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**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 SEVENTEENTH SESSION**
(Geneva, 29 – 30 June 2009)

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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 seventeenth session from 29 to 30 June 2009, with Ms. Kim Headrick (Canada) as Chairperson and Mr. Thomas Gebel (Germany) and Mrs. Elsie Snyman (South Africa) as vice-chairpersons.

2. Experts from the following countries took part in the session: Argentina, Austria, Belgium, Brazil, Canada, China, Denmark, Finland, France, Germany, Ireland, Japan, Kenya, Netherlands, Norway, Portugal, Qatar, Republic of Korea, Serbia, South Africa, Spain, 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, Romania, Russian Federation and Thailand.

4. Representatives of the United Nations Institute for Training and Research (UNITAR) and of the following specialized agencies were present: World Health Organization (WHO) and International Maritime Organization (IMO).

5. The following intergovernmental organizations were also represented: European Commission 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: Compressed Gas Association (CGA); Croplife International, European Chemical Industry Council (CEFIC); European Fertilizer Manufacturers' Association (EFMA); European Industrial Gases Association (EIGA); Federation of European Aerosol Associations (FEA); 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 Paint and Printing Ink Council (IPPIC); International Petroleum Industry Environmental Conservation Association (IPIECA); Responsible Packaging Management Association of Southern Africa (RPMASA); Soap and Detergent Association (SDA); and Sporting Arms and Ammunition Manufacturers' Institute (SAAMI).

II. ADOPTION OF THE AGENDA (agenda item 1)

Documents: ST/SG/AC.10/C.4/33 (Provisional agenda)
ST/SG/AC.10/C.4/33/Add.1 (List of documents and annotations)

Informal documents: INF.1 (List of documents), INF.2 (List of documents under each agenda item) and INF.16 (Provisional timetable for the meetings of the 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.22/Rev.1.

8. The Sub-Committee noted that following the Economic and Social Council decision 2009/201C of 18 May 2009, Kenya and the Republic of Korea, which had taken part in its work as observers for several years, had become full members of the Sub-Committee.

III. UPDATING OF THE THIRD REVISED EDITION OF THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) (agenda item 2)

A. Physical hazards

1. Development of classification criteria for combustible dusts

Documents: ST/SG/AC.10/C.4/2009/6 (United States of America)

Informal documents: INF.11 (Australia), INF.22 and INF.22/Rev.1 (United States of America)

9. Most experts were of the opinion that combustible dusts were a workplace problem. However, there were different views on the need to address their classification in the GHS.

10. Some experts explained that the hazard posed by combustible dusts was not related to their intrinsic properties but to a concurrence of several factors (such as the presence of an oxidizing agent, an effective ignition source, particle size, etc.) and therefore should be addressed from the point of view of risk assessment at the workplace. In addition, all organic material, in particular agricultural products, and not necessarily chemicals, are likely to pose this problem of dust explosion, especially when they are processed.

11. On the contrary others felt that criteria could be made available in the GHS to be used for the workplace sector, following the building block approach.

12. Others noted that the issue might fall within the scope of the work of other bodies (e.g. the International Labour Organization (ILO)) or might be already addressed at national or regional level.

13. The Sub-Committee entrusted the analysis of existing practices and regulations addressing dust explosion hazards, in accordance with the terms of reference in INF.22/Rev.1, to a correspondence group led by the United States of America. The correspondence group will inform the Sub-Committee of the outcome of the analysis and on that basis, the Sub-Committee will consider whether further work is needed.

2. Classification of aerosols

Informal documents: INF.4 (United Kingdom) and INF.19, para. 6 (Secretariat)

14. Most experts agreed that the pictogram for gases under pressure should not be required for aerosols falling within the scope of the definition of gases under pressure, but that further work on the development and harmonization of hazard and precautionary statements applicable to these aerosols was needed. Some experts proposed that the precautionary phrases which are currently being used by different regulatory regimes all over the world be also taken into account.

15. The Sub-Committee invited the expert from the United Kingdom to take into account the comments received and to submit a revised document for the next session.

3. Criteria for flammable gases in 2.2.5

Informal document: INF.7 (EIGA)

16. The Sub-Committee agreed on the correction to the equation in 2.2.5 and requested the representative from EIGA to submit an official document for the eighteenth session.

4. Chemically unstable gases

Informal documents: INF.10 (Germany) and INF.19, para. 7 (Secretariat)

17. The Sub-Committee noted with satisfaction the progress made by the working group on the development of criteria and a test method for the classification of chemically unstable gases.

18. With regard to the location of the new test method, the Sub-Committee noted that the Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee) had agreed that it should be included in the Manual of Tests and Criteria.

19. The Sub-Committee invited experts to provide comments on the questions raised in paragraph 11 of INF.10.

5. Work on desensitized explosives and Test Series 7

Informal document: INF.19, para. 7 (Secretariat)

20. The Sub-Committee noted the information provided by the Vice-Chairman of the TDG Sub-Committee on the status of work on desensitized explosives and on Test Series 7. Two experts requested that the reports of the informal working groups on matters of concern to the GHS Sub-Committee be circulated simultaneously to both Sub-Committees for ease of reference.

21. Following the request made by the TDG Sub-Committee Working Group on Desensitized Explosives, experts were invited to provide data for the assignment of the entries listed in paragraph 8 of the report of the TDG Sub-Committee Working Group on Explosives (circulated as informal document INF.57 at the thirty-fifth session of the TDG Sub-Committee).

B. Health hazards

1. Classification of poorly soluble particles for specific target organ toxicity followed repeated exposure

Document: ST/SG/AC.10/C.4/2009/5 (ICMM, CEFIC)

Informal document: INF.11 (Australia)

22. Most experts agreed that the interpretation of inhalation toxicity information from repeated inhalation exposure studies in rodents needed to be investigated further. However, it was felt that

the approach given in paragraph 3.9.2.8 (e) of the GHS was satisfactory and therefore the revision of current criteria was not necessary.

23. The representative of ICCM volunteered to provide information at the next session of the Sub-Committee on examples of classification where the application of 3.9.2.8 (e) could lead to no classification. Experts interested in participating in this work were invited to contact the representative of ICCM.

2. Editorial review of Chapters 3.2 and 3.3 of the GHS

24. The expert from Germany informed the Sub-Committee that the correspondence group on the editorial revision of chapters 3.2 and 3.3 of the GHS had compiled all comments collected and received so far by the members of the group in one single working document, to be used as the basis for discussion, which had already been circulated to its members.

25. Following a question from a member of the secretariat on the scope of the revision of chapters 3.2 and 3.3, he confirmed that the revision was intended to improve the clarity and user-friendliness of the skin corrosion/irritation and serious eye damage/irritation chapters, in accordance with the terms of reference agreed by the Sub-Committee at its sixteenth session (document ST/SG/AC.10/C.4/32, annex II, sub-paragraph (e)). See also paras. 57 to 61 of this report.

C. Annexes

1. Revision of Annexes 1, 2 and 3 (Precautionary statements)

Informal document: INF.14 (United Kingdom)

26. The Sub-Committee acknowledged the work done by the working group, provided some comments on the proposals referred to in paragraph 43 of INF.14 and invited the expert from the United Kingdom to continue the work on this matter.

D. Miscellaneous proposals

1. Concentration units of ingredients in mixtures

Document: ST/SG/AC.10/C.4/2009/2 (EIGA)

Informal document: INF.11 (Australia)

27. The proposal to express the concentration units for gases in 4.1.3.5.2 and 4.1.5.1.2 (decision logic 4.1.2), in weight/weight for solids, liquids, dusts, mists and vapours and in volume/volume for gases, was not adopted on the grounds that a concentration in volume/volume is not suitable to define the concentration of a gas dissolved in a liquid and therefore it is not applicable to determine its aquatic toxicity.

IV. HAZARD COMMUNICATION ISSUES (agenda item 3)

A. Pictograms for gases under pressure

Document: ST/SG/AC.10/C.4/2009/1 (EIGA)

Informal document: INF.11 (Australia)

28. The proposal to exempt packagings bearing a Class 2 label (flammable gases, non-flammable, non-toxic gases; toxic gases) in accordance with the UN Model Regulations on the Transport of Dangerous Goods from bearing also the GHS pictogram for the supply and use sectors applicable to gases under pressure, was not adopted.

29. Some experts were concerned about the implications that this exemption could have for other sectors where people were not necessarily trained to understand transport labels.

30. The expert from Germany proposed to delete the GHS pictogram for supply and use for gases under pressure on the grounds that the hazard would still be communicated through the signal word and the hazard statement. However, several experts noted that there might be situations where the transport label is not required (e.g. tanks for storage not intended to be transported) and where the GHS pictogram is the main tool to convey the hazard information to workers.

31. Since the Sub-Committee could not reach consensus on any of the proposals, the representative of EIGA and the expert from Germany were invited to present a revised proposal for the next session taking into account the comments received and the transport requirements for the labelling of Class 2 substances.

B. Labelling of small packagings

Informal document: INF.9 (CEFIC)

32. The Sub-Committee noted the information provided by CEFIC on the work on labelling of small packagings. Further updates on the status of the work on this subject will be provided to the Sub-Committee in due time.

V. IMPLEMENTATION ISSUES (agenda item 4)

A. Clarification of the bases for decision not to classify substances or mixtures in the GHS

Informal document: INF.3 (United States of America, Australia)

33. Several experts provided comments on the possible options to clarify in the Safety Data Sheet the bases for decision not to classify a substance or mixture (i.e.: interpretation of the terms “no data available”, “not classified” and “classification not possible”). The expert from the United States was invited to revise the proposal taking into account the comments received and to keep the Sub-Committee informed about the progress of the work on this subject.

B. Proposed items of work for the informal correspondence group on practical classification issues

Informal document: INF.5 (United States of America)

34. Following a question from the expert from France, it was made clear that the mandate of the group would only include addressing the items listed under paragraph 4 of INF.5 and that any other question on classification issues should be addressed to the Sub-Committee.

35. The expert from Germany said that the discussions on GHS coverage of asphyxiation (item 4 (f)) should take into account the conclusions and findings of the working group on the classification of gas mixtures on this subject to avoid reopening the discussions on issues on which an agreement had already been reached in the past.

36. The Sub-Committee agreed on the items to be considered by the correspondence working group proposed in paragraph 4 of INF.5.

VI. DEVELOPMENT OF GUIDANCE ON THE APPLICATION OF GHS CRITERIA
(agenda item 5)

A. Application of the GHS to substances of unknown or variable composition, complex reaction products or biological materials (UVCBs) in specific petroleum substances and options for publication of sector specific guidance

Document: ST/SG/AC.10/C.4/2009/7 (IPIECA)

Informal documents: INF.11 (Australia) and INF.13 (Secretariat)

37. The Sub-Committee reiterated its view that the ownership of any sector-specific guidance developed by the industry for the application of the GHS criteria belonged to the authors, who should remain responsible for its contents.

38. Most experts suggested that providing a link from the GHS web pages on the UNECE secretariat website to an industry public website containing the guidance would be the best option to make it available worldwide. However, it was made clear that this would not imply any endorsement of industry's guidance by the Sub-Committee. To that end, the Chairperson and the secretariat volunteered to prepare a draft disclaimer to be included in the relevant web pages of the UNECE secretariat website, for consideration by the Sub-Committee at its next session.

39. The Sub-Committee took note of the guidance in document ST/SG/AC.10/C.4/2009/7 and some experts offered to provide additional comments to IPIECA.

VII. STATUS OF IMPLEMENTATION OF THE GHS (agenda item 6)**A. Reports from governments or organizations****1. Consideration of issues relevant to Safety Data Sheets by the IMO Sub-Committee on Bulk, Liquids and Gases at its thirteenth session (BLG13)**

Document: ST/SG/AC.10/C.4/2009/4 (IMO)

Informal documents: INF.11 (Australia) and INF.12 (IPIECA)

40. The Sub-Committee noted the information provided by the representative of IMO on the requirements for Safety Data Sheets (SDS) in relation to Annex I of the International Convention for the Prevention of Pollution from ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78).

41. Noting some differences between the IMO SDS (referred to as MSDS in document ST/SG/AC.10/C.4/2009/4) and the GHS SDS, most experts were of the opinion that using a single SDS covering the needs of all sectors was important. They strongly suggested that if the maritime sector felt that additional information was needed on a harmonized SDS, this should be proposed to the Sub-Committee. It was suggested that the views of the Sub-Committee on this issue be communicated to the BLG Sub-Committee.

42. It was also proposed that IPIECA submit a document to the next session of the BLG Sub-committee highlighting its concerns.

43. The representative of IMO informed the Sub-Committee that the fourteenth session of the BLG Sub-Committee (BLG 14) would be held from 8 to 12 February 2010 and that he would subsequently provide a report at the nineteenth session of the GHS Sub-Committee (July 2010) about the outcome of the discussions.

44. Some experts suggested that a joint correspondence group on SDS should be established between the Sub-Committee and the IMO BLG Sub-Committee. It was agreed that the Sub-Committee would consider this suggestion after consideration of the report of the BLG on its fourteenth session.

45. In the meantime, the Sub-Committee requested the secretariat to communicate the views of the Sub-Committee on this issue to the BLG Sub-Committee.

2. European Commission

Informal document: INF.15 (European Commission)

46. The representative of the European Commission informed the Sub-Committee of a Conference on worldwide rules for classification, labelling and packaging of chemicals which was held in Brussels on 17 June 2009. The conference, which was intended to explain the main

features of the European Regulation implementing the GHS in the European Union (referred to as the CLP Regulation)¹, will be available on the web for one year.

47. Regarding guidance materials, she explained that several guidance documents for the application of GHS criteria were under development and were expected to be finalized soon.

48. She also mentioned that the first adaptation to technical progress (ATP) to the CLP Regulation, transferring additional harmonized classification for specific substances under Directive 67/548/EEC, to the CLP regulation was expected to be published in the Official Journal of the European Union by the end of July 2009. Suppliers should apply the harmonized classifications set in the first ATP and adapt the labelling and packaging provisions accordingly before 1 December 2010 at the latest.

49. Regarding safety data sheets, the Sub-Committee noted that the Commission services were in the process of adapting Annex II of the REACH Regulation² in accordance with the GHS requirements.

3. Argentina

50. The expert from Argentina said that an inter-ministerial technical working group had recently been established to prepare a GHS implementation strategy in his country.

51. As regards regional initiatives, he said that Argentina, Brazil, Chile and Paraguay had presented to the Inter-American Development Bank a project for the implementation of the GHS in the region as a tool to enhance the protection of human health and the environment as well as trade facilitation. The project has been pre-selected and it is expected that the resulting regional plan for the implementation of the GHS be approved by June 2010. Uruguay is expected to join the project in a near future.

4. Brazil

Informal document: INF.17 (Brazil)

52. The expert from Brazil informed the Sub-Committee that Ordinance number 20 concerning safety at work (flammable gases and liquids) had been revised in accordance with the GHS and issued for public consultation in December 2008. He also said that the revision of Ordinance number 26, dealing with chemicals hazard communication, had recently been approved. He also

¹ *Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (1).* (OJ L353, 31.12.2008, Volume 51).

² *Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.*

provided information about different GHS events which had been organized in Brazil in the past six months.

5. United States of America

53. The expert from the United States of America announced that the Occupational Safety and Health Administration (OSHA) of the Department of Labor had sent the GHS proposal for the workplace to the Office of Management and Budget (OMB) for final review prior to its publication (expected by October 2009). Once published, the proposal will be available for review and comment prior to the completion of the regulation. OSHA will issue a press release with links to the proposal at the time of publication.

6. Norway

54. The expert from Norway said the GHS would be implemented in Norway by the end of 2009 through the adoption of the CLP Regulation, which was currently being translated into Norwegian. She added that the same transitional periods established by the CLP Regulation would be applicable in Norway.

7. Japan

55. The expert from Japan explained that six hundred substances had been classified according to the GHS since the beginning of this year (in addition to the 1500 substances that had already been classified in the past). He also informed the Sub-Committee that Japan, the Republic of Korea and China continued to work together in the comparison of the classification results of a limited number of substances, in the framework of the Tripartite Policy Dialogue on Chemicals Management.

8. Organization for Economic Co-operation and Development (OECD)

56. The representative of the OECD informed the Sub-Committee of an ongoing programme for the classification of chemicals listed in Annex III of the Rotterdam Convention in accordance with the GHS. The Sub-Committee as well as the secretariat of the Rotterdam Convention will be informed about the outcome of the program.

B. Cooperation with other bodies or international organizations

1. Further alignment of the corrosivity criteria in the Model Regulations on the Transport of Dangerous Goods with the GHS criteria

Informal documents: INF.19, paras. 8-15 and INF.20 (Secretariat)

57. The Sub-Committee was informed of the discussions held during the thirty-fifth session of the TDG Sub-Committee on this issue.

58. It was explained that the proposal from the Netherlands for further alignment of the criteria for corrosivity in the Model Regulations with the GHS criteria had not been adopted mainly because:

- (a) Several experts understood that the GHS criteria for corrosivity were being revised by the informal group on the review of chapters 3.2 and 3.3 and that the decision to amend the text in the Model Regulations should be deferred until the review had been carried out; and
- (b) Other experts considered that the GHS criteria for corrosivity were not suitable for transport (in particular the use of extreme pH values as good indicators of corrosivity). They thought that its application would inappropriately bring into the scope of the regulations more substances and would lead to further testing.

59. On (a), the expert from Germany explained that the review of chapters 3.2 and 3.3 was meant to be editorial and that no changes in the criteria were envisaged (see also para. 26).

60. On (b), the Sub-Committee expressed the wish that any issue related to the implementation of the GHS criteria in any of the sectors involved should be brought to its consideration.

61. The Sub-Committee noted the decision of the TDG Sub-Committee to carry forward the proposal from the expert from the Netherlands to its next session for consultation by a working group which will meet during the second week of the TDG Sub-Committee meeting (further details to be communicated in due time). Experts from the Sub-Committee were encouraged to participate in the working group.

VIII. CAPACITY BUILDING (agenda item 7)

Informal document: INF.6 (UNITAR)

62. The representative of UNITAR informed the Sub-Committee of recent activities of the UNITAR/ILO Global GHS Capacity Building Programme, including the completion of the national GHS capacity assessment and workshop in Uruguay; acceptance by the Strategic Approach to International Chemical Management Quick Start Programme (SAICM QSP) Trust Fund proposals for Gambia and Zambia; development of GHS training materials in the framework of the Swedish Chemicals Agency (KemI)'s project "Towards a non-toxic environment in Africa" to be pilot tested at a workshop in Nigeria in July 2009, in cooperation with the Basel Convention Regional Coordinating Center; and plans for a sub-regional GHS Conference in Beijing in 2010.

63. On the preparation of guidance materials, she announced that the draft introductory course to the GHS will be pilot tested next year before being updated and finalized, and said that the revision and further development of the training course "Classifying chemicals according to the GHS, and GHS labels and SDSs" was ongoing.

IX. OTHER BUSINESS (agenda item 8)

A. Safety of nanomaterials

Document: ST/SG/AC.10/C.4/2009/3 (France)

Informal document: INF.11 (Australia)

64. The Sub-Committee noted the information provided by the expert from France regarding currently available information about nanotechnology.

B. Report of the Secretary-General

Informal document: INF.8 (Secretariat)

65. The Sub-Committee noted that the report of the Secretary General would be discussed during the Economic and Social Council substantive session of 2009 (6 - 31 July 2009).

C. International Transport and Environmental Conference

Informal document: INF.18 (RPMASA)

66. The Sub-Committee was informed of the outcome of the International Transport and Environmental Conference held in Durban from 2 to 4 March 2009.

D. Work on terrestrial hazards

67. The expert from Spain announced to the Sub-Committee that his country would not be able to continue leading the work on hazards for the terrestrial environment during this biennium, although it would be happy to cooperate with any other country who may wish to take over the leadership.

E. Informal working group on Test Method N.5

68. The Sub-Committee noted that a meeting of the informal working group on test method N.5 would be held back-to-back with the next session of the Sub-Committee in December 2009. Interested experts were invited to participate in the work of the informal working group.

X. ADOPTION OF THE REPORT (agenda item 9)

69. The Sub-Committee adopted the report on its seventeenth session on the basis of a draft prepared by the secretariat.
