



**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-ninth session**

held in Geneva from 29 June to 1 July 2015

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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-ninth session from 29 June to 1 July 2015, with Mr. Robin Foster (United Kingdom of Great Britain and Northern Ireland) as Chairman on 29 June and Ms. Maureen Ruskin (United States of America) as Chairperson and Mr. Robin Foster as Vice-Chairman from 30 June and 1 July.
2. Experts from the following countries took part in the session: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Finland, France, Germany, Italy, Japan, Netherlands, New Zealand, Norway, Poland, Portugal, Republic of Korea, Russian Federation, 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: Romania and Switzerland.
4. Representatives of the the International Maritime Organization (IMO) and the United Nations Institute for Training and Research (UNITAR) were also present.
5. The following intergovernmental organization was also represented: European Union.
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); European Industrial Gases Association (EIGA); Federation of European Aerosol Associations (FEA); Grain and Feed Trade Association (GAFTA); International Association for Soaps, Detergents and Maintenance Products (AISE); International Bulk Terminals Association (IBTA); 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); 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.4/57 (Secretariat)
ST/SG/AC.10/C.4/57/Add.1 (Secretariat)

Informal documents: INF.1, INF.2 and INF.6 (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.20.

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

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

1. Revision of Chapter 2.1 of the GHS

Document: ST/SG/AC.10/C.4/2015/6 (SAAMI)

Informal documents: INF.8 (Australia)
INF.13 (Sweden)
INF.18, section A and Annex (Secretariat)

8. The Sub-Committee noted that the expert from Australia was no longer in a position to lead the work on the revision of Chapter 2.1 of the GHS, welcomed the initiative from the expert from Sweden to take up this role and agreed to the structure for the revision outlined in INF.13.

9. The Sub-Committee also noted that the expert from Sweden, in accordance with the procedure agreed by the Sub-Committee at its 28th session¹, intended to liaise with the Working Group on Explosives of the TDG Sub-Committee to work on this issue and to report to both sub-committees on the progress made. Experts interested in the revision were invited to contact the expert from Sweden.

10. The Sub-Committee also considered the proposal in the document from SAAMI as well as the outcome of the discussions at the TDG Sub-Committee on this issue. There was support in principle for some of the proposed amendments but in light of some of the comments made, it was felt that they needed to be developed further. Taking into account that the Working Group on Explosives of the TDG Sub-Committee would reconsider the issues raised by SAAMI within the context of the full revision of Chapter 2.1, the Sub-Committee decided to postpone its decision until this work was completed and the proposal for revision of Chapter 2.1 was submitted for its consideration.

2. Tests and criteria for oxidizing liquids and solids

Informal document: INF.18, section B (Secretariat)

11. The Sub-Committee noted that the Round Robin Testing Programme for Tests O.2 had started with the participation of 9 laboratories from five countries, and that the testing programme for Test O.3 was expected to be circulated in July 2015 to the 13 laboratories from 9 countries that had expressed their willingness to participate in the Programme. A progress report would be submitted to the December sessions of both sub-committees.

3. Explosives and related matters

12. The Sub-Committee noted that work on a number of explosives' related matters, including the revision of Parts I and II of the Manual of Tests and Criteria, was continuing. The summary of the discussions and conclusions of the Explosives Working Group on these matters during the 47th session of the TDG Sub-Committee was included in the report

¹ See the report of the Sub-Committee of Experts on its 28th session (ST/SG/AC.10/C.4/56, paragraphs 66-70).

of working group which was circulated as INF.53 to the 47th session of the TDG Sub-Committee.²

B. Classification criteria for flammable gases

Informal documents: INF.3 (Belgium and Japan)
INF.16 (United States of America)

13. The Sub-Committee took note of the progress made by the working group on classification criteria for flammable gases and expressed its appreciation for the good organization and outcome of the first meeting of the working group. The expert from Belgium indicated that the second meeting of the working group was scheduled to take place in Brussels from 8 to 10 September 2015 and that alternative options for participation of those who were unable to travel were foreseen.

14. Instead of considering the further sub-division of Category 1 into 1A and 1B only, some delegations suggested that Category 2 should be taken into account as well. They considered that since Category 2 is currently empty it could be used to achieve appropriate categorization while avoiding further sub-categorization. Others expressed concern about the unintended implications this option might have for the transport sector and considered that due consideration should also be given to the implications on the classification of pyrophoric gases and chemically unstable gases.

15. Noting that the terms of reference approved by both sub-committees explicitly mentioned the development of sub-categories within Category 1 to ensure that the change in classification criteria would not have implications for the transport sector, the Sub-Committee considered that the working group should continue to work in this direction. Should the possibility of using Category 2 arise as a possible solution in the future, this option could be considered at a later stage with the agreement of both sub-committees.

C. Corrosivity criteria

Document: ST/SG/AC.10/C.4/2015/2 (Canada)

Informal document: INF.18, section D (Secretariat)

16. The Sub-Committee noted the outcome of the discussions of the TDG Sub-Committee on this issue.

17. On the questions outlined in INF.18, section D, paragraph 76 (f), the Sub-Committee welcomed the proposal from the expert of the United States of America who volunteered to informally lead the efforts to further improve the additivity method to ensure better correlation of the results obtained with this calculation method and those obtained through the methods traditionally used for the assignment of packing groups in transport. It was suggested that improvement of the applicability of other non-animal testing methods (other than bridging principles) could be explored as well. Experts interested in contributing to this work were invited to contact the expert from the United States of America.

18. The Sub-Committee noted that in case no improvement in the applicability of the additivity method could be achieved within the current biennium or was foreseen for the

² Available at : <http://www.unece.org/transport/areas-of-work/dangerous-goods/meetings-and-events/ecosoc-bodies/tdg-sub-committee/informal-documents/47th-session.html>

next biennium, the TDG Sub-Committee would consider exploring other methods for the assignment of packing groups.

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

Informal documents: INF.4 (Netherlands)
INF.7 (Chairman of the TDG Sub-Committee Working Group
on Explosives)
INF.9 (Canada)
INF.18, section E (Secretariat)

Background documents:

Document: ST/SG/AC.10/C.4/2014/8 (Secretariat)

Informal documents: INF.5 and Add.1–5 (27th session) (Secretariat)
INF.19 (28th session) (Secretariat)
INF.53 (TDG Sub-Committee, 46th session)(United Kingdom)

19. The Sub-Committee noted that the outcome of the discussions of the Explosives Working Group had been endorsed by the TDG Sub-Committee. Some experts expressed objections to the deletion of the decision logics from the GHS.

20. It was noted that no formal decisions had been taken yet and that the Working Group intended to address the questions and comments raised by the secretariat in INF.5 and Add. 1-5, as well as the comments made during the sessions of both sub-committees. The Chairman of the Explosives Working Group said that he would consolidate the comments and submit proposals to both sub-committees, on the basis of which the secretariat may wish to consider issuing a revised version of the texts in INF.5 and its addenda to take account of the decisions made.

E. Dust explosion hazards

Informal documents: INF.14 (United States of America)
INF.19 (Argentina)

21. There were divided opinions on whether dust generated from agricultural products such as grains and flours was intrinsically hazardous.

22. Some delegations concurred with the expert from Argentina that agricultural products were not intrinsically hazardous and that the dust they generated only showed hazardous properties when several factors concurred, such as a defined particle size; minimum concentration in air; confinement in enclosed spaces or presence of an ignition source. They considered that the hazards associated with the development of dusts from agricultural products could be addressed by providing adequate information in the Safety Data Sheet.

23. The expert from the United States of America indicated that at present the focus of the work of the informal group was on the development of criteria for substances in dust form and that it was premature at this stage to address the issue raised by Argentina. The Sub-Committee noted that the group intended to finalize work on the development of a flowchart of criteria for combustible dusts before considering those that through processing could result in a dust explosion hazard.

24. On the request from several delegations to the expert from the United States to convene face-to-face meetings of the group at each session of the Sub-Committee, he

recalled that the informal working group was meant to work by correspondence but that face-to-face meetings would continue to be organized during Sub-Committee sessions as was done in the past.

F. Practical classification issues

25. The Sub-Committee noted that the informal group has addressed items (a), (d) and (g) of its programme of work (refer to informal document INF.32 submitted at the 28th session) during its meeting on 29 June 2015, and that status updates were provided on items (b) and (c). Pending agreement on some of the issues considered, the expert from the United States indicated that she intended to submit an informal document for the 30th session of the Sub-Committee.

G. Aspiration hazard: viscosity criterion for classification of mixtures

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

H. Nanomaterials

27. The Sub-Committee noted that France had initiated a classification exercise of some selected manufactured nanomaterials at national level with a possible proposal of a harmonised classification at EU level for one of them. The Sub-Committee also noted the update provided by Finland on the classification for environmental hazards made by the correspondence group. The availability of the “dossiers” under the “OECD Testing Programme of Manufactured Nanomaterials”³ was welcomed as a source of additional data for classification.

28. The expert from France informed the Sub-Committee that he intended to organize a teleconference for the correspondence group on nanomaterials by the end of September or in October 2015.

I. Joint work with the TDG Sub-Committee

Informal documents: INF.15 (Secretariat)
INF.18, section F (Secretariat)

29. The Sub-Committee noted that the experts from Belgium, France and the United Kingdom had submitted a proposal for joint work at the last session of the Committee (Committee’s informal document INF.3) which had been agreed subject to concurrence by both sub-committees (ST/SG/AC.10/42, para.16). The proposed possible arrangements for scheduling meetings for such joint work (ST/SG/AC.10/42, para.17) had also been endorsed by the Council.

30. The Sub-Committee concurred with the TDG Sub-Committee (see INF.18, section F) on the benefits of organizing a joint meeting of both sub-committees to address issues of common concern (e.g. corrosivity criteria, criteria for flammable gases, explosives, the Manual of Tests and Criteria, labelling/placarding issues, and all documents bearing a double symbol). It also concurred with the TDG Sub-Committee on having the

³ <http://www.oecd.org/chemicalsafety/nanosafety/dossiers-and-endpoints-testing-programme-manufactured-nanomaterials.htm>

first session of the joint TDG-GHS on Wednesday 9 December 2015. Experts wishing to submit documents to be considered by the joint TDG-GHS session were invited to give a clear indication in this respect at the time of submission. The deadline for submission of official documents to the joint TDG-GHS session is 4 September. The meeting arrangements (agenda, meeting duration, etc) would be defined by the officers of both sub-committees in consultation with the secretariat and circulated to both sub-committees as soon as possible.

IV. Hazard communication issues (agenda item 3)

A. Labelling of small packagings

Document: ST/SG/AC.10/C.4/2015/7 (CEFIC)

Informal document: INF.11 (CEFIC)

31. The Sub-Committee noted that the informal working group on labelling of small packagings had considered the examples provided in the documents from CEFIC and that they will be revised to take account of the comments received.

32. The representative from CEFIC invited additional comments from the Sub-Committee on the example provided in document ST/SG/AC.10/C.4/2015/7, and indicated that she intended to submit a revised proposal to the next session of the Sub-Committee for adoption.

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

33. The informal working group met on 30 June 2015 during the 29th Session of the Sub-Committee. In accordance with its programme of work, discussions focused on ideas to give labelling practitioners more flexibility in the selection and application of precautionary statements including the application of precautionary statements concerning first aid and medical attention and a proposal from FEA on minor linguistic variations in hazard and precautionary statements which do not affect the meaning of these statements.

34. The informal working group intends to develop an informal document for the December session of the Sub-Committee. The informal working group will continue to inform the Sub-Committee on progress in its work.

C. Miscellaneous

1. Order of the minimum information to be included in the Safety Data Sheet (Chapter 1.5, Table 1.5.2)

Document: ST/SG/AC.10/C.4/2015/1 (Secretariat)

35. The Sub-Committee could not reach consensus on any the proposed options and decided to keep the listing of items in Table 1.5.2 of the GHS and its related note as adopted at its 28th session.

2. Prohibition in transport of non-transport GHS pictograms when not in a complete GHS label

Document: ST/SG/AC.10/C.4/2015/3 (DGAC)

Informal document: INF.18, section G (Secretariat)

36. There was support in principle for the proposal from DGAC. It was noted that during the TDG Sub-Committee session, the possibility of inserting an explanatory note in the Model Regulations had been considered. The Sub-Committee invited the representative of DGAC to consider the development of an example to be included in Annex 7 of the GHS, or a note to be inserted in the Model Regulations.

37. The representative of DGAC said that he would consider the comments made and would submit a revised proposal for the next session.

3. GHS labels in transport on combination packagings containing multiple goods not subject to transport

Document: ST/SG/AC.10/C.4/2015/4 (DGAC)

Informal document: INF.18, section H (Secretariat)

38. The Sub-Committee acknowledged the concerns raised by DGAC and agreed that they needed to be addressed. It was noted however that the issues raised could be due to differences in the way GHS provisions were implemented in different parts of the world, rather than to a problem with the GHS provisions themselves. Therefore, Sub-Committee experts were invited to contact the representative of DGAC to share current practices at national and regional level as well as any guidance available. He indicated that, in cooperation with any other interested experts, he would work on the development of a proposal to be submitted for consideration by the Sub-Committee at a future session.

4. Application of precautionary statement P502 to explosives

Document: ST/SG/AC.10/C.4/2015/5 (Sweden)

Informal document: INF.20 (Sweden)

39. The Sub-Committee adopted the proposal to allow the application of precautionary statement P502 to explosives as amended by INF.20, with some additional modifications (see annex).

V. Implementation of the GHS (agenda item 4)

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

Informal document: INF.12 and –Adds 1-3 (United States of America)

40. The informal working group on the development of a list of chemicals classified in accordance with the GHS met on 30 June 2015. The Sub-Committee noted that the informal working group had been updated on the work done by the pilot project chemical sponsors on developing agreed data assessment and classification and labelling report forms and resources tracking forms. Several experts provided comments on ways to improve these forms. The Sub-Committee also noted that given that the development of the draft report

forms had taken longer than expected, sponsor countries would need more time than expected to complete the draft data and therefore the informal working group had agreed to the revised schedule for the pilot project as indicated in paragraph 6 of informal document INF.12.

B. Reports on the status of implementation

1. Brazil

41. The Sub-Committee noted that the Brazilian standard 14.725 for classification of mixtures in accordance with the GHS had entered into force on 1 June 2015.

2. Canada

Informal document: INF.10 (Canada)

42. The Sub-Committee noted that the Hazardous Products Regulations implementing the GHS for the workplace in Canada had been published in Part II of the Canada Gazette on 11 February 2015. The Hazardous Products Regulations amended the existing “Workplace Hazardous Materials Information System (WHMIS)” (WHMIS 1998) to introduce the GHS provisions. The new WHMIS (referred to as WHMIS 2015) can be applied from 11 February 2015. However, to give suppliers, employers and workers time to adjust to the new system, implementation of the new provisions will take place over a three-stage transition period⁴.

3. European Union

43. The Sub-Committee noted that Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) became mandatory for mixtures on 1 June 2015, following a transitional period during which both this Regulation and the old system of classification and labelling could be applied to mixtures. Both the “dangerous substances directive” (Directive 67/548/EEC) and the “dangerous preparations directive” (Directive 1999/45/EC) are repealed. It was also noted that mixtures with the old labelling that entered the supply chain before 1 June 2015 may remain on the market until June 2017.

4. United States of America

44. The Sub-Committee noted that the revisions to the Hazard Communication Standard implementing the GHS became effective on 1 June 2015. Since then, all manufacturers and importers are required to label their products and produce Safety Data Sheets in accordance with the GHS as implemented by the Hazard Communication Standard.

5. Switzerland

45. The Sub-Committee noted that the GHS was already in force for substances since 2012 and had entered into force for mixtures on 1 June 2015. Mixtures already classified and labelled according to the former system before that date may still be sold to final users

⁴ Refer to : <http://www.hc-sc.gc.ca/ewh-semt/occup-travail/whmis-simdut/transition/index-eng.php>

for 2 years. It was also noted that GHS implementation in Switzerland is supported by the information campaign “bien regardé, bien protégé”⁵.

C. Cooperation with other bodies or international organizations

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

D. Miscellaneous

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

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

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

VII. Capacity building (agenda item 6)

Informal documents: INF.5 (UNITAR)
 INF.17 (RPMASA)

49. The Sub-Committee took note of various projects, capacity-building and awareness raising activities related to the implementation of the GHS conducted between January and June 2015 around the world.

50. The representative from UNITAR indicated that projects for GHS implementation were about to be completed in four countries, while broader projects including GHS components were being conducted in another seven countries.

51. As regards training, guidance and resource materials, the Sub-Committee noted that the first version of the “IOMC Toolbox for Decision Making in Chemicals Management”, including a module with a draft management scheme for GHS implementation, was now available online⁶; that the 4th edition of the GHS e-learning course had been conducted from April to June 2015 and that a new edition was expected to be released during the fourth quarter of 2015.

52. The Sub-Committee noted RPMASA awareness raising and capacity building activities as well as its difficulties in identifying additional GHS experts in the Southern African region.

⁵ Further information about the campaign is available at: <http://www.cheminfo.ch/fr/page-daccueil.html>.

⁶ <http://iomctoolbox.oecd.org/>

VIII. Other business (agenda item 7)

A. Resolution of the Economic and Social Council

53. The Sub-Committee was informed that the resolution prepared by the Committee at its seventh session⁷ had been adopted without modifications by the Economic and Social Council on 8 June 2015.

54. The Sub-Committee thanked the secretariat for having already published the English and French versions of the sixth revised edition of the GHS and the nineteenth revised edition of the Recommendations on the Transport of Dangerous Goods, Model Regulations.

B. Corrections to the sixth revised edition of the GHS

55. The Sub-Committee noted that in Annex 3, Section 3, the matrix table for the acute toxicity oral exposure route (categories 1, 2 and 3) was missing. The secretariat was invited to issue a corrigendum to the sixth revised edition.

IX. Adoption of the report (agenda item 8)

56. In accordance with established practice, the Sub-Committee adopted the report on its twenty-ninth session on the basis of a draft prepared by the secretariat.

⁷ See the report of the Committee of Experts on its seventh session (ST/SG/AC.10/42, Annex IV) and the report of the Secretary-General to the Economic and Social Council (E/2015/66, Part I).

Annex

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

Annex 3, Section 2, Table A3.2.5

- **P501**

Delete the entry for explosives in columns (3) and (4)

- **P502**

Amend to read as follows:

Code (1)	Disposal precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P502	Refer to manufacturer or supplier [/. . .] for information on [disposal.] recovery or recycling	Explosives (Chapter 2.1)	Unstable explosives and Divisions 1.1, 1.2, 1.3, 1.4, 1.5	... Manufacturer/supplier or the competent authority to specify appropriate source of information, in accordance with local/regional/national/international regulations as applicable
		Hazardous to the ozone layer (Chapter 4.2)	1	<i>- Text in square brackets not to be used for hazardous to the ozone layer</i>

Annex 3, Section 3 matrix tables in A3.3.5

- In the tables for Explosives (Unstable explosives and Divisions 1.1, 1.2, 1.3, 1.4, 1.5), replace precautionary statement P501 with the following:

“P502

Refer to manufacturer or supplier [/. . .] for information on [disposal.] recovery or recycling

...Manufacturer/supplier or the competent authority to specify appropriate source of information, in accordance with local/regional/national/international regulations as applicable.”.

(The disposal precautionary statement for hazardous to the ozone layer remains unchanged)