



**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 twenty-sixth session**

held in Geneva from 4 to 6 December 2013

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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 twenty-sixth session from 4 to 6 December 2013, with Ms. M. Ruskin (United States of America) as Chairperson.
2. Experts from the following countries took part in the session: Argentina, Austria, Belgium, Brazil, Canada, China, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Poland, Republic of Korea, Russian Federation, Serbia, South Africa, Sweden, United Kingdom of Great Britain and Northern Ireland, and United States of America.
3. Under rule 72 of the rules of procedure of the Economic and Social Council, observers from the following countries also took part: Bulgaria and Switzerland.
4. Representatives of the United Nations Institute for Training and Research (UNITAR), the International Maritime Organization (IMO) and the World Health Organization (WHO) were present.
5. The following intergovernmental organizations were also represented: European Union and Organisation 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); Dangerous Goods Advisory Council (DGAC); European Chemical Industry Council (CEFIC); European Industrial Gases Association (EIGA); Industrial Federation Paints and Coats of Mercosul (IFPCM); International Bulk Terminals Association (IBTA); International Association for Soaps, Detergents and Maintenance Products (AISE); International Confederation of Plastics Packaging Manufacturers (ICPP); International Council of Chemical Associations (ICCA); International Council on Mining and Metals (ICMM); International Fibre Drum Institute (IFDI); International Paint and Printing Ink Council (IPPIC); International Petroleum Industry Environmental Conservation Association (IPIECA); Responsible Packaging Management Association of Southern Africa (RPMASA); Sporting Arms and Ammunition Manufacturers' Institute (SAAMI) and The Grain and Feed Trade Association (GAFTA).

II. Adoption of the agenda (agenda item 1)

Documents: ST/SG/AC.10/C.4/51 (Secretariat)
ST/SG/AC.10/C.4/51/Add.1 (Secretariat)

Informal documents: INF.1, INF.2, INF.6 and INF.12 (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.30 and the withdrawal of INF.24.

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

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

1. Screening procedures for potential explosives

Document: ST/SG/AC.10/C.4/2013/5 (Sweden)

Informal document: INF.26, section A.1 (Secretariat)

8. The Sub-Committee adopted without modifications the amendments to paragraph 2.1.4.2.2 of the GHS proposed in paragraphs 13 and 14 of the document from Sweden (see Annex I).

2. Desensitized explosives

Document: ST/SG/AC.10/C.4/2013/6 (Germany)

Informal documents: INF.22 (Australia)

INF.26, section A.2 (Secretariat)

9. The Sub-Committee concurred with the Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee) on the need to include a new chapter in the GHS to address desensitized explosives and noted the decision taken by the TDG Sub-Committee to provisionally adopt the proposed amendments to the Manual of Tests and Criteria between square brackets¹.

10. Noting that there were a large number of editorial or technical comments on the proposed new chapter for the GHS, the Sub-Committee agreed to adopt the proposal in principle and invited experts to submit their comments in writing to the expert from Germany (Ms. Michael-Schulz: heike.michael-schulz@bam.de) before the end of January 2014 so that a revised formal proposal could be submitted to the next session.

11. Some experts pointed out that the French version of the proposal in the document from Germany needed to be revised to ensure consistency with the English version and with GHS terminology. They were invited to send their comments in writing to the secretariat.

3. Definition of Division 1.6 articles

Document: ST/SG/AC.10/C.4/2013/7 (Secretariat)

12. The Sub-Committee adopted the proposal in paragraph 3 of the document without modifications (see Annex I) and noted that the text between brackets in paragraph 4 was expected to be considered by the Working Group on Explosives at its next meeting during the 45th session of the TDG Sub-Committee in 2014.

¹ Refer to the report of the TDG Sub-Committee on its 44th session (document ST/SG/AC.10/C.3/88, paras. 108 and 109).

4. Clarification of skin corrosion criteria for sub-categories 1A and 1B in GHS and packing groups I and II in the UN Model Regulations

Document: ST/SG/AC.10/C.4/2013/8 (IPPIC)

Informal document: INF.26, section A.3 (Secretariat)

13. There was no support to amend the criteria in the GHS as proposed by IPPIC. Some experts felt that modifying the criteria as outlined in the proposal could be misunderstood as a suggestion to encourage retesting of already classified chemicals or to conduct additional tests on animals. Others considered that, in view of the very small number of chemicals addressed by the proposal, the most appropriate way to deal with the issue raised by IPPIC would be through appropriate guidance. There was some concern, however, on which of the hazard categories 1A or 1B should be assigned to these chemicals. The Sub-Committee agreed that this question should be addressed in the guidance.

14. In view of the comments made, the Sub-Committee invited the representative of IPPIC to consider developing such guidance and to submit it for consideration at a future session.

B. Practical classification issues

Informal document: INF.18 (United States of America)

15. The Sub-Committee noted that the informal working group, at its previous meeting, had agreed in principle on the introduction of the concept of “relevant ingredients” for “Specific target organ toxicity following single exposure” Category 3; on additional text to clarify that the approach for the classification of untested mixtures for aspiration hazards is additive; and on some editorial amendments intended to align the text in sections 4.1.3.5.5.3 and 4.1.3.5.5.4 with the criteria in table 4.1.3, and to clarify the criteria in table 3.7.1. Following the meeting of the informal group on Thursday afternoon, the Sub-Committee was informed that the group had discussed the proposals in INF.18 and intended to submit a formal document to the next session.

16. The Sub-Committee also noted that, at the same meeting, the group had agreed in principle to a set of guidance principles and a process to advance the work to revise the definitions in the health hazard chapters; to include the development of guidance on the application of the GHS to substances of unknown composition, complex reaction products or biological materials (UBCVs substances) on its agenda for the next meeting; and to continue working on the interpretation of the “interpolation” bridging principle.

C. Corrosivity criteria

Work of the Joint TDG-GHS Working Group on corrosivity criteria

Informal documents: INF.9 and INF.9/Add.1 (CEFIC)

INF.11 (United Kingdom)

INF.17 (Secretariat), paragraphs 18 and 19

INF.27 (United Kingdom)

17. The Sub-Committee noted the outcome of the meeting of the Joint TDG-GHS working group on corrosivity criteria in INF.27. The expert from the United Kingdom informed the Sub-Committee that the joint working group had reached agreement on working on a possible solution on the basis of the outline developed by the Netherlands and reproduced in paragraph 8 of INF.27, as a variation of option 6 in INF.11.

18. The Sub-Committee agreed to continue working on the development of a proposal on the basis of the outline presented in paragraph 8 of INF.27. It also agreed to request the TDG Sub-Committee to consider mechanisms to address the issue outlined in the first row of the table, i.e. developing a mechanism to assign substances to packing group I for transport purposes on the basis of considerations that could go beyond hazard classification.

19. It was also agreed to convene a meeting of the Joint Working Group during the next session of the Sub-Committee, back to back with the TDG Sub-Committee session, in July 2014.²

D. Dust explosion hazards

Informal document: INF.28 (United States of America)

20. The Sub-Committee noted the outcome of the meeting of the informal group on dust explosion hazards provided in INF.28.

E. Aspiration hazard: viscosity criterion for classification of mixtures

21. The Sub-Committee noted that IPPIC would continue to work on the issue.

F. Nanomaterials

Informal document: INF.23 (France)

INF.29 (France)

22. The Sub-Committee adopted the terms of reference for the work of the informal group on the basis of the proposal in INF.29, with a minor editorial change to subparagraphs (a), (b) and (c) (see Annex II).

G. Miscellaneous

1. Pyrophoric gases

Document: ST/SG/AC.10/C.4/2013/9 (United States of America)

Informal documents: INF.3 (United States of America)

INF.14 (EIGA)

INF.26, section A.5 (Secretariat)

23. There was general support for addressing pyrophoric gases in the GHS. In addition, although views were divided on whether they should be included as a category or sub-category within the hazard class “flammable gases” or as a new hazard class, most of the experts who spoke favored the proposal to include them as a category or sub-category of flammable gases (in a similar way as done in the past for chemically unstable gases).

24. During the discussion, questions were raised about the applicability of the 1% cut-off value for gas mixtures, the proposed value in the definition for the auto-ignition

² Note by the secretariat: The meeting of the Joint Working Group has been scheduled to take place on Wednesday 2 July 2013 (p.m).

temperature and the concepts of “spontaneous” or “delayed” ignition for pyrophoric gases. A number of comments were also made regarding the title of the chapter in the proposal in document ST/SG/AC.10/C.4/2013/9, the assigned hazard and precautionary statements and the test standards for determining pyrophoricity. A small informal group met during the breaks to address the comments made but could not achieve consensus on a proposal before the end of the session. The group agreed to continue working to develop an agreed proposal before the next session.

25. The Sub-Committee noted that the expert from the United States of America intended to submit a revised proposal to the next session.

2. Classification of polymerizing substances

Informal document: INF.26, section A.5 (Secretariat)

26. The Sub-Committee noted the information regarding on-going work on classification of polymerizing substances in the TDG Sub-Committee.

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

27. The Sub-Committee noted that the informal working group would continue to work on some editorial and technical questions with a view to submitting an information document to the next session.

28. Regarding guidance to address degradation for inorganic substances, the representative of ICMM informed the Sub-Committee that the informal group could not reach an agreement. Considering the technical nature of the issues raised, the informal group intended to seek the advice of OECD on how to address them before coming back to the Sub-Committee in the future with a suitable proposal for the GHS once all the technical issues have been solved.

IV. Hazard communication issues (agenda item 3)

A. Revision of Section 9 of Annex 4

Informal document: INF.5 (Germany)

29. The informal group on the revision of Section 9 of Annex 4 met on 4 December during the 26th session of the Sub-Committee.

30. The Sub-Committee noted that the group had decided to include detailed guidance for each of the properties for which a description was required under Section 9 of the Safety Data Sheet (SDS). It was also noted that the group had identified the need for consequential amendments to table 1.5.2 in Chapter 1.5 of the GHS (such as the deletion of the reference to the “evaporation rate” and the addition of a new entry addressing “particle characteristics”). Finally, the Sub-Committee noted that the group intended to submit a formal document to the next session with the proposals for amendment to the GHS emanating from its work.

B. Labelling of small packagings

Informal document: INF.17 (CEFIC)

31. The informal group on the labelling of small packagings met on 4 December during the 26th session of the Sub-Committee.

32. The Sub-Committee noted that the group had agreed in principle on the example provided in INF.17 and on its inclusion in Annex 7 of the GHS, and would submit a formal document to the next session for consideration.

33. The Sub-Committee also noted that the group intended to develop another example addressing other labelling issues and their possible solutions.

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

Informal document: INF.15 (United Kingdom)

34. The informal group on the improvement of Annexes 1 to 3 met on 4 December during the 26th session of the Sub-Committee.

35. The Sub-Committee noted that the group had assessed a significant number of precautionary statements with a view to limiting repetitions regarding the reference to a poison centre or doctor and to expanding guidance regarding which information should be shown in the label.

36. The group also considered the idea for a new precautionary statement addressing the disposal of malfunctioning or expired explosive articles handled by the general public (as contained in INF.18 submitted at the 25th session) and discussed the assignment of a new precautionary statement P212 for desensitized explosives (as proposed in document ST/SG/AC/10/C.4/2013/6).

D. Miscellaneous

Large pictograms on transport packages or cargo transport units

Document: ST/SG/AC.10/C.4/2013/10 (DGAC)

Informal document: INF.26, section B.1 (Secretariat)

37. There was no support for the proposal from DGAC.

38. Several experts considered that GHS labels should not be displayed on tanks or similar containers during transport, nor on freight containers, road vehicles or railway wagons/tanks as indicated in paragraph 1.4.10.5.1 of the GHS. A few others on the contrary, felt that the GHS information could be affixed where potential exposure to the chemical might occur (for instance, near a valve or a bottom opening of a tank) provided that this information did not interfere with the transport labels. Others did not agree with this approach from a practical point of view since they considered that it would be difficult to determine the language in which the text elements of the label should be displayed for means of containment used for international transport into different countries.

39. On the contrary, there was general agreement that the GHS information should be available at the workplace or supply and use settings where an exposure risk existed.

40. In view of the comments made by a few experts, the Sub-Committee recognized that some additional guidance on how to apply the GHS label elements might be needed (e.g. in terms of their applicability, size and placement) and invited interested experts to contact the representative of DGAC to work on a proposal.

V. Implementation of the GHS (agenda item 4)

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

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

INF.30 (United States of America)

41. The Sub-Committee noted the report on the outcome of the meeting of the informal correspondence group on the development of a global list of classified chemicals held on 5 December during the 26th session of the Sub-Committee, as provided in INF.30. The proposed phases to be followed for the pilot classification exercise and the way forward for the selection of chemicals to be considered by the group are outlined in paragraphs 3 and 5 of INF.30.

42. The Sub-Committee agreed to invite OECD to collaborate in the pilot classification exercise, in light of its expertise and previous experience in the classification of chemicals.

B. Reports on the status of implementation

1. South Africa

Informal document: INF.4 (South Africa)

43. The Sub-Committee noted the information related to the on-going development of legislation for GHS implementation and on several training and capacity building activities conducted in South Africa.

2. European Union

44. The Sub-Committee noted that a new adaptation to technical progress (ATP) to Regulation (EC) No. 1272/2008 (CLP Regulation) had been published on 3 October 2013. This 5th ATP³ to the CLP includes, in Annex VI to the regulation, new or updated harmonized classification and labelling for a number of substances. The new rules entered into force on 24 October 2013 but would only apply after a transitional period.

³ Official Journal of the European Union, L 261 of 3.10.2013, page 5 (<http://eur-lex.europa.eu/JOHtml.do?uri=OJ:L:2013:261:SOM:EN:HTML>)

C. Cooperation with other bodies or international organizations

1. Alignment of Annex I to the UNECE Convention on the Transboundary Effects of Industrial Accidents with the GHS

Informal document: INF.20 (Secretariat)

45. The Sub-Committee noted the report from the third meeting of the Working Group on the Development of the Convention and the proposal for the alignment of Annex I to the Convention with the GHS contained in the annex to the report of the Working Group.

2. Review of the Manual of Tests and Criteria: Work of the Sub-Committee of Experts on the Transport of Dangerous Goods on its 44th session

Informal document: INF.26, section C.1 (Secretariat)

46. The Sub-Committee noted the work on the revision of the Manual of Tests and Criteria currently on-going in the TDG Sub-Committee. Bearing in mind that the Tests described in the Manual are also relevant for GHS physical hazards, Sub-Committee experts were invited to consider the documents on this issue on the agenda for the next session of the TDG Sub-Committee and to liaise with the TDG Sub-Committee to ensure that the needs of the workplace and supply and use sectors are also addressed during the revision.

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

47. As no document had been submitted, this item was not discussed.

VII. Capacity building (agenda item 6)

Informal documents: INF.7 (UNITAR)

INF.25 (RPMASA)

48. The Sub-Committee noted the information provided by UNITAR regarding various country or regional projects for GHS implementation currently under way or completed during the last six months. It was also noted that the existing guidance and training materials were being reviewed and updated in accordance with the 5th revised edition of the GHS, that the next round of the e-learning course is expected to take place in early 2014 and that a module for the GHS will be developed by UNITAR and the International Labour Organization (ILO) for the "IOMC toolbox for decision-making in chemicals management (IOMC Toolbox)".

49. As regards work on nanomaterials, the Sub-Committee noted that UNITAR had developed guidance materials on nanotechnology and manufactured nanomaterials and was undertaking pilot projects to assist developing and transition countries to develop programmatic capacities to address nano issues at the national level.

50. The Sub-Committee also noted the information provided in INF.25 on GHS awareness raising and capacity building activities conducted by RPMASA in partnership with UNITAR. The Sub-Committee was informed that waste regulations released last August in South Africa require classification of wastes in accordance with the GHS as well as GHS compliant SDS and that industry was seeking guidance on the application of GHS provisions to wastes.

VIII. Other business (agenda item 7)

1. ECOSOC Resolution 2013/25

Informal document: INF.8 (Secretariat)

51. The Sub-Committee noted the adoption by ECOSOC of Resolution 2013/25 on the work of the Committee of Experts and its two Sub-Committees during 2011-2012 and its programme work for 2013-2014.

2. Vice-chairmanship of the Sub-Committee

52. The Sub-Committee was informed that Mr. Thomas Gebel, former head of the German delegation and Vice-Chairman of the Sub-Committee since 2009 has undertaken new responsibilities and would no longer attend the sessions of the Sub-Committee. The Sub-Committee expressed its appreciation for Mr. Gebel's contribution to the development of the GHS and to the work of the Sub-Committee and wished him the best of success in his new undertakings.

53. The Sub-Committee was invited to inform the Chairperson and the Secretariat, as soon as possible, whether it wished to hold elections at its next session for a new Vice-Chair for the rest of the term of the current biennium, or to wait until the end of the current biennium in December 2014 to elect its bureau for the period 2015-2016.

3. Condolences

54. Following the passing away on 5 December of Mr. Nelson Mandela, former President of South Africa, the Chairperson of the GHS Sub-Committee and the Chairman of the TDG Sub-Committee expressed their deepest condolences and respect to the South African delegation on behalf of both Sub-Committees.

IX. Adoption of the report (agenda item 8)

55. In accordance with established practice, the Sub-Committee adopted the report and its annexes) on its twenty-sixth session on the basis of a draft prepared by the secretariat.

Annex I

Draft amendments to the fifth revised edition of the Globally Harmonized System of Classification and Labelling of Chemicals (ST/SG/AC.10/30/Rev.5)

Chapter 2.1

- 2.1.2.1 (f) Replace “articles which contain only extremely insensitive substances or articles” with “articles which predominantly contain extremely insensitive substances or articles”

(Reference document: ST/SG/AC.10/C.4/2013/7)

Chapter 2.1

- 2.1.4.2.2 Amend the first sentence to read as follows: “The acceptance procedure for the hazard class Explosives need not be applied if:”

(Reference document: ST/SG/AC.10/C.4/2013/5)

- 2.1.4.2.2 (c) Amend to read as follows:

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

- the exothermic decomposition energy is less than 500 J/g, or
- the onset of exothermic decomposition is 500 °C or above

as indicated by Table 2.1.3.

Table 2.1.3 DECISION TO APPLY THE ACCEPTANCE PROCEDURE FOR THE HAZARD CLASS EXPLOSIVES FOR AN ORGANIC SUBSTANCE OR A HOMOGENOUS MIXTURE OF ORGANIC SUBSTANCES

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

The exothermic decomposition energy may be determined using a suitable calorimetric technique (see section 20.3.3.3 of the *UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria*); or”.

(Reference documents: ST/SG/AC.10/86/Add.1, annex IV as amended by ST/SG/AC.10/C.4/2013/5)

Annex II

Terms of reference for the work of the informal working group on nanomaterials

- (a) To establish whether there is a need to amend the GHS to make clear that nano forms of a substance are within scope of the GHS;
 - (b) To review the classification and labelling criteria in the GHS to establish whether they are appropriate for nano, as well as bulk-forms of a substance;
 - (c) To review the content of safety data sheets set out in the GHS in terms of their applicability to nano-forms of a substance;
 - (d) To report back to the Sub-Committee on the outcomes of (a) to (c) and to propose further work, as appropriate.
-