



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 forty-second session

held in Geneva from 6 to 8 July 2022

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I. Attendance

1. The Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals held its forty-second session from 6 to 8 July 2022, with Ms. Maureen Ruskin (United States of America) as Chairperson and Ms. Nina John (Austria) as vice-chairperson.
2. Experts from the following countries took part in the session: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Finland, France, Germany, Italy, Japan, Mexico, Netherlands, New Zealand, Norway, Poland, Republic of Korea, Russian Federation, Serbia, South Africa, Spain, 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 the Philippines and Switzerland also took part.
4. Representatives of the Organisation for Economic Co-operation and Development (OECD) and the United Nations Institute for Training and Research (UNITAR) were also present.
5. The following intergovernmental organizations were also represented: European Union.
6. Representatives of the following non-governmental organizations took part in the discussion of items of concern to their organizations: Australasian Explosives Industry Safety Group Incorporated (AEISG); Compressed Gas Association (CGA); Croplife International; Cruelty Free International; Dangerous Goods Advisory Council (DGAC); European Industrial Gases Association (EIGA); Federation of European Aerosol Associations (FEA); Industrial Federation Paints and Coats of Mercosul (IFPCM); International Association for Soaps, Detergents and Maintenance Products (A.I.S.E); International Council of Chemical Associations (ICCA); International Council on Mining and Metals (ICMM); International Dangerous Goods and Containers Association (IDGCA); International Organization of Motor Vehicle Manufacturers (OICA); International Petroleum Industry Environmental Conservation Association (IPIECA); Institute of Makers of Explosives (IME); Responsible Packaging Management Association of Southern Africa (RPMASA); Sporting Arms and Ammunition Manufacturers' Institute (SAAMI); and World Coating Council, Inc.

II. Adoption of the agenda (agenda item 1)

Documents: ST/SG/AC.10/C.4/83 and ST/SG/AC.10/C.4/83/Add.1 (secretariat)

Informal documents: INF.1, INF.2 and INF.11 (secretariat)

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.24.

III. Work on the Globally Harmonized System (agenda item 2)

A. Work of the Sub-Committee of Experts on the Transport of Dangerous Goods on matters of interest to the Sub-Committee

8. The Sub-Committee was informed that Mr. Ed de Jong would be retiring in September 2023 and that therefore he would no longer be able to continue chairing the Explosives Working Group. The Sub-Committee took this opportunity to join the Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee) on its deep appreciation for Mr. de Jong's hard work, expertise, and dedication as chair of the working group and as a member of the delegation of the Netherlands.

1. Amendment of the Manual of Tests and Criteria to appropriately reflect the Globally Harmonized System of Classification and Labelling of Chemicals

Document: ST/SG/AC.10/C.4/2022/2 (Germany, Chair of the Explosives Working Group)

Informal document: INF.22, section 1 (secretariat)

9. The Sub-Committee endorsed the decision of the TDG Sub-Committee to adopt the amendments to paragraphs 37.1.2 and 32.2.2 of the Manual of Tests and Criteria as proposed in paragraphs 5 and 9 in document ST/SG/AC.10/C.4/2022/2.¹

10. The Sub-Committee concurred with the views expressed by the TDG Sub-Committee that the proposed amendments and options provided in paragraphs 10 to 12 in document ST/SG/AC.10/C.4/2022/2 needed further assessment.

11. It was noted that the experts participating in the discussions within the Explosives Working Group had indicated that the open-cup test was no longer in use for classification of flammable liquids and had expressed a preference for option 1 in paragraph 11 in document ST/SG/AC.10/C.4/2022/2. However, following the interventions from several experts during the discussion at the GHS Sub-Committee, it was noted that the open-cup test was appropriate for some very viscous flammable liquids and that amending the Manual of Tests and Criteria to recommend only the closed-cup method could be interpreted as invalidating classifications based on test results using the open-cup method. On these grounds, some experts expressed a preference for option 2 in paragraph 11, with the removal of the square brackets around the proposed amendment to section 32.4 of the Manual of Test and Criteria in paragraph 12 of the document.

12. After an exchange of views, the Sub-Committee invited the authors of the document to take account of the comments made and submit a proposal for consideration by both sub-committees at their next session. The Chair of the Explosives Working Group invited experts to provide information about cases where the open-cup test is used for flammable liquid's classification purposes.

2. Exit from Class 1 for very low hazard energetic articles

Document: ST/SG/AC.10/C.4/2022/4 (COSTHA, SAAMI)

Informal document: INF.22, section 2 (secretariat)

13. The Sub-Committee took note of the outcome of the discussions on this topic at the TDG Sub-Committee.

14. Several experts expressed concerns about the unintended consequences of the proposal, in particular the possibility of declassification of some explosive articles or the need to develop new testing criteria.

15. The representative of SAAMI indicated that the proposal aimed at providing a worldwide harmonized approach for classification and hazard communication for the articles addressed by the proposal and pointed out that no impact on scope was expected as regards the possibility of declassification of articles currently falling within the scope of the GHS. He indicated that work on this topic would continue and invited experts to send their comments to the authors of the document so that they can be taken into account in future proposals.

¹ **Note by the secretariat:** The amendments to the Manual of Tests and Criteria are listed in addendum 1 to the report of the TDG Sub-Committee on its 60th session (see document ST/SG/AC.10/C.3/120/Add.1).

3. Manual of Tests and Criteria, sections 1.2.1.4.3 and 20.2.5 on self-heating test N.4 for organic peroxides

Informal document: INF.6 (Cefic)
INF.22, section 3 (secretariat)

16. The Sub-Committee supported the proposal and concurred with the views expressed by the Explosives Working Group that polymerizing substances should also be included. In addition, the representative of Cefic was invited to consider addressing explosives as well.

17. The representative of Cefic indicated that a revised proposal would be submitted for consideration at the next session.

4. Issues related to the definition of Class 1

Informal document: INF.22, section 4 (secretariat)

18. The Sub-Committee was informed that the Explosives Working Group had agreed on a proposal for amendment to the definitions of “pyrotechnic substance” and “explosive effect” and that, noting that these terms were also used in Chapter 2.1 of the GHS, the TDG Sub-Committee had invited the expert from Sweden to submit the proposal (including consequential amendments to the GHS, if applicable) for consideration by the TDG and GHS sub-committees at their next session. The expert from Sweden at the GHS Sub-Committee indicated that he would work together with his counterpart at the TDG Sub-Committee to address the consequential amendments to the GHS, as appropriate.

19. It was pointed out that the document from Sweden (informal document INF.12, submitted for consideration by the TDG Sub-Committee at its sixtieth session)² also included a proposal for amendment to the definition of Class 1. The Sub-Committee was informed that the TDG Sub-Committee had endorsed the views of the Explosives Working Group and did not support the amendment, on the grounds that it could have unintended consequences, considering that the Class 1 definition had been in use for many years, was implemented through international and national legal instruments addressing all modes of transport and was also included in the GHS.

20. The Sub-Committee noted that, following the advice of the TDG Sub-Committee, development of explanations or guidance to address some inconsistencies identified in informal document INF.12 would be pursued. As an example, it was pointed out that this guidance could help addressing current difficulties in interpreting the provisions applicable to road transport in accordance with the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) for determining the maximum total quantity of articles of Class 1 authorized per transport unit (currently defined as “net mass in kilograms of the explosive substance”).

B. Simultaneous classification in physical hazard classes and precedence of hazards

Informal document: INF.9 (Germany)

21. The Sub-Committee took note of the information in informal document INF.9.

22. The expert from Germany indicated that the informal working group intended to submit an official document to request feedback from the TDG and GHS sub-committees on some of the issues under consideration by the group. In addition, she indicated that the informal working group started discussions on gases in combination with the hazard corrosive to metals, as well as on combination of some hazards, in particular: explosive and flammable solids; and flammable and oxidizing gases. The Sub-Committee will be kept informed about the progress of this work.

² <https://unece.org/sites/default/files/2022-06/UN-SCETDG-60-INF12e.pdf>

C. Classification of skin sensitizers using the results of local lymph node assays test methods in accordance with OECD Test Guideline 442B

Document: ST/SG/AC.10/C.4/2022/7 (Japan)

Informal documents: INF.4 and INF.5 (Japan)

23. The Sub-Committee supported in principle the proposal in document ST/SG/AC.10/C.4/2022/7. Several experts indicated, however, that it would be desirable to explore the possibility to invite OECD to consider including sub-categorization criteria using the local lymph node assays (LLNA) BrdU-ELISA test method in OECD Test Guideline 442B. The expert from the United States of America volunteered to work with Japan and any other interested delegation at OECD level to explore this possibility.

24. It was suggested that in the case an update of the OECD guidelines was not feasible, a note (similar to that used for the non-animal test methods) could be included in the GHS, indicating that although no sub-categorization criteria had been agreed internationally using the LLNA BrdU-ELISA test method, validated sub-categorization criteria may be allowed by competent authorities.

25. The Sub-Committee invited the expert from Japan to revise the proposal to take account of the comments made during the discussion and submit a revised document for consideration at the next session.

D. Practical classification issues (proposed amendments to the Globally Harmonized System)

Document: ST/SG/AC.10/C.4/2022/3 (United States of America)

Informal documents: INF.19 (United States of America)

INF.22, section 5 (secretariat)

26. The Sub-Committee took note of the information in informal document INF.19 on the work of the informal working group and noted that the proposals contained therein would be submitted for consideration and adoption by the Sub-Committee at its next session.

27. Noting the outcome of the discussions at the TDG Sub-Committee in informal document INF.22 (section 5), the expert from the United States of America indicated that, with respect to the comment addressing the accepted exposure times, the guidance in paragraph 3.1.5.3.2 allowed competent authorities to decide on the exposure times acceptable for conversion. As regards the comment on including available “n” values for different chemicals, she indicated that should this guidance be considered necessary for the purposes of the Model Regulations, a proposal should be addressed directly to the TDG Sub-Committee.

28. The Sub-Committee adopted the proposal in document ST/SG/AC.10/C.4/2022/3 with some editorial amendments (see annex).

E. Nanomaterials

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

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

Document: ST/SG/AC.10/C.4/2022/5 (United Kingdom)

Informal documents: INF.3 and INF.12 (United Kingdom)

30. The Sub-Committee took note of the information on the progress of the work of the informal working group in informal document INF.12 and adopted the amendments to

sections 1, 2 and 3 of Annex 3 of the GHS proposed in paragraphs 14 to 19, 33 to 35 and 39 of document ST/SG/AC.10/C.4/2022/5 (see annex).

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

Informal document: INF.16 (United Kingdom, Netherlands)

31. The Sub-Committee expressed its appreciation for the work done by the informal working group on the updating of Chapter 3.4 of the GHS to address classification using non-animal test methods.

32. The experts from the United Kingdom and the Netherlands invited the Sub-Committee to provide comments on the proposal in the annex to informal document INF.16 and indicated that the informal working group expected to finalise the work on a proposal for amendment to Chapter 3.4 for adoption by the Sub-Committee at its next session. It was also noted that the informal working group may need to continue the work on developing the relevant guidance in the biennium 2023-2024. If so, this will be included in the work plan of the non-animal test methods informal working group for the next biennium.

33. The Sub-Committee welcomed the way forward proposed by the informal working group and agreed that priority should be given to finalising the on-going work on Chapter 3.4 during this biennium and address development of guidance during the biennium 2023-2024.

H. Classification criteria for germ cell mutagenicity

Informal document: INF.15 (European Union)

34. The Sub-Committee took note of the progress of work of the informal working group in informal document INF.15.

35. In addition, the Sub-Committee noted that the informal working group had completed the review of terminology and the list of test methods, had started to discuss criteria for sub-categories 1A and 1B and had agreed to continue working on Chapter 3.5 during the next biennium.

36. It was also noted that OECD had agreed to set up an expert group on genotoxicity to review the criteria developed by the informal working group and that the Genetic Toxicology Technical Committee (GTTC) of the Health and Environmental Sciences Institute (HESI) had started to investigate further data to assist in the revision of criteria for germ cell mutagenicity. The informal working group will start considering the results of the data available from HESI by the end of 2022.

I. Other matters

1. Desensitized explosives

Informal documents: INF.8, INF.18, INF.24 (Germany and United States of America)
INF.22, section 6 (secretariat)

37. The Sub-Committee took note of the outcome of the discussions of the Explosives Working Group and their recommendations to amend paragraph 2.17.2.3, decision logic 2.17.1 and section 51.2.2, as indicated in informal document INF.24.

38. The Sub-Committee expressed support in principle for the proposal in informal documents INF.8 and INF.18 as amended by INF.24. Experts who indicated that some editorial refinements were needed to avoid misunderstanding of the criteria were invited to send their comments to the authors of the proposal. The Sub-Committee noted that a revised consolidated version of the proposal would be submitted for adoption by the Sub-Committee at its next session.

2. *Classification and hazard communication of hydrofluorocarbons addressed in Annex F of the Montreal Protocol*

Informal document: INF.14 (secretariat)

39. The Sub-Committee acknowledged the need to clarify the scope of the GHS hazard class “hazardous to the ozone layer” following the adoption and entry into force of the Kigali amendment to the Montreal Protocol. However, there was no consensus on the proposal to address the issue by amending the current hazard statement.

40. Noting that the substances listed in Annex F to the Montreal Protocol had different properties than those hazardous to the ozone layer, one expert suggested addressing them separately in a new Chapter 4.3 with specific criteria and hazard communication elements and limit the scope of the current hazard class in Chapter 4.2 to ozone depleting substances only, by excluding substances listed in Annex F of the Montreal Protocol. Another expert suggested amending the current hazard class to address “hazardous to the upper atmosphere”.

41. The Sub-Committee considered that further consideration should be given to the matter before taking a decision on how to proceed and welcomed the offer made by the experts from Austria, the United Kingdom and the United States of America to work on a proposal. Experts interested in contributing to this work were invited to contact them.

3. *Information on upcoming proposal for new items for the programme of work for 2023-2024*

Informal document: INF.17 (European Union)

42. The Sub-Committee noted the information provided by the representative of the European Union on the statements, options and discussion points presented in informal document INF.17.

43. Some experts felt that the proposal to address several endpoints simultaneously within the given timeframe was too ambitious while others supported the proposal. Concerns were voiced about the additional workload that would represent addressing developing criteria for all the proposed new endpoints within the current available resources, while at the same time ensuring progress of on-going work. Furthermore, some experts stated that new developments on the GHS should follow the state of the science instead of leading it. In this context, a suggestion was put forward that the work could be prioritised to address first endpoints for which OECD test guidelines were already available and continue with other endpoints as science evolves. Some experts pointed out that the informal working group on non-animal test methods had been following a similar approach with very good results.

44. On the options proposed in paragraph 11, several experts were in favour of option (b), i.e.: to entrust the technical work to an informal working group within the Sub-Committee, while ensuring the involvement of OECD in the work. They considered that this would give the Sub-Committee the opportunity to address aspects that might go beyond purely technical issues such as policy matters or hazard versus risk considerations. Others on the contrary expressed a preference for option (a) or a hybrid approach combining both options, with some work items dealt with within the Sub-Committee and others entrusted to OECD.

45. The Sub-Committee noted OECD readiness and willingness to cooperate in the development of criteria for new endpoints, by providing expertise, irrespective of the method of work adopted by the Sub-Committee. In response to a question addressing involvement of non-OECD members, the representative of OECD informed the Sub-Committee that there were mechanisms available allowing participation of non-OECD members in the work of OECD expert groups.

46. The representative of ICCA considered that the European Union should reconsider the development of criteria for new endpoints outside the Sub-Committee as this could undermine the goal of GHS to achieve global harmonisation. The representative of CropLife invited the Sub-Committee to carefully consider the resources available, benefits and justification for the development of criteria for new endpoints before committing to undertake the work.

47. The representative of the European Union indicated that he would take into account the comments made and would submit a proposal for the programme of work for the next biennium to be considered by the Sub-Committee at its next session.

IV. Implementation of the Globally Harmonized System (agenda item 3)

A. Possible development of a list of chemicals classified in accordance with the Globally Harmonized System

Informal document: INF.20 and addendum 1, 2 and 3 (Canada, United States of America)

48. The Sub-Committee welcomed the analysis of the responses from competent authorities to the survey on chemical classification lists that follow the GHS provided by the experts from Canada and the United States of America.

49. On the points for discussion listed in paragraph 9 of the document, the Sub-Committee welcomed the proposal from the informal working group to provide a similar analysis of the responses received from United Nations bodies/specialized agencies and non-governmental organisations.

50. There was also general agreement that the survey results should be made widely and publicly accessible. The representative of UNITAR indicated that one of the most frequently asked questions during capacity building events is the availability of GHS classification lists and data and volunteered to contribute to spreading this information.

51. Some experts suggested broadcasting the results of the survey through a journal article. A member of the secretariat suggested making the results of the survey available on the webpage containing information on the status of implementation of the GHS.³

52. The experts from Canada and the United States of America welcomed the feedback received and indicated that they would aim at completing the analysis of the results of the survey for United Nations bodies/specialized agencies and non-governmental organisations on time to be presented at the next session.

B. Reports on the status of implementation

Informal document: INF.7 (South Africa)

53. The expert from South Africa informed the Sub-Committee that on 29 March 2021 the South African Department of Employment and Labour promulgated into law the Regulations for Hazardous Chemical Agents under the Occupational Health and Safety Act. 3. The law includes a provision for an 18-month transition period for implementation, ending on 29 September 2022. In addition to the “phase-in period” a further 12 months are granted for chemicals manufactured or imported before 29 September 2022, to allow supply of existing stock-in trade that are not yet GHS compliant.

54. It was noted that these regulations make GHS classification, safety data sheets and labelling, compulsory for hazardous chemicals in the workplace environment.

C. Cooperation with other bodies or international organizations

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

³ <https://unece.org/ghs-implementation-0>

D. Miscellaneous

Activities to support implementation of the Globally Harmonized System

Document: ST/SG/AC.10/C.4/2022/6 (Sweden)

56. While acknowledging the involvement of several members of the Sub-Committee in capacity-building programs and implementation activities in cooperation with UNITAR, ILO or other international programs dealing with chemical safety, or conducted within the framework of international cooperation initiatives at national level, the Sub-Committee welcomed the discussion on exploring ways to further promote and support GHS implementation.

57. There was general support for the actions listed in paragraph 7 of the document, in particular to encourage further involvement by participants in the Sub-Committee in providing detailed information about experience and results from capacity building and implementation related activities (e.g. lessons learned, challenges experienced with implementation, available resources, expertise sharing, etc). The representative of UNITAR volunteered to provide regular reports to the Sub-Committee on the activities conducted by the Programme Advisory Group (PAG). The Chair of the Sub-Committee invited Sub-Committee members to consider submitting information in writing on their activities related to GHS implementation.

58. Sub-Committee members were encouraged to contact their counterparts dealing with developments related to the Strategic Approach to International Chemicals Management (SAICM) Beyond 2021 process, to ensure coverage of GHS implementation specific targets and indicators.

59. On the question about the periodicity of the revisions to the GHS, it was recognized that although not all jurisdictions may be able to keep up with the 2-year review cycle, it would be inappropriate to impose a longer period since this would delay implementation of improved provisions following scientific progress or resulting in increased worker's protection in other jurisdictions.

V. Development of guidance on the application of the Globally Harmonized System criteria (agenda item 4)

A. Alignment of Annex 9 (section A9.7) and Annex 10 with the criteria in Chapter 4.1

Informal document: INF.10 (ICMM)

60. The representative of ICMM informed the Sub-Committee that the informal working group had achieved good progress and intended to submit a proposal for adoption by the Sub-Committee at its next session. She invited experts to provide feedback on the proposed amendments to annexes 9 and 10 of the GHS in informal document INF.10 before mid-August.

B. Practical classification issues

61. The Sub-Committee considered the examples of classification using calculated 4-hour LC₅₀ values included in document ST/SG/AC.10/C.4/2022/3 under agenda item 2 (see paragraphs 26 to 28).

C. Practical labelling issues

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. Capacity building (agenda item 5)

A. “BlueGreen Alliance and Clearya True Health Hazard Project”

Informal document: INF.21 (United States of America)

64. The Sub-Committee noted with interest the information about the “BlueGreen Alliance and Clearya True Health Hazard Project” being conducted in the United States of America for safety data sheet analysis. It was noted that the analysis of the first 100 safety data sheets under the first stage of the pilot project had been completed and results showed that 33.3 per cent of the safety data sheets contained inaccurate information.

65. Following expression of interest in the details of the project, the expert from the United States of America invited experts to refer to the contact information provided in informal document INF.21 or contact her directly for further details.

B. UNITAR

66. The representative of UNITAR informed the Sub-Committee that the GHS e-learning courses in English and Spanish had just been completed. It was noted that a new round of courses in these languages was expected to start in September.

67. The Sub-Committee noted that activities in support of GHS implementation, including the provision of legal expertise for development of legislation, have been conducted in Ghana, Kiribati and Benin. Follow-up activities may be needed at a later stage. A project addressing development of legislation to implement the GHS, technical capacities and training materials for Côte d’Ivoire, Ghana, Kenya and Nigeria is expected to start in the second half of 2022.

68. On guidance materials, the Sub-Committee was informed that the 2022 version of the guidance document “Developing a national GHS implementation strategy” had been published.⁴

C. Capacity building activities in South Africa

Informal document: INF.23 (RPMASA)

69. The Sub-Committee noted the information in informal document INF.23. The representative of RPMASA stressed the need for capacity building in the region and indicated that additional GHS courses were expected to be conducted before the end of 2022.

⁴ https://www.unitar.org/sites/default/files/media/file/DEV%20GHS%20STRATEGY%20DOC_INT_26May2022.pdf

VII. Other business (agenda item 6)

A. Seminar in follow-up to the 2020 Beirut port explosion: summary and conclusions

Document: ST/SG/AC.10/C.4/2022/1 (OECD, secretariat)

Informal document: INF.22, section 7 (secretariat)

70. The Sub-Committee noted the outcome of the online seminar held on 14 December 2021 on the 2020 Beirut port explosion, on lessons learned, experiences and good practices in managing risks of ammonium nitrate storage, handling and transport in port areas, preventing accidents and mitigating their consequences.

71. A member of the secretariat informed the Sub-Committee that the Bureau of the Industrial Accidents Convention had recently approved the inclusion in the Convention's workplan for 2023-2024 of a follow-up activity on risk management on this subject, that included the preparation of an online webpage/repository for information and good practices, which can be supplemented by promotional materials to share information on related international legal and policy instruments; and existing guidance, national experiences, lessons learned and good practices.

72. The Sub-Committee noted that during the consideration of this topic by the TDG Sub-Committee, the representatives of IVODGA and AEISG provided information about guidance in relation to this topic, as follows:

- A "White Paper" on storage and handling of dangerous goods in preparation for, or after, sea-transport;⁵ and
- AEISG Code of Practice – Storage and Handling of Solid Ammonium Nitrate⁶

73. The need for capacity building on this subject in the Southern African region voiced by the representative of RPMASA was also noted.

B. Review of the work of ECOSOC subsidiary bodies: Summary recommendations

Informal documents: INF.13 (secretariat) and INF.22, section 8 (secretariat)

74. The Sub-Committee noted the opinions expressed by the TDG Sub-Committee on this subject as contained in informal document INF.22. It concurred with the TDG Sub-Committee on the need for additional guidance on how to identify the Sustainable Development Goals relevant to its work and welcomed the proposal by the secretariat to include this information on the webpage addressing the work of the Committee and its sub-committees,⁷ building on the information provided to the sub-committee at its forty-first session in informal document INF.5.⁸

75. The Chair invited the Sub-Committee to consider the options provided in informal document INF.22 and continue the discussion on this topic at the next session.

C. Meeting dates and submission deadlines for the forty-third session

76. The Sub-Committee was invited to note the meeting dates and document submission deadlines for its forty-third session as follows:

- (a) Meeting dates: 7-9 (morning) December 2022

⁵ https://unece.org/sites/default/files/2022-03/CTU-Code_2022_first-informal-meeting_15%20%281%29.pdf

⁶ [https://www.aeiscg.org.au/aeiscg-codes-of-practice/ Storage and Handling of Solid Ammonium Nitrate Edition 1, June 2022.pdf](https://www.aeiscg.org.au/aeiscg-codes-of-practice/Storage%20and%20Handling%20of%20Solid%20Ammonium%20Nitrate%20Edition%201,%20June%202022.pdf)

⁷ <https://unece.org/transport/dangerous-goods/ecosoc-bodies-dealing-chemicals-safety>

⁸ <https://unece.org/sites/default/files/2021-11/UN-SCEGHS-41-INF05e.pdf>

- (b) Deadline for submission of official documents: 14 September 2022 (for documents submitted for consideration by the GHS Sub-Committee only) and 2 September 2022 (for documents submitted for consideration by the TDG and the GHS sub-committees)

77. It was noted that the forty-third session would be followed by the eleventh session of the Committee of Experts, to be held on 9 December (afternoon).

78. Regarding meeting arrangements, a member of the secretariat informed the Sub-Committee that provision of hybrid meeting support will be discontinued by the end of 2022 and that, as from 2023, all meetings will be held in-person. For the forty-third session to be held in December 2022 it will still be possible for the secretariat to organise a hybrid meeting, provided there is not unforeseen last-minute budget restrictions. It was pointed out however, that the last session of the biennium is usually one of the busiest of the cycle. Bearing in mind that the standard duration for provision of simultaneous interpretation for a hybrid meeting when statements delivered through the virtual platform exceed 30 minutes in total is two hours, rather than the three hours as applicable for in-person meetings, delegations were invited to consider participating in-person, as this will enable the Sub-Committee to avoid such restrictions and gain two additional hours of interpretation services per meeting day.

VIII. Adoption of the report (agenda item 7)

79. In accordance with the established practice, the Sub-Committee adopted the report on its forty-second session, and its annex, based on a draft prepared by the secretariat.

Draft amendments to the ninth revised edition of the Globally Harmonized System of Classification and Labelling of Chemicals (ST/SG/AC.10/30/Rev.9)

Chapter 3.1

3.1.2.6.1 Add the following sentence at the end of the existing paragraph:

“Guidance on the conversion of experimental values for times other than a 1-hour exposure is provided in 3.1.5.3.”

(Reference document: ST/SG/AC.10/C.4/2022/3)

3.1.5.3 Add a new section 3.1.5.3 to read as follows:

“3.1.5.3 Guidance

3.1.5.3.1 The ATE values used for inhalation toxicity classification in Table 3.1.1 are based on a 4-hour experimental exposure in laboratory animals (3.1.2.6.1). Existing inhalation LC₅₀ values obtained in studies using exposure times other than 1 hour (3.1.2.6.1) can be adjusted to a 4-hour exposure using the ten Berge equation ($C^n \times t = k$) for gases and vapours and Haber’s rule ($C \times t = k$) for dusts and mists, as follows:

Formula for gases and vapours

$$LC_{50}(4 \text{ hours}) = \left(\frac{C^n \times t}{4} \right)^{1/n}$$

where:

C = LC₅₀ concentration for exposure duration t

n = chemical-specific exponent

t = exposure duration, in hours, for C

Formula for dusts and mists

$$LC_{50}(4 \text{ hours}) = \frac{C \times t}{4}$$

where:

C = LC₅₀ concentration for exposure duration t

t = exposure duration, in hours, for C

3.1.5.3.2 A default value of 2 is used for n unless additional conclusive information is available to indicate that a different value is more appropriate. The accepted exposure times for conversion are from 30 minutes to 8-hour exposures. A competent authority may decide whether other exposure times are acceptable for conversion. Data from a long-term exposure should not be converted because this hazard class addresses Acute Toxicity. Guidance on the duration of short-term (i.e., acute) inhalation toxicity exposures can be found in OECD Guidance Document 39 (section 4.1: Outline of the exposure methodology).

Examples: classification using calculated 4-hour LC₅₀ values**Example 1****Substance (liquid)**

1. For the purpose of this example the substance has an experimental 6-hour vapour LC₅₀ = 13.6 mg/l
2. No additional information on n is available so the default value (n = 2) will be used.

Criterion:

$$LC_{50}(4 \text{ hours}) = \left(\frac{C^n \times t}{4} \right)^{1/n}$$

Calculation

$$LC_{50}(4 \text{ hours}) = \left(\frac{C^n \times t}{4} \right)^{\frac{1}{n}} = \left(\frac{13.6^2 \times 6}{4} \right)^{\frac{1}{2}} = 16.7$$

3. Therefore, the substance is classified into Category 4 based on the vapours Category 4 criteria (10.0 < ATE ≤ 20.0) from Table 3.1.1.

Example 2**Substance (solid)**

4. For this example, the substance has an experimental 2-hour dust LC₅₀ = 0.26 mg/l

Criterion:

$$LC_{50}(4 \text{ hours}) = \frac{C \times t}{4}$$

Calculation

$$LC_{50}(4 \text{ hours}) = \frac{C \times t}{4} = \frac{0.26 \times 2}{4} = 0.13$$

5. Therefore, the substance is classified into Category 2 based on the dusts and mists Category 2 criteria (0.05 < ATE ≤ 0.5) from Table 3.1.1.”.

(Reference document. ST/SG/AC.10/C.4/2022/3, as amended)

Annex 3**Section 1**

- A3.1.2.3 Replace the last sentence with:

“For example, H300 + H310 + H330 indicates that the text to appear on the label is **“Fatal if swallowed, in contact with skin or if inhaled.”**”

- A3.1.2.4 Replace the last sentence with the following:

“Also, where a combined hazard statement is permitted for two or more hazard statements (see A3.1.2.5), the competent authority may specify whether the combined hazard statement or the corresponding individual statements should appear on the label or may leave the choice to the manufacturer/supplier.”

- A3.1.2.5 Insert a new paragraph to read as follows:

“A3.1.2.5 In addition to the combinations found in Table A3.1.2, it is also permitted to combine more than one health hazard statement of equivalent severity if,

for example, there is insufficient space on the label. When hazard statements are combined, all hazards must be clearly conveyed and only the repetitive text may be deleted. Statements can be combined by using the word “and”, additional punctuation, and changing the case of the initial letter of the word at the beginning of a statement. For example, H317 “May cause an allergic skin reaction” + H340 “May cause genetic defects” + H350 “May cause cancer” may all be combined because they are all for Category 1 health hazards (i.e., health hazard statements of equivalent severity) and have repetitive elements of the hazard statement (i.e., the statements begin with “may cause”). These statements may be combined to “May cause an allergic skin reaction, genetic defects, and cancer.” The competent authority may limit the types of combinations permitted to ensure comprehensibility (e.g., limit the number of hazard statements that can be combined).”

Table A3.1.2:

- After “H303 + H313 + H333”, insert the following new entry:

H315 + H319	Causes skin irritation and serious eye irritation ^a	Skin corrosion/irritation (chapter 3.2) and serious eye damage/eye irritation (chapter 3.3)	2 (skin) + 2/2A (eye)
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- For “H315 + H320”:
Under column (2), add a reference to note “^a” at the end of the hazard statement, as follows: “Causes skin and eye irritation ^a”
Under column (4), replace “2 (skin)/2B (eye)” with “2 (skin) + 2B (eye)”.
- Insert the following note “^a” under table A3.1.2:

^a *Competent authorities may select the applicable hazard statement(s) depending on the serious eye damage/eye irritation hazard categories implemented in their jurisdiction (2/2A or 2A/2B).*”

Section 2

A3.2.5.2.2 Insert the following text after the first sentence:

“Precautionary statements can be combined by using the word “and”, additional punctuation, and changing the case of the initial letter of the word at the beginning of a statement. For example, P302 + P335 + P334 **“IF ON SKIN: Brush off loose particles from skin and immerse in cool water [or wrap in wet bandages].”**”

A3.2.2.4 Insert the following new paragraph:

“A3.2.2.4 Where square brackets [...] appear around a precautionary statement code, this indicates the precautionary statement is not appropriate in every case and should be used only in certain circumstances. In these cases, conditions for use explaining when the text should be used are given in column (5) of the tables.”

Table A3.2.3:

For “P302 + P335 + P334”, amend the precautionary statement in column (2) to read as follows: **“IF ON SKIN: Brush off loose particles from skin and immerse in cool water [or wrap in wet bandages].”**

Section 3

In the matrix table for pyrophoric solids (chapter 2.10), hazard category 1, column “Response”, replace the “P302 + P335 + P334” entry with:

“P302 + P335 + P334
IF ON SKIN: Brush off loose particles from skin and immerse in cool water or wrap in wet bandages.”

(Reference document: ST/SG/AC.10/C.4/2022/5)