made. The expert from Sweden reiterated the need to have experts from all sectors involved in the work of the informal correspondence group and invited all GHS Sub-Committee experts interested in joining the discussions to contact him.

21. After consideration of the options in INF.41 the Sub-Committee agreed that the informal correspondence group should continue to work in accordance with the terms of reference in document ST/SG/AC.10/C.3/2014/79–ST/SG/AC.10/C.4/2014/15, paragraphs 10 to 13, while considering the work items listed in option B of INF.41.

6. Other matters of interest

(a) *Revision of Chapter 2.8 of the United Nations Model Regulations on the Transport of Dangerous Goods*

Informal document: INF.36, item 7 (Secretariat)

22. The Sub-Committee noted with satisfaction that the TDG Sub-Committee had finalised the work for further alignment of the provisions in Chapter 2.8 of the Model Regulations with those of the GHS as regards the use of alternative methods to animal testing for corrosivity classification. The Sub-Committee also noted that:

- (a) Minor amendments to the GHS bridging principles on dilution remain due to the possibility of synergistic effects and the use of a corrosive substance as a diluent;
- (b) The GHS additivity method does not allow assignment of packing groups, which are used in transport regulations to define transport conditions. Therefore, a newly developed calculation method based on the concentration of the ingredients will be used for assignment of packing groups; and
- (c) The use of pH as a criterion for classification was not adopted, as information on the corrosivity of the ingredients of a mixture was considered a better indicator of corrosivity than the pH of the mixture.

23. The Sub-Committee noted the invitation from the TDG Sub-Committee to consider whether the solutions adopted to the issues addressed in sub-paragraphs (a) to (c) above could be applicable to other sectors.

(b) *Test method for readily combustible solids (Test N.1)*

Informal document: INF.36, item 8 (Secretariat)

24. The Sub-Committee noted that the TDG Sub-Committee adopted an amendment to Test N.1 to clarify the meaning of “the whole length of the sample”. Some considered it to be the length of the mould used during the test while others considered that it referred to the “timing zone” (i.e. the length over which the burning rate was measured). The TDG Sub-Committee confirmed that the phrase referred to the “timing zone” and agreed to include the exact length in the test provisions to avoid further misunderstandings.

25. Considering that this clarification might also be useful for GHS users, the Sub-Committee agreed to modify the corresponding text in Chapter 2.7, paragraph 2.7.2.2 of the GHS (see annex I).

C. Dust explosion hazards

Informal document: INF.23 (United States of America)

26. The Sub-Committee agreed that the informal correspondence group should continue to work in accordance with the work plan detailed in paragraph 8 of INF.23.

27. It noted that the informal correspondence group reviewed and discussed the labelling requirements for combustible dusts prescribed by the applicable legislation in the United States of America and in Canada during the meeting held on 8 December 2016. This discussion resulted in a better understanding as to how labelling requirements are applied in these countries to chemicals shipped in a dust form and to those forming a dust when processed. The informal correspondence group considered this information to determine what could be included in the draft annex, in the section on supplemental information for hazard communication. The Sub-Committee also noted that the informal correspondence group started the review of the draft annex in INF.23 and intended to finalise it in time to submit a formal proposal for the thirty-third session.

D. Practical classification issues

Informal documents: INF.35 (European Union)
INF.39 (United States of America)

28. The Sub-Committee entrusted consideration of the issue raised in paragraph 6 in INF.35 to the informal correspondence group on practical classification issues.

29. The expert from the United States of America informed the Sub-Committee that, during its meeting on Wednesday 7 December, the informal correspondence group had considered items for its programme of work for the next biennium and continued its discussions on the application of the bridging principles.

30. The Sub-Committee agreed to the terms of reference for the informal correspondence group contained in INF.39.

E. Aspiration hazard

31. The Sub-Committee considered this issue under agenda item 7.

F. Nanomaterials

Informal document: INF.27 (France)

32. The Sub-Committee noted the information on the progress made by the informal correspondence group and agreed to the programme of work for the next biennium proposed in paragraph 9 of INF.27 (see annex III). The expert from France reiterated his invitation to interested experts to participate in the work of the informal correspondence group.

G. Miscellaneous

1. Chemicals under pressure

Informal documents: INF.26 (CEFIC, EIGA)
INF.28 (EIGA)

33. The Sub-Committee agreed that classification and labelling of chemicals under pressure was an issue that needed to be addressed during the next biennium.

34. Some experts thought that a new separate chapter should be developed for a new hazard class “chemicals under pressure”. Others considered that current chapter 2.3 on aerosols could be modified to incorporate criteria for classification and labelling of chemicals under pressure. A few others indicated that they had some additional comments on the proposal in INF.26 and volunteered to share them with the representatives of CEFIC and EIGA.

35. The Sub-Committee invited the authors of the proposal to take account of the comments made and deferred its decision on the location of the new provisions (i.e. in a new chapter or in a revised version of current chapter 2.3) until the proposal was further developed by the informal correspondence group led by CEFIC and EIGA.

2. Use of non-animal testing methods for the classification of health hazards

36. The Sub-Committee noted that work on this issue had started following the adoption of the terms of reference for the work of the informal correspondence group at the thirty-first session. It was noted that the group had started examination of existing guidelines on skin irritation/corrosion and that four *in vitro* test guidelines had been selected. Work continues within the group to determine the best way to include a reference to these test guidelines in the GHS. The informal correspondence group will inform the Sub-Committee at its thirty-third session about the progress made.

IV. Hazard communication issues (agenda item 3)

A. Labelling and small packagings

1. Example for fold-out labels

Document: ST/SG/AC.10/C.3/2016/19 (CEFIC)

37. The Sub-Committee adopted without modifications the example proposed in the annex to the document (see annex I).

2. Development of examples for sets and kits

Informal document: INF.19 (CEFIC)

38. The Sub-Committee noted that the informal correspondence group on labelling of small packagings had reviewed INF.19 and continued to work on the development of examples for sets and kits. Regarding the programme of work for the next biennium, the representative of CEFIC indicated that the informal correspondence group intended to complete the development of examples for sets and kits, assess the need for additional examples to be included in Annex 7 of the GHS and start developing them if appropriate.

B. Improvement of annexes 1 to 3 and further rationalization of precautionary statements

1. Work of the informal correspondence group

Document: ST/SG/AC.10/C.3/2016/17 (United Kingdom)

Informal documents: INF.3 and Add. 1 and 2 (United Kingdom)
INF.12 and INF.12/Rev.1 (United Kingdom)

39. The Sub-Committee adopted the amendments in document ST/SG/AC.10/C.3/2016/17 with some additional corrections (see annex I).

40. The expert from the United Kingdom informed the Sub-Committee that the informal correspondence group had reviewed the documents in the agenda for this session and had considered its programme of work for the next biennium based on informal document INF.12. However, after consideration of some additional proposals by AISE and the Secretariat, as well as of the request from the Sub-Committee to address the issue raised in document ST/SG/AC.10/C.4/2016/20, the informal correspondence group had agreed to include them in its programme of work, as reflected in INF.12/Rev.1.

41. The Sub-Committee agreed to the programme of work for the informal correspondence group in INF.12/Rev.1.

2. Precautionary statements addressing medical advice/attention

Document: ST/SG/AC.10/C.4/2016/20 (European Union)

Informal documents: INF.13 (United Kingdom)
INF.34 (United States of America)

42. Several experts considered that the distinction between “medical advice” and “medical attention” should be retained as it is intended to address two different levels of hazard severity and response, i.e. warning against an immediate or severe hazard versus a less severe hazard. Others considered that the terms “advice” and “attention” did not adequately convey that message and suggested that the text of the precautionary statements be reviewed.

43. After some discussion, the Sub-Committee agreed that the current assignment of the terms “medical advice” and “medical attention” to precautionary statements P313, P314 and P315 needed to be reconsidered on a case-by-case basis and entrusted consideration of this issue to the informal correspondence group on the improvement of annexes 1 to 3 (see also paragraph 40).

44. The representative of the European Union noted that as the inconsistency raised in ST/SG/AC.10/C.4/2016/20 is retained, the condition for use currently applicable to P313, P314 and P315 cannot be implemented consistently in all linguistic versions.

C. Miscellaneous

1. Amendments to Annex 4, sub-section A4.3.14.7

Document: ST/SG/AC.10/C.3/2016/21 (ICMM)

Informal documents: INF.37 (United States of America)
INF.43 (Secretariat)

45. The Sub-Committee adopted the proposal in ST/SG/AC.10/C.3/2016/21 as amended by INF.43 with some additional corrections (see annex I).

2. Amendments to Annex 4, sub-section A4.3.3.2.3

Informal document: INF.17 (CEFIC)

46. The majority of the experts who spoke expressed concern as regards the interpretation of GHS provisions on confidential business information in relation to the use of concentration ranges given in INF.17. Most experts considered that the GHS gives competent authorities the discretion to decide the provisions they consider appropriate for the protection of this information as stated in section 1.4.8 of the GHS.

47. Some experts indicated that there might be practical difficulties in applying the current text in paragraph A4.3.3.2.3 in Annex 4 of the GHS and suggested that this question be examined during the next biennium.

48. The Sub-Committee agreed to consider proposals intended to examine whether the text of paragraph A4.3.3.2.3 needs to be further refined, provided that confidential business information issues are set aside. The representative of CEFIC was invited to review the description of the issues raised in INF.17 to facilitate future discussions.

3. Examples of precautionary pictograms in Annex 3, section 5

Informal document: INF.6 (RPMASA)

49. The Sub-Committee was informed that South African Standard SABS 0265:1999 had been cancelled and agreed to the deletion of the reference to that standard and its precautionary pictograms in Annex 3, section 5 of the GHS (see annex I).

4. Presentation of the information in the Safety Data Sheets

Informal document: INF.32 (RPMASA)

50. The Sub-Committee noted that in Canada and the United States of America numbering of sub-headings in the SDS was accepted but not required. It also noted that in the European Union there is an expectation to provide numbering of sub-headings. The Sub-Committee was of the opinion that it was the responsibility of the competent authorities to decide how they wish to implement GHS provisions in this respect.

51. The representative of RPMASA welcomed information from other experts on how these provisions are implemented in their countries.

V. Implementation of the GHS (agenda item 4)

A. Development of a list of chemicals classified in accordance with the GHS

Document: ST/SG/AC.10/C.3/2016/18 (OECD)

Informal documents: INF.4 and Adds. 1 to 3 (OECD)
INF.25 (United States of America)
INF.40 (United States of America)

52. The Sub-Committee noted the outcome of the meeting of the informal correspondence group in paragraphs 1 to 5 of INF.40.

53. The Sub-Committee agreed to the programme of work for the informal correspondence group for the next biennium outlined in para 6 of INF.40, on the understanding that a more detailed work plan would be developed by the informal correspondence group once agreement on some of the outstanding issues was reached.

B. Reports on the status of implementation

1. Information about the status of implementation worldwide

54. The representative of CEFIC said that the information provided by the secretariat about the status of implementation of the GHS on the website¹ was greatly appreciated by the industry and invited Sub-Committee members to revise it and communicate to the Secretariat any relevant progress so that the webpage could be kept up to date.

2. Canada

Informal document: INF.30 (Canada)

55. The Sub-Committee noted that Canada had released on 2 December 2016 the complete Technical Guidance on the Requirements of the Hazardous Products Act and the Hazardous Products Regulations. This technical guidance will assist manufacturers and importers to comply with the requirements of the new GHS based Workplace Hazardous Materials System of Classification and Labelling of Chemicals (WHMIS 2015).

3. Russian Federation

Informal document: INF.31 (Russian Federation)

56. The Sub-Committee noted that the technical regulation “on the safety of chemical products” was adopted on 7 October 2016 through Government Decree No.1019. With this regulation the provisions of GHS based national standards (GOSTs) on test methods, classification criteria and hazard communication elements become mandatory. The transitional period ending on 1 July 2021 gives manufacturers and suppliers the opportunity to adapt to the new provisions.

¹ http://www.unece.org/trans/danger/publi/ghs/implementation_e.html

4. South Africa

57. The Sub-Committee noted that several pieces of legislation were in the final stages of development and that work on the development and update of a GHS national implementation plan continued. The involvement of government stakeholders responsible for chemicals management in capacity building and awareness raising activities was also noted.

5. Australia

58. The Sub-Committee noted that Australia had implemented the third revised edition of the GHS for chemical classification and hazard communication requirements for workplace chemicals. Six states and territories had implemented GHS through the Work Health Safety (WHS) Regulations (2011). Implementation in three other jurisdictions is expected during 2017. It was noted that the GHS is already recognised in these states through other pieces of legislation.

59. Consumer goods, human therapeutics, cosmetics, toiletries and some veterinary chemicals are exempted from the GHS labelling requirements under the model WHS Regulations. Pesticides registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA) are also partially exempted from GHS labelling requirements (only hazard and precautionary statements are required to be included if they are not already on the approved APVMA label).

60. During the transitional period (1 January 2012 to 31 December 2016), manufacturers and importers were allowed to use either the GHS for classification, labelling and safety data sheets, or the previous hazardous substances and dangerous goods based classification systems. After 31 December 2016, manufacturers and importers of workplace chemicals must classify according to the GHS and labels and safety data sheets must be updated accordingly. Suppliers may continue to supply other workplaces with stock they have on hand after 1 January 2017 providing it was manufactured or imported prior to 1 January 2017 and correctly labelled at that time. Suppliers will also need to have GHS compliant safety data sheets available from this date. Users of hazardous chemicals are not required to re-label or dispose of existing non-GHS labelled stock.

61. The Sub-Committee noted that policy agreement has been gained for the adoption of the sixth revised edition of the GHS, although a timeframe for adoption has not yet been defined. The expert from Australia announced that she would inform the Sub-Committee at its next session on progress with GHS implementation in her country.

C. Cooperation with other bodies or international organizations

62. As no document had been submitted under this agenda item, no discussion took place on this subject.

D. Miscellaneous

63. As no document had been submitted under this agenda item, no discussion took place on this subject.

VI. Development of guidance on the application of GHS criteria (agenda item 5)

Guidance on the applicability of the GHS to classification and labelling of pesticides

Informal document: INF.24 (Secretariat)

64. The Sub-Committee noted that several FAO or WHO guidelines addressing classification and labelling of pesticides had been updated to take account of GHS provisions. In particular, it was noted that the FAO “Guidelines on highly hazardous pesticides” published in 2016, the “Guidelines on good labelling practice for pesticides” published in 2015, and the “WHO recommended classification of pesticides by hazard and guidelines to classification” published in 2009, contained multiple references to the applicability of the GHS to classification and/or labelling of pesticides.

VII. Capacity building (agenda item 6)

Informal documents : INF.29 (UNITAR)
INF.38 (Sweden)
INF.42 (RPMASA)

65. The Sub-Committee took note of the GHS capacity-building and awareness raising activities undertaken by UNITAR, the Swedish Chemicals Agency (KEMI) and RPMASA listed in informal documents INF.29, INF.38 and INF.42.

VIII. Programme of work for the biennium 2017-2018 (agenda item 7)

Informal documents: INF.22 (Germany)
INF.33 (IPPIC)
INF.44 (Secretariat)

66. The representative of ICMC confirmed that work on the alignment of the guidance in Annex 9 with Chapter 4.1 was almost completed. He invited the Sub-Committee to consider keeping this item in its programme of work for 2017-2018. The Sub-Committee agreed to his request.

67. On the basis of the proposals discussed and approved under this and other agenda items during this and previous sessions, the Sub-Committee agreed to the programme of work for 2017-2018 reproduced in Annex III.

IX. Draft resolution 2017/... of the Economic and Social Council (agenda item 8)

Informal document: INF.16 (Secretariat)

68. The Sub-Committee adopted part B of the proposed draft resolution to be submitted to the Economic and Social Council for consideration at its 2017 session, with a minor editorial correction to sub-paragraph (c).

X. Election of officers for the biennium 2017-2018 (agenda item 9)

69. Ms. Maureen Ruskin (United States of America) and Mr. Robin Foster (United Kingdom) were re-elected respectively chairperson and vice-chairperson of the Sub-Committee for the biennium 2017-2018 by acclamation.

XI. Other business (agenda item 10)

70. The Sub-Committee noted the deadlines for submission of documents for its next session, as follows:

- documents submitted for consideration by both sub-committees (TDG and GHS):
7 April 2017
- documents for the thirty-third session of the GHS Sub-Committee: 14 April 2017

XII. Adoption of the report (agenda item 11)

71. In accordance with the established practice, the Sub-Committee adopted the report on its thirty-second session based on a draft prepared by the secretariat.

Annex I

Draft amendments to the sixth revised edition of the GHS (ST/SG/AC.10/30/Rev.6)

Document ST/SG/AC.10/C.4/2016/11 adopted with the following modifications:

Chapter 1.2

The amendment to the definition of “Respiratory sensitizer” should read:

“Amend the definition of “*Respiratory sensitizer*” to read as follows:

“*Respiratory sensitizer* means a substance or mixture that induces hypersensitivity of the airways occurring after inhalation of the substance or mixture;”.”

Chapter 3.1

The amendment to the definition of “acute toxicity” in French does not apply to the English version.

Chapter 3.4

The amendment to 3.4.1.1 should read as follows:

“3.4.1.1 Amend to read as follows:

“*Respiratory sensitization* refers to hypersensitivity of the airways occurring after inhalation of a substance or a mixture.

Skin sensitization refers to an allergic response occurring after skin contact with a substance or a mixture.”

Consequential amendment: Delete related footnote 1 and renumber subsequent footnotes accordingly.”.”

Chapter 3.6

The amendment to 3.6.1 should read as follows:

“3.6.1 Amend the first sentence to read as follows:

“*Carcinogenicity* refers to the induction of cancer or an increase in the incidence of cancer occurring after exposure to a substance or mixture.”.”

Chapter 3.7

3.7.1.1 The amendment to the first sentence of this paragraph in French does not apply to the English version.

Chapter 3.8

The amendment to 3.8.1.1 should read as follows:

“3.8.1.1 Amend the first sentence to read as follows:

“*Specific target organ toxicity – single exposure* refers to specific, non-lethal toxic effects on target organs occurring after a single exposure to a substance or mixture.”.”

Chapter 3.9

The amendment to 3.9.1.1 should read as follows:

“3.9.1.1 Amend the first sentence to read as follows:

“*Specific target organ toxicity – repeated exposure* refers to specific toxic effects on target organs occurring after repeated exposure to a substance or mixture.””

Chapter 3.10

The amendment to 3.10.1.3 should read as follows:

“3.10.1.3 Renumber as 3.10.1.2 and amend to read:

“*Aspiration hazard* refers to severe acute effects such as chemical pneumonia, pulmonary injury or death occurring after aspiration of a substance or mixture.””

Document ST/SG/AC.10/C.4/2016/13, amendment to 2.6.4.2.2: adopted without modifications

(For the consequential amendments to Appendix 6 to the Manual of Test and Criteria see annex II)

Document ST/SG/AC.10/C.4/2016/14, amendments to 2.1.1.2 (c) and note b to table 2.1.1: adopted without modifications

Document ST/SG/AC.10/C.4/2016/19 adopted without modifications

Document ST/SG/AC.10/C.4/2016/12 adopted with the corrections in informal document INF.11, and the amendments in informal documents INF.18 (option 1) and INF.20 (proposal 2) as follows:

Annex 1

Amend A1.2 to read as follows:

“**A1.2 Flammable gases** (see Chapter 2.2 for classification criteria)

Classification			Labelling				Hazard statement codes	
Hazard class	Hazard category		Pictogram		Signal word	Hazard statement		
			GHS	UN Model Regulations ^a				
Flammable gases	1A	Flammable gas			Danger	Extremely flammable gas	H220	
		Pyrophoric gas			Danger	Extremely flammable gas May ignite spontaneously if exposed to air	H220 H232	
		Chemically unstable gas	A			Danger	Extremely flammable gas May react explosively even in the absence of air	H220 H230
			B			Danger	Extremely flammable gas May react explosively even in the absence of air at elevated pressure and/or temperature	H220 H231
	1B			Danger	Flammable gas	H221		
	2	No pictogram	Not required	Warning	Flammable gas	H221		

^a Under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, the symbol, number and border line may be shown in black instead of white. The background colour stays red in both cases."

Chapter 2.2

In 2.2.5, under "Calculation", amend 3. to read as follows:

"3. Adjust the sum of the contents to 100%:

$$\frac{100}{81.35} \times [2\%(\text{H}_2) + 6\%(\text{CH}_4) + 73.35\%(\text{N}_2)] = 2.46\%(\text{H}_2) + 7.37\%(\text{CH}_4) + 90.17\%(\text{N}_2)''.$$

Document ST/SG/AC.10/C.4/2016/17, adopted with the following modifications:

Replace the text of A3.3.2.2.2 with the following:

"A3.3.2.2.2 Combinations of precautionary statements can also be useful for different types of hazard where the precautionary behaviour is similar. Examples are P370 + P372 + P380 "**In case of fire: Explosion risk. Evacuate area.**" and P210 + P403 "**Keep away from heat, sparks and open flame and store in a cool well ventilated place**"."

Replace the text of A3.3.2.4.2 (a) with the following:

"(a) Where the classification of a substance or mixture triggers several different precautionary statements a system of prioritisation should be applied. P310 "**Immediately call a POISON CENTER/doctor/...**", should be prioritised over P311-P313; P311 "**Call a POISON CENTER/doctor/...**" over P312 and P313; and where only P312 "**Call a POISON CENTER/doctor/...if you feel unwell**" and P313 "**Get medical advice/attention**" are triggered, P311 "**Call a POISON CENTER/doctor/...**" should be used."

Replace the text of A3.3.2.4.2 (b) (i) with the following:

"(i) if P301 and P305 "**IF SWALLOWED:**" and "**IF IN EYES:**" are triggered with P313 "**Get medical advice/attention**", and P312 "**Call a POISON CENTER/doctor/...if you feel unwell**", then P301 + P305 + P311 "**IF**

SWALLOWED OR IN EYES: Call a POISON CENTER/doctor/...”, should appear.”.

Replace the text of A3.3.2.4.2 (b) (iii) with the following:

“(iii) if P305 and P302 **“IF IN EYES:”** and **“IF ON SKIN”**, are triggered with P310 **“Immediately call a POISON CENTER/doctor/...”**, P313 **“Get medical advice/attention”** and P314 **“Get medical advice/attention if you feel unwell”**, then P305 + P302 + P310: **“IF IN EYES OR ON SKIN: Immediately call a POISON CENTER/doctor/...”** and P314 **“Get medical advice/ attention if you feel unwell”** should appear separately.”.

Document ST/SG/AC.10/C.4/2016/21, adopted as amended in informal document INF.43, with some additional corrections, as follows:

Amend section A4.1.14.7 as follows:

“A4.3.14.7 Transport in bulk according to IMO instruments

This sub-section only applies when cargoes are intended to be carried in bulk according to IMO instruments: e.g., chapter VI or VII of SOLAS⁹ Annex II or Annex V of MARPOL¹⁰, the IBC Code¹¹, the IMSBC Code¹² and the IGC Code¹³ (or earlier versions eGC Code¹⁴ or GC Code¹⁵).

For liquid bulk cargoes, provide the product name (if name is different to that given in A4.3.1.1) as required by the shipment document and in accordance with the name used in the lists of product names given in Chapters 17 or 18 of the IBC Code or the latest edition of the IMO’s MEPC.2/Circular. Indicate ship type required and pollution category.

For solid bulk cargoes, provide the bulk cargo shipping name, whether or not the cargo is considered harmful to the marine environment (HME) according to MARPOL Annex V, whether it is a material hazardous only in bulk (MHB) according to the IMSBC Code, and which Group it should be shipped according to the IMSBC.

For liquefied gas cargoes in bulk provide the product name and ship type according to the IGC Code (or earlier versions, i.e.: EGC Code or GC Code).”.

Insert the related footnotes 9 to 15 as follows and renumber subsequent footnotes in Annex 4 accordingly:

⁹ *SOLAS means the International Convention for the Safety of Life at Sea, 1974, as amended.*

¹⁰ *MARPOL means the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, as amended*

¹¹ *IBC Code means the International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).*

¹² *IMSBC Code means the International Maritime Solid Bulk Cargoes Code, as amended.*

¹³ *IGC Code means the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk, including applicable amendments to which the vessel has been certified.*

¹⁴ *EGC Code means the Code for Existing Ships Carrying Liquefied Gases in Bulk.*

¹⁵ *GC Code means the Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (Gas Carrier Code).”*

Consequential amendments to Chapter 1.5

In Table 1.5.2, amend item (g) under section 14 “Transport information” to read as follows:

“(g) transport in bulk according to IMO instruments”.

Informal document INF.36, annex I, proposal in section B, adopted without modifications as follows:

Chapter 2.7

2.7.2.2 Amend the end of the paragraph to read as follows: "...and the reaction spreads over the whole length of the sample (100 mm) in 10 min or less."

Informal document INF.6 adopted without modifications as follows:

Annex 3, Section 5

A3.5.1 Delete "From South African Bureau of Standards (SABS 0265:1999)" and related pictograms.

Annex II

Draft amendments to the sixth revised edition of the Manual of Tests and Criteria (ST/SG/AC.10/11/Rev.6)

Appendix 6

In paragraph 4.1, at the end of the introductory sentence, delete “(23 °C and 60°C, respectively)”.

(Reference document: ST/SG/AC.10/C.4/2016/13)

Annex III

Programme of work of the Sub-Committee for 2017-2018

1. Classification criteria and related hazard communication, including:

- (a) Review of Chapter 2.1 (Explosives) of the GHS
Lead country: Sweden
Mandate/Terms of reference: report of the Sub-Committee on its thirty-second session (ST/SG/AC.10/C.4/64, paragraph 21)
- (b) Use of the Manual of Tests and Criteria in the context of the GHS
Focal point: TDG Sub-Committee
Mandate/Terms of reference: informal document INF.19 (twenty-eighth session)
- (c) Criteria for water-reactivity
Focal point: TDG Sub-Committee
Mandate/Terms of reference: ST/SG/AC.10/C.4/40 (Annex II)
- (d) Tests for oxidizing liquids and oxidizing solids
Lead country: France
Focal point: TDG Sub-Committee
Mandate/Terms of reference: report of the Sub-Committee on its thirty-second session (ST/SG/AC.10/C.4/64, paragraph 14)
- (e) Stability tests for industrial nitrocellulose
Lead country: Germany
Focal point: TDG Sub-Committee
Mandate/Terms of reference: informal document INF.22 (thirty-second session) and report of the Sub-Committee on its thirty-second session (ST/SG/AC.10/C.4/64, paragraph 67)
- (f) Dust explosion hazards
Lead country: United States of America
Mandate/Terms of reference: informal document INF.23 (thirty-second session) and report of the Sub-Committee on its thirty-second session (ST/SG/AC.10/C.4/64, paragraph 26)
- (g) Use of non-animal testing methods for classification of health hazards
Lead countries: Netherlands and United Kingdom
Mandate/Terms of reference: informal document INF.27/Rev.2 (thirty-first session) and report of the Sub-Committee on its thirty-first session (ST/SG/AC.10/C.4/62 paragraph 36)

- (h) Practical classification issues
Lead country: United States of America
Focal point: Informal correspondence group on practical classification issues
Mandate/Terms of reference: informal document INF.39 (thirty-second session) and report of the Sub-Committee on its thirty-second session (ST/SG/AC.10/C.4/64, paragraph 30)
- (i) Aspiration hazard
Lead organizations: IMO and IPPIC
Mandate/Terms of reference: informal document INF.33 (thirty-second session) and report of the Sub-Committee on its thirty-second session (ST/SG/AC.10/C.4/64, paragraph 67)
- (j) Nanomaterials
Lead country: France
Mandate/Terms of reference: informal document INF.27 (thirty-second session) and report of the Sub-Committee on its thirty-second session (ST/SG/AC.10/C.4/64, paragraph 32)

2. Hazard communication issues, including:

- (a) Labelling of small packagings
Lead organization: CEFIC
Mandate/Terms of reference: report of the Sub-Committee on its thirty-second session (ST/SG/AC.10/C.4/64, paragraph 38)
- (b) Improvement of Annexes 1 to 3 and further rationalization of precautionary statements
Lead country: United Kingdom
Mandate/Terms of reference: informal document INF.12/Rev.1 (thirty-second session) and report of the Sub-Committee on its thirty-second session (ST/SG/AC.10/C.4/64, paragraph 41)
- (c) Review of Annex 4, sub-section A4.3.3.2.3
Lead organization: CEFIC
Mandate/Terms of reference: report of the Sub-Committee on its thirty-second session (ST/SG/AC.10/C.4/64, paragraph 48)

3. Implementation issues, including:

- (a) Assessing the possible development of a list of chemicals classified in accordance with the GHS
Lead country: United States of America
Mandate/Terms of reference: informal document INF.40 (thirty-second session) and report of the Sub-Committee on its thirty-second session (ST/SG/AC.10/C.4/64, paragraph 53).
- (b) Facilitate the coordinated implementation of the GHS in countries and monitor the status of implementation of the GHS

- (c) Cooperate with other bodies or international organizations responsible for the administration of international agreements and conventions dealing with the management of chemicals to give effect to the GHS through such instruments

4. Guidance on the application of the GHS criteria, including:

- (a) Development of examples illustrating application of criteria and any related hazard communication issues, as needed

Lead country: United States of America

Focal point: Informal correspondence group on practical classification issues

Mandate/Terms of reference: informal document INF.39 (thirty-second session) and paragraph 30 of the report of the Sub-Committee on its thirty-second session (ST/SG/AC.10/C.4/64, paragraph 30).

- (b) Alignment of guidance in Annex 9 (section A9.7) and Annex 10 of the GHS with the criteria in Chapter 4.1

Lead organization: ICMM

Mandate/Terms of reference: informal document INF.25 (24th session) and report of the Sub-Committee on its thirty-second session (ST/SG/AC.10/C.4/64, paragraph 66).

5. Capacity building, including:

- (a) Review reports on training and capacity-building activities
- (b) Provide assistance to United Nations programmes and specialized agencies involved in training and capacity-building activities, such as UNITAR, ILO, FAO and WHO/IPCS through the development of guidance materials, advice with respect to their training programmes and identification of available expertise and resources
