



**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 Transport of Dangerous Goods

**Report of the Sub-Committee of Experts on the Transport of
Dangerous Goods on its fifty-third session**

held in Geneva from 25 June to 4 July 2018

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* For practical reasons this annex has been published in an addendum to this report (ST/SG/AC.10/C.3/106/Add.1).

I. Attendance

1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its fifty-third session from 25 June to 4 July 2018 with Mr. D. Pfund (United States of America) as Chair and Mr. C. Pfauvadel (France) as Vice-Chair.
2. Experts from the following countries took part in the session: Australia, Austria, Belgium, Brazil, Canada, China, Finland, France, Germany, Italy, Japan, Netherlands, Republic of Korea, Poland, Russian Federation, Spain, Sweden, Switzerland, United Kingdom and United States of America.
3. Under rule 72 of the rules of procedure of the Economic and Social Council, observers from Ireland, New Zealand, Qatar and Slovakia also took part.
4. Representatives of the European Union and the Intergovernmental Organization for International Carriage by Rail (OTIF) also attended.
5. Representatives of the Food and Agriculture Organization (FAO), the International Atomic Energy Agency (IAEA), the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO) and the World Health Organization (WHO) were also present.
6. Representatives of the following non-governmental organizations took part in the discussion on items of concern to those organizations: Australian Explosives Industry Safety Group (AEISG), Compressed Gas Association (CGA), Cosmetics Europe, Council on Safe Transportation of Hazardous Articles (COSTHA), Dangerous Goods Advisory Council (DGAC), Dangerous Goods Trainers Association (DGTA), European Association for Advanced Rechargeable Batteries (RECHARGE), European Association of Automotive Suppliers (CLEPA), European Chemical Industry Council (CEFIC), European Committee for Standardization (CEN), European Industrial Gases Association (EIGA), Federation of European Aerosol Associations (FEA), Institute of Makers of Explosives (IME), International Air Transport Association (IATA), International Association for Soaps, Detergents and Maintenance Products (AISE), International Association of Fire and Rescue Services (CTIF), International Confederation of Container Reconditioners (ICCR), International Confederation of Drums Manufacturers (ICDM), International Confederation of Plastics Packaging Manufacturers (ICPP), International Council of Intermediate Bulk Container Associations (ICIBCA), International Fibre Drum Institute (IFDI), International Organization for Standardization (ISO), International Organization of Motor Vehicle Manufacturers (OICA), International Paint and Printing Ink Council (IPPIC), International Petroleum Industry Environmental Conservation Association (IPIECA), International Road Transport (IRU), International Tank Container Organisation (ITCO), Kilofarad International (KFi), Medical Devices Battery Transport Council (MDBTC), The Rechargeable Battery Association (PRBA), Responsible Packaging Management Association of Southern Africa (RPMASA), Sporting Arms and Ammunition Manufacturers' Institute (SAAMI) and Stainless Steel Container Association (SSCA).

II. Opening of the session

7. Mr. Yuwei Li, the Director of the United Nations Economic Commission for Europe (UNECE) Sustainable Transport Division, welcoming the participants, stressed the importance of the work of the Sub-Committee in relation to the Sustainable Development agenda and its goals, and in particular to road safety. He explained that the Sustainable Transport Division was at the latest stages of defining its strategy for the future, to support

the vision expressed in the ministerial resolution “Embracing the new era for sustainable inland transport and mobility” adopted in February 2017 by transport ministers from the ECE region and from the contracting parties to conventions under the purview of the UNECE Inland Transport Committee (see ECE/TRANS/2017/2, Annex I). Noting that 58 United Nations transport legal instruments were under the responsibility of the UNECE Sustainable Transport Division, Mr. Li considered that with this ministerial resolution, the role of UNECE as the global centre for inland transport was formally recognized.

8. The Sub-Committee expressed its gratitude to the UNECE secretariat for the services provided and support to its work and wished that appropriate resources and support continue to be provided by UNECE.

III. Adoption of the agenda (agenda item 1)

Documents: ST/SG/AC.10/C.3/105 (Provisional agenda)
ST/SG/AC.10/C.3/105/Add.1 (List of documents)

Informal documents: INF.1 and INF.2 (List of documents)
INF.12 (Provisional timetable)
INF.27 (Working group on lithium batteries)
INF.28 (Working group on fibre-reinforced plastics portable tanks)
INF.40 (Reception organized by NGOs)

9. The Sub-Committee adopted the provisional agenda prepared by the secretariat after amending it to take account of informal documents INF.1 to INF.71.

10. Some experts regretted that the late announcement of the meeting of the working group on fibre-reinforced plastics portable tanks had made it difficult for them to organise the participation of experts or develop a formal position on the matter. They requested that information about organisation of working groups meetings in parallel to the plenary be announced well in advance to the sessions so that the necessary arrangements to ensure attendance of relevant experts could be made.

IV. Explosives and related matters (agenda item 2)

11. After preliminary consideration in plenary, all documents under agenda item 2, as well as those addressing the use of the Manual of Tests and Criteria in the context of the GHS (agenda item 10 (d)) and informal document INF.29 on the proper shipping names for UN Nos. 0237 and 0288 were referred to the Working Group on Explosives, which met from 25 to 28 June 2018 under the chairmanship of Mr. E. de Jong (Netherlands).

12. The Sub-Committee noted that all documents addressing the review of Chapter 2.1 of the GHS (agenda item 10 (e)) would be preliminary discussed by the intersessional correspondence group led by the expert from Sweden on Thursday morning (28 June) with participation of experts from the Working Group of Explosives (see paragraphs 25 to 27). Detailed discussions on these documents would take place during the joint session of both sub-committees on Tuesday 3 July (see paragraphs 163 to 165).

13. It was pointed out that informal document INF.33 should be considered by the Sub-Committee as part of its work as the GHS Sub-Committee’s focal point for physical hazards.

Report of the Working Group on Explosives

Informal document: INF.67 (Chairman of the Working Group)

14. Having considered the report of the Working Group on Explosives and heard the explanations provided by its chairman, the Sub-Committee noted the conclusions listed

below for each subject under consideration under agenda items 2 and 10 (d). The adopted texts will be included in the consolidated list of draft amendments adopted at the fifty-first, fifty-second and fifty-third sessions for confirmation by the Sub-Committee at the next session. Since some of these texts were adopted on the basis of informal documents available only in English, they are not detailed in the annexes to this report.

A. Review of test series 6

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

B. Review of tests in parts I, II and III of the Manual of Tests and Criteria

1. Improvement of the 8 (c) test for ammonium nitrate emulsions (UN No. 3375)

Informal document: INF.22 (IME)

16. There was no consensus within the Working Group on the proposal for a minimum burning pressure test for ammonium nitrate emulsions. The Sub-Committee noted that the expert from Canada and the representative of IME would take account of the comments made and submit a revised proposal for the next session.

2. Use of “practical explosive or pyrotechnic effect”

Informal document: INF.39 (Sweden)

17. The Sub-Committee took note of the outcome of the discussions of the working group as reflected in paragraph 5 of its report. It was noted that the expert from Sweden would take account of the comments made and consider revisiting this issue in the future.

C. Electronic detonators

Document: ST/SG/AC.10/C.3/2018/58 (AEISG)

18. The Sub-Committee endorsed the recommendation by the Working Group and adopted amendments 1, 2, 3, and 4 in Annex 2 of informal document INF.67 (see annex I).

D. Guidance for application of test series 3 and 4

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

E. Stability tests for industrial nitrocellulose

1. Stability tests for nitrocellulose mixtures

Document: ST/SG/AC.10/C.3/2018/9 (CEFIC)

20. The Sub-Committee endorsed the recommendation by the Working Group and adopted amendment 5 in Annex 2 and amendments 1, 2, 3 and 4 in Annex 3 of informal document INF.67 (see annexes I and II).

2. Classification of desensitized explosives in accordance with Chapter 2.17 of the GHS

Informal document: INF.7 (CEFIC)

21. The Sub-Committee endorsed the recommendation by the Working Group and adopted amendments 5 and 6 in Annex 3 of informal document INF.67, with some changes (see annex II).

F. Application of security provisions to explosives N.O.S

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

G. Review of packing instructions for explosives

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

H. Classification of articles under UN No. 0349

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

I. Review of Chapter 2.1 of the GHS

Document: ST/SG/AC.10/C.3/2018/33 (Sweden)

Informal documents: INF.9 (Sweden)
INF.33 (USA, IME, SAAMI)
INF.46 (Sweden)

25. The Sub-Committee noted that the GHS informal group on the review of Chapter 2.1 met jointly with the Working Group on Explosives on Tuesday 28 June to review and refine some technical aspects, primarily the criteria for the proposed GHS categories. After discussion, both groups concurred on the following:

- (a) Classification into divisions would be relevant for explosives in their transport packaging/configuration (including storage in that packaging/configuration), with category 1 to be assigned by default to explosives to which a Division cannot be assigned (e.g: in manufacturing, processing or other similar situations);
- (b) Classification at sub-category level (in accordance with the summary criteria outlined in item 18 of informal document INF.67) would be relevant level for supply and use and other similar situations.

26. The Sub-Committee noted that both groups had reached consensus on the interpretation of the proposed classification scheme and would continue work to further refine some technical details and finalise the review.

27. It was also noted that the review of Chapter 2.1 would also be addressed during the joint session of the TDG and the GHS sub-committees (see paragraphs 163 to 165) and the thirty-fifth session of the GHS Sub-Committee (see ST/SG/AC.10/C.4/70 paragraphs 24 to 27).

J. Miscellaneous

1. Reference to ISO 12097 in 2.1.3.6.4

Document: ST/SG/AC.10/C.3/2018/6 (Germany)

28. The Sub-Committee endorsed the recommendation by the Working Group and adopted amendment 6 in Annex 2 of informal document INF.67 (see annex I).

2. Classification of UN No. 0431

Document: ST/SG/AC.10/C.3/2018/48 (United States of America)

29. There was no consensus within the Working Group to include UN No. 0431 in the table for default classification of fireworks in 2.1.3.5.5. The Sub-Committee noted that the expert from the United States of America would conduct further review and consider submitting a revised proposal in the future.

3. Determination of electrostatic sensitiveness discharge (ESD)

Document: ST/SG/AC.10/C.3/2018/52 (SAAMI)

30. The Sub-Committee noted the concerns of the Working Group about including in the Manual of Tests and Criteria tests not required by the Model Regulations, the lack of general support for describing specific methods for ESD and the suggestion to replace them with an overview of the testing concept and some examples. It was also noted that the representative of SAAMI would take account of the comments made and consider submitting a proposal in the future.

4. Transport of controlled shipments of explosives (≤ 25 g) that are not yet classified

Document: ST/SG/AC.10/C.3/2018/53 (SAAMI)

Informal document: INF.43 (SAAMI)

31. The Sub-Committee noted the conclusions and comments by the Working Group in informal document INF.67 (item 12) and that SAAMI would consider submitting a revised proposal in the future that would take them into account. Noting the proposal in informal document INF.43 for classification in Division 1.4, Compatibility Group S, and that 1.4S explosives could be transported in passenger aircrafts, the representative of ICAO invited SAAMI to provide further information on this proposal to the ICAO Dangerous Goods Panel.

5. Transport of energetic samples for further testing

Informal document: INF.17 (CEFIC)

32. The Sub-Committee noted that the Working Group had requested more time to examine and find a practical solution to the issue raised and that it has encouraged the representative of CEFIC to submit an official document to a future session to facilitate the discussions.

6. UN No. 0222 (Ammonium nitrate)

Informal document: INF.21 (IME)

33. The Sub-Committee noted that the Working Group could not reach consensus on the proposal to exclude commercial grades of ammonium nitrate from the current scope of

special provision 370, applicable to UN No. 0222, and that the representative of IME would submit a revised proposal for the next session.

7. Additional LP101 entries into the dangerous goods list

Informal document: INF.24 (United Kingdom)

34. The Sub-Committee noted the different interpretations on the suitability of LP101 for the transport of small articles of UN No. 0012 and that the expert from the United Kingdom intended to consider the comments made by the Working Group and submit an official document for the next session.

8. Proper shipping names for explosives in Spanish

Informal document: INF.29 (Spain)

35. The Sub-Committee endorsed the recommendation of the Working Group for amendment of the Spanish version of the proper shipping names of UN Nos. 0237 and 0288 as contained in amendment 7 in Annex 2 of informal document INF.67. The secretariat was invited to take them into account when preparing the twenty-first revised edition of the Model Regulations. The proposal for amendment of the French version of the proper shipping names was not adopted.

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

Document: ST/SG/AC.10/C.3/2018/1 (Chairman of the Working Group)

Informal documents: INF.3, 4, 5 (Chairman of the Working Group)

36. The Sub-Committee endorsed the recommendation of the Working Group and adopted the proposals in ST/SG/AC.10/C.3/2018/1 as amended in annexes 2 (amendment 8) and 3 (amendments 7, 8, 9, 10, 11 and 12 (with some changes)) of informal document INF.67 (see annexes I and II).

37. The Sub-Committee noted that the Working Group intended to submit proposals for amendment to parts II and III of the Manual at the next session. It was also noted that EIGA would continue work on improvement of tests series H and that, once finished, the related proposals of amendment would be addressed separately.

V. Listing, classification and packing (agenda item 3)

A. Viscous liquids not subject to regulation

Document: ST/SG/AC.10/C.3/2018/4 (Spain)

38. The Sub-Committee concurred with the expert from Spain that the differences in the flash point values in paragraph 2.3.2.5.1 of the Model Regulations and 32.5.1.4 in the Manual of Tests and Criteria were not justified and adopted the amendment to 32.5.1.1 proposed in paragraph 5 of the document (see annex II).

39. It was also noted that paragraph 32.5.1.4 contained references to no longer existing paragraphs in the Manual of Tests and Criteria (i.e. 32.3.1.6 and 32.3.1.7) and that this has already been addressed in informal document INF.5.

40. The representative of CEFIC considered that the description of the solvent separation test in 32.5.1 could be improved to include further details, indications on the temperature

range etc. The Sub-Committee considered that this should be the subject of a separate proposal.

B. Name and description of UN No. 3363

Document: ST/SG/AC.10/C.3/2018/7 (Germany)

41. Most experts considered that the two options proposed by Germany were acceptable. After an exchange of views, the Sub-Committee adopted option 1 (see annex I).

C. Corrections to the names of several UN numbers

Document: ST/SG/AC.10/C.3/2018/11 (Spain)

42. The Sub-Committee adopted the corrections to the Spanish version of the proper shipping name of UN Nos. 2044, 2441, 2949, 3138 and 3300. They will be included in a corrigendum to the Spanish version of the Model Regulations.

D. Classification of self-inflating recovery devices

Document: ST/SG/AC.10/C.3/2018/13 (Germany)

Informal document: INF.6 (Germany)

43. Views were divided on the proposed options. Most experts were not in favor of extending the scope of application of UN No. 2990 (option 1) as they considered that this entry had been specifically created to cover appliances performing a live-saving function and should not be used for other purposes. Others were reluctant to the introduction of new UN numbers, either in Class 1 or in Class 9 (options 3 and 4).

44. After some discussion and noting that some of these devices met the criteria for exclusion from Class 1, the expert from the United States of America suggested considering addressing them in a note under 2.1.3.6.4. Although acknowledging that this solution might not be suitable for all the potential configurations of these devices, the proposal was well received, and most experts welcomed this suggestion. The Sub-Committee noted the increasing need to address classification of these types of devices as new products are being developed (e.g. self-inflating jackets, self-inflating helmets).

45. The expert from Germany invited other delegations to work with her to develop a proposal for the next session.

E. Entries assigned to special provisions 117 and 123

Document: ST/SG/AC.10/C.3/2018/28 (COSTHA)

46. Some experts considered that special provisions 117 and 123 should be deleted, as there was no value in indicating in the Model Regulations when a substance is only regulated for transport by a specific mode (e.g. air or sea) and the modes have discretion to decide when their provisions apply to the transport of a given substance. Others on the contrary, considered that this guidance was useful. The Sub-Committee concluded that it would not be appropriate to take such a decision without assessing all its implications.

47. After considering the proposal in paragraph 9 together with the comments made during the discussion, the Sub-Committee adopted the replacement of special provision 117 by special provision 123 for UN Nos. 1372, 1387, 1856, 1857 and 3360 (see annex I). If

needed, amendments to other UN numbers (e.g.: 2216, 3166 and 3171) might be considered in the future within the framework of a more comprehensive revision of other provisions.

F. Organic peroxides: new formulations to be listed in 2.5.3.2.4 and IBC520

Document: ST/SG/AC.10/C.3/2018/29 (CEFIC)

48. On a question from the expert from Canada, the representative of CEFIC explained that the proposal for a change from packing method OP7 to OP8 was based on test data which were not available at the time OP7 had been assigned to di-(4-tert-butylcyclohexil) peroxydicarbonate, using a read-across approach. Other experts confirmed that tests results conducted according to the Manual of Tests and Criteria supported this change. On these grounds, the Sub-Committee adopted the proposal in paragraph 2 of the document (see annex I).

G. Editorial corrections to the French and English text of the Model Regulations

Document: ST/SG/AC.10/C.3/2018/38 (Canada)

49. Some experts noted that the proposed amendments in paragraphs 2, 4, 6 and 7 might have unintended consequences in the interpretation of the criteria and were reluctant to adopt them without considering in detail when “and” or “or” should be used (i.e.: when compliance with all conditions or with only some of them was required). The Sub-Committee considered that it would be useful to examine the original proposal submitted to the Sub-Committee at the time these provisions were introduced into the Model Regulations and requested the secretariat to provide this information at the next session in an information document.

50. The Sub-Committee adopted the corrections to the references in 2.3.1.3 and the note under 2.6.2.2.4.1, as proposed in paragraphs 3 and 5 of the document (see annex III).

H. Proposal to amend special provision 375 in relation to UN Nos. 3077 and 3082

Document: ST/SG/AC.10/C.3/2018/47 (DGAC, COSTHA)

51. The Sub-Committee noted that the proposal was based on industry practices, was not substantiated with relevant data and might not be suitable for sea transport. Some experts expressed sympathy for continuing consideration of this issue based on additional data and safety justifications. Most experts did not agree that a lack of accidents or incidents justified the proposal from a safety point of view. Others did not support the change of the net quantity or mass per packaging, as it would allow transport of bigger quantities in untested packagings.

52. The representative of COSTHA withdrew the proposal. He said that he would continue gathering data from industry and consider submitting a revised proposal in the future that would take account of the comments made.

I. Classification of strontium metal and subsidiary hazard corrosivity of alkali and alkaline earth metals

Informal document: INF.14 (Austria)

53. Several experts indicated that according to 2.0.0.2 of the Model Regulations, substances and articles not specifically mentioned in the dangerous goods list should be classified under the generic or not otherwise specified (n.o.s.) entry which most appropriately described their properties.

54. The Sub-Committee invited the expert from Austria to submit data on the corrosive properties of the substances listed in his document to ascertain whether it would be necessary to add a subsidiary hazard in the dangerous goods list for the applicable generic entries or to consider more specific UN numbers for these substances. The representative of the European Union volunteered to cooperate with the expert from Austria in gathering data.

J. Assignment of special provision 356 to UN No. 3529

Informal documents: INF.19 and INF.61 (IATA)

55. The Sub-Committee adopted the amendments to special provision 356 in informal document INF.61 with some additional changes, as well as its assignment to UN No.3259 (see annex I).

K. Amendment of packing instruction P404

Informal document: INF.23 (CEFIC)

56. There was general support for the proposal and the Sub-Committee invited the representative of CEFIC to revise the proposal in the light of the comments made and to submit an official document for the next session.

L. Technical names for environmentally hazardous goods of Class 9 (UN Nos. 3077 and 3082)

Informal document: INF.26 (IPPIC)

57. The Sub-Committee did not support the deletion of special provision 274 for these two entries. Most experts considered that the technical name provided relevant information about the properties of the substances transported under these entries that were particularly useful in case of spillage to determine appropriate containment and cleaning-up measures. It was also pointed out that deleting this provision would create disharmony with the IMDG Code, which require technical names to be specified for marine pollutant substances even when special provision 274 is not assigned.

58. Concerning the complexity of the technical names, it was pointed out that the Model Regulations allowed the use of generic or chemical family names. One expert suggested that the use of generic names such as “ink” or “paint” could be considered in this context.

59. The representative of IPPIC noted the interpretation provided by the Sub-Committee on the possibility to use simplified technical names in the context of the application of special provision 274 and said that she would reconsider the need to submit a proposal to clarify this further in the Model Regulations.

M. Transport of barium carbonate as non-dangerous good

Informal document: INF.32 (Spain)

60. Even though some experts agreed that barium carbonate could be considered as non-dangerous based on the data provided, opinions were divided on the need to introduce a special provision stating that it is not subject to transport of dangerous goods regulations.

61. Some experts noted that substances not meeting the criteria for classification in any of the dangerous goods classes were, by default, not subject to transport of dangerous goods regulations. They considered that it was not necessary to include additional provisions in the Model Regulations for further clarification on a case-by-case basis. Others considered it acceptable given that existing special provision 177 explicitly excludes barium sulphate. Some others felt that a more detailed analysis could be carried out to identify other substances in the same situation as that described for barium carbonate.

62. The expert from Spain pointed out that despite the availability of data demonstrating the non-dangerous nature of barium carbonate during transport, problems persisted in international transport, as some countries still required it to be transported under UN No. 1564. After an exchange of views, she said that she would submit an official document for the next session with detailed information on data from different sources.

N. Exemptions for polymerizing substances

Informal document: INF.50 (CEFIC)

63. One delegation highlighted the importance of determining the sensitiveness of these substances to heating under confinement and questioned the appropriateness of using an exemption based on the criteria referring to explosives in 2.1.3.6.4 (a) and (b) (i.e: external surface temperature and level of the rupture or fragmentation of the packaging). Another delegation considered that it should be made clear that the proposed exemption would only apply to polymerizing substances transported in small packagings.

64. The representative of CEFIC said that he would work with the delegations that provided comments and submit a revised proposal for the next session.

O. Spanish names for explosives

Document: ST/SG/AC.10/C.3/2018/14 (Spain)

65. The expert from Spain informed the Sub-Committee that the Spanish speaking delegations in the Sub-Committee had agreed to the corrections proposed in ST/SG/AC.10/C.3/2018/14 with some modifications. The Sub-Committee invited the secretariat to ensure that they were taken into account in the Spanish version of the next revised edition of the Model Regulations.

P. Clarification of performance testing requirements for infectious substances packagings in Chapter 6.3

Document: ST/SG/AC.10/C.3/2018/25 (Canada)

Informal documents: INF.31 (United Kingdom)
INF.59 (Canada and United Kingdom)

66. The Sub-Committee adopted the proposal in ST/SG/AC.10/C.3/2018/25 as amended by informal document INF.59 with some additional modifications (see annex I).

Q. Revision of packing instruction P801

Document: ST/SG/AC.10/C.3/2018/21 (Canada)

Informal document: INF.62 (Canada)

67. The proposal for amendment to P801 in ST/SG/AC.10/C.3/2018/21, paragraph 8, was adopted as amended by informal document INF.62 with some additional changes (see annex I). The proposed amendment to PP16 was withdrawn.

R. Classification and packaging for infectious waste of Category A

Document: ST/SG/AC.10/C.3/2018/20 (Canada)

Informal document: INF.70 (Canada)

68. There was general support for the proposals in ST/SG/AC.10/C.3/2018/20 as amended by informal document INF.70, with some additional changes. However, noting that some experts needed more time to consult with public authorities on the proposed amendments, the Sub-Committee decided to place them between square brackets for confirmation at the next session (see annex I).

S. Review of the definition of infectious substance and the table in 2.6.3.2.2.1

Document: ST/SG/AC.10/C.3/2018/26 (Canada)

Informal document: INF.68 (Canada)

69. There was no support for the proposed editorial amendments in paragraphs 7 to 13 in ST/SG/AC.10/C.3/2018/26. The proposals in paragraphs 5 and 6 (amendments to 2.6.1 (b), 2.6.3.1.1 and note 3 to 2.6.3.2.2.1 of the Model Regulations) were adopted (see annex I).

VI. Electric storage systems (agenda item 4)

A. Testing of lithium batteries

Document: ST/SG/AC.10/C.3/2018/50 (PRBA, RECHARGE)

70. There was no support for the proposal as drafted. Most experts considered that it would be premature to exempt all types of primary lithium cells and batteries at the discharge state from the T.1 to T.6 testing requirements in the absence of more detailed test results data and details, such as: description of the types and sizes of lithium cells and batteries covered by the exemption; comparison of the tests results for a given type of lithium cell or battery when tested at the fully charged and at the undischarged state, etc. The expert from China indicated that in some cases, tests conducted with primary discharged batteries resulted in burning, leaking and even explosion of the tested batteries.

71. The representatives of PRBA and RECHARGE invited the expert from China to share the details of the tests results with them and said that they would take account of the comments made and would submit a revised proposal together with the additional data requested by the Sub-Committee at a future session.

B. Hazard-based system for classification of lithium batteries

Document: ST/SG/AC.10/C.3/2018/59 (France, RECHARGE)

Informal documents: INF.37 (France, RECHARGE)

INF.66 (France on behalf of the lunchtime working group)

72. The Sub-Committee took note of the outcome of the meeting of the lunchtime working group in informal document INF.66. It was noted that the group was focusing in a first instance on the development of a hazard-based classification system for lithium batteries, in accordance with the action points listed in paragraph 17 of informal document INF.66. Consideration of other conditions such as the mitigation properties of packagings would be addressed at a later stage.

73. The expert from France informed the Sub-Committee that the next face to face meeting of the informal working group will take place in the IATA offices in Geneva (4 to 6 December 2018). Further details on the organization of the meeting will be provided at a later stage.

C. Transport provisions

Harmonization of the proper shipping names of UN Nos. 3481 and 3091

Document: ST/SG/AC.10/C.3/2018/37 (RECHARGE, PRBA)

Informal document: INF.65/Rev.1 (RECHARGE, PRBA)

74. The Sub-Committee adopted the proposal in option 1 in ST/SG/AC.10/C.3/2018/37 as amended by informal document INF.65/Rev.1 with some changes (see annex I).

D. Damaged or defective lithium batteries

Document: ST/SG/AC.10/C.3/2018/51 (PRBA, MDBTC, RECHARGE)

Informal document: INF.69/Rev.1 (PRBA, MDBTC, RECHARGE)

75. The Sub-Committee adopted the proposal in ST/SG/AC.10/C.3/2018/51, paragraph 6, as amended by informal document INF.69/Rev.1 (see annex I).

E. Sodium-ion batteries

Document: ST/SG/AC.10/C.3/2018/3 (United Kingdom)

76. There was support in principle for the proposal but the Sub-Committee considered that it needed to be further developed before it could be adopted. Most experts considered that additional information on the chemical properties of the discharged sodium-ion batteries was needed, as well as on their size, composition (e.g. amount of electrolyte), behaviour when discharged (e.g. full absence of electrical risk during normal conditions of transport), measures to prevent accidental activation etc. Others pointed out that sodium-ion batteries

could not be compared to other energy storage systems such as ultracapacitors as their operation mechanism was different.

77. The expert from the United Kingdom withdrew the proposal and said that he would take account the comments made and consider submitting a revised proposal at a future session.

F. Miscellaneous

1. Examples of lithium battery test summary and additional questions and answers

Informal document: INF.38 (PRBA, RECHARGE, MDBTC)

78. The Sub-Committee took note of the information provided. The authors of the document said that they would continue to inform the Sub-Committee about matters related to compliance with the test summary required by 2.9.4 and would request to convene an informal lunchtime working group during its fifty-fifth session.

2. Dimensions of the lithium battery mark

Informal document: INF.41 (PRBA, RECHARGE)

79. Some experts were concerned about the implications of the proposal (e.g. potential reduction in the level of safety; possibility to use small marks irrespective of the size of the package). They considered that marks should always remain visible.

80. It was pointed out that the current wording in 5.2.1.9 already allowed the use of smaller marks when the size of the package so required. Noting the concerns expressed by some delegations on the difficulties encountered in the field to interpret this provision, some experts suggested the authors of the proposal to work on a revised wording of the existing text to make it clearer without changing the current provisions.

81. The representative of ICAO informed the Sub-Committee that this issue will be brought to the attention of the Dangerous Goods Panel at its next meeting in October 2018 and that a report on the outcome of the discussions will be provided to the Sub-Committee at its fifty-fourth session.

82. The representatives of PRBA and RECHARGE withdrew the proposal and said that they would submit a revised document for the next session that would take account of the comments made.

3. Sodium-Nickel chloride (Na-NiCl₂) cells and batteries

Informal document: INF.45 and Add.1 (Switzerland)

83. Most of the experts who took the floor were reluctant to exempt the transport of discharged sodium-nickel chloride cells and batteries from the Regulations. They noted that, according to the information provided, a certain amount of sodium remained in the battery even at the discharged state and consequently the chemical hazard could not be ignored.

84. Some experts considered that the existing UN No. 3292 was the most appropriate entry to describe the chemical hazard associated with the transport of these cells and batteries and felt that specific transport or packing provisions could be developed for them under this UN number.

85. The expert from Switzerland stressed the fact that no incidents related to the transport of this type of cells and batteries had been reported for many years. He felt that this safety record should be borne in mind when considering less stringent transport requirements. The

Sub-Committee invited him to take account of the comments made and to submit an official document for the next session.

VII. Transport of gases (agenda item 5)

A. Global recognition of UN and non-UN pressure receptacles

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

B. Miscellaneous

1. Shells for UN acetylene cylinders

Document: ST/SG/AC.10/C.3/2018/8 (Canada)

Informal documents: INF.18 (ISO)
INF.36 (Germany)

87. The Sub-Committee adopted the proposal in ST/SG/AC.10/C.3/2018/8, paragraph 2, as amended by informal documents INF.18 and INF.36 (see annex I).

2. Clarification of a marking provision for UN pressure receptacles

Document: ST/SG/AC.10/C.3/2018/22 (ISO)

Informal document: INF.57 (ISO)

88. The Sub-Committee adopted the proposal in ST/SG/AC.10/C.3/2018/22, paragraph 2, as amended by informal document INF.57 with some changes. A consequential amendment to 6.2.2.9.2 was also adopted (see annex I).

3. New and updated ISO standards in Class 2

Document: ST/SG/AC.10/C.3/2018/23 (ISO)

89. The Sub-Committee adopted proposals 1, 2, 3, 5 and 6 in ST/SG/AC.10/C.3/2018/23 (see annex I).

90. Noting that the amendment in proposal 4 would imply a significant increase in the pressure value for the burst test applicable to self-closing cylinder valves and that this decision had not been reached by consensus at ISO level, some experts expressed objections to its adoption. It was also noted that no incidents had been reported with valves tested at the current 450 bar pressure value. The representative of ISO withdrew proposal 4 and said that he would work with EIGA and CGA to reach consensus on this issue and would keep the Sub-Committee informed of the outcome.

91. Following a comment made by the expert from Germany on proposal 6, the Sub-Committee noted that other standards in Chapter 6.2 might have been superseded by newer versions. The representative of ISO volunteered to review all references in Chapter 6.2 and submit a proposal for the next session with the necessary updates.

4. Update of LC₅₀ values in P200

Document: ST/SG/AC.10/C.3/2018/24 (ISO)

92. The Sub-Committee supported the proposal in principle. However, several experts felt that more information about the background behind the proposed values was needed before a decision could be taken.

93. On a question from the expert from Switzerland on the relevance of these data in the context of packing instruction P200, several industry representatives indicated that the toxicity values were used, among other purposes, to determine toxicity of mixtures or handling conditions and considered that they should not be removed.

94. The representative of ISO withdrew the proposal and said that he would work with EIGA and CGA to compile the data requested by the Sub-Committee and submit a revised document for the next session.

5. Provision for the carriage of waste gas cartridges (UN No. 2037)

Document: ST/SG/AC.10/C.3/2018/36 (Ireland)

Informal document: INF.42 (ECMA)

95. There was support in principle for the proposal in option 2 in ST/SG/AC.10/C.3/2018/36. However, several experts indicated that some improvements to the text were needed before it could be adopted, such as: avoid misunderstandings in the interpretation of the text of special packing instruction L2 as regards the requirement for absorbent material, consider introducing a reference to pressurized salvage packagings and amending current PP87 instead of introducing a new special packing provision.

96. Concerning informal document INF.42, the Sub-Committee considered that punctured small receptacles containing gas (gas cartridges), which are automatically emptied, were out of the scope of the regulations. On these grounds, it concluded that the proposed explanatory text for special provision 327 was not necessary.

97. The observer from Ireland said that she would submit a revised proposal for the next session that would take account of the comments made.

6. Incidents with composite cylinders without a liner manufactured from two parts joined together

Informal document: INF.10 (ISO)

98. The Sub-Committee adopted between square brackets the proposals in informal document INF.10 with some changes, for confirmation at its next session (see annex I).

7. Amendment to packing instruction P206 for gas-based suppression systems

Informal document: INF.11 (CEFIC)

99. There was support in principle for reinstating the 10-year periodic inspection for UN No. 3500 but the Sub-Committee could not reach consensus on the proposed options. The representative of CEFIC was invited to take account of the comments made and to submit a revised proposal for the next session.

VIII. Miscellaneous proposals for amendments to the Model Regulations on the Transport of Dangerous Goods (agenda item 6)

A. Marking and labelling

1. Colour of the elevated temperature substance mark in accordance with 5.3.2.2

Document: ST/SG/AC.10/C.3/2018/10 (France)

100. The Sub-Committee adopted the proposed correction to the French text of 5.3.2.2 in paragraph 5 of the document (see annex III).

2. Amendments to special provision 363

Document: ST/SG/AC.10/C.3/2018/19 (Germany)

101. The Sub-Committee considered that the proposed amendments would improve the understanding of placarding provisions and adopted them as proposed in paragraphs 4 and 5 of the document (see annex I).

3. Description of label No. 9A

Informal document: INF.47 (Russian Federation)

102. The Sub-Committee did not adopt the amendments to 5.2.2.2.1.3 and 5.2.2.2.1.5 as it considered that they did not provide additional clarity.

103. The expert from the Russian Federation felt that the description of label 9A in the table under 5.2.2.2.2 and in 5.2.2.2.1.3 and 5.2.2.2.1.5 could be further aligned and said that he would consider submitting a formal proposal for the next session.

4. Use of the term “placard” in the Model Regulations

Informal document: INF.49 (Russian Federation)

104. The Sub-Committee took note of the terminology issues raised by the Russian Federation and requested the secretariat to communicate the proper terms to linguistic services to ensure that they are corrected in the next revised edition of the Model Regulations.

B. Packagings

1. Maximum permitted stacking load of IBC

Document: ST/SG/AC.10/C.3/2018/27 (ICPP)

Informal document: INF.16 (CEFIC)

105. The Sub-Committee adopted the amendment to 6.5.2.2.2 as proposed in ST/SG/AC.10/C.3/2018/27, paragraph 3, with an additional consequential amendment to 6.6.3.3 (see annex I).

106. The Sub-Committee did not agree to the introduction of a new definition for “carriage”, as proposed in informal document INF.16, to be used only in the context of 6.5.2.2.2. It was noted that the proposed definition would introduce a concept of “carriage” that differed significantly from that already extensively used in land transport legal

instruments, thus introducing disharmony and a potential source of confusion and misunderstandings.

2. Requirements for routine maintenance of IBCs

Document: ST/SG/AC.10/C.3/2018/44 (Belgium)

107. The Sub-Committee did not agree to the amendment to 4.1.2.4 as proposed by Belgium.

108. It was noted that the reference to the owner of the IBC included cases where routine maintenance was delegated to third parties. As this was applicable not only to IBCs but also to other means of containment, the Sub-Committee considered that introducing the additional clarification in 4.1.2.4 for IBCs only would be misleading.

3. Inner receptacle marking of composite IBCs

Document: ST/SG/AC.10/C.3/2018/45 (Belgium)

109. The Sub-Committee confirmed that the marks of the inner receptacles should remain visible throughout the whole life of the IBC to allow for the necessary inspections and checks. In the light of this interpretation, the expert from Belgium withdrew the proposal for amendment to 6.5.2.2.4.

4. Aluminium drums

Document: ST/SG/AC.10/C.3/2018/32 (Italy)

110. Several experts noted that the text proposed by the expert from Italy addressed a general requirement applicable not only to metal drums but also to other materials (e.g. plastics) and types of packagings. They considered that to avoid repetition of text, it would be preferable to insert a general requirement in Chapter 6.1 rather than addressing all types of materials and types of packagings individually.

111. Others considered that the amendment was not necessary as 4.1.1.2 already prescribed the use of suitable inner coatings or treatments, when required, to ensure that all packagings are able to perform its containment function under normal conditions of transport.

112. After some discussion, the Sub-Committee adopted the proposal to insert a new paragraph in 6.1.4.2.6 addressing the use of protective coatings or treatments to ensure compatibility of aluminium drums with the substance to be transported. On an oral proposal from the expert from the Netherlands, the Sub-Committee also adopted the insertion of the same text for drums other than steel or aluminium as a new 6.1.4.3.6 (see annex I).

113. The Sub-Committee invited experts to review Chapter 6.1 to identify other materials for which this provision might apply.

5. Proposal for an IBC informal working group

Informal document: INF.52 (United Kingdom)

114. Bearing in mind the high safety record of IBCs and noting that no specific issues had been identified with the current provisions, most of the experts who took the floor considered that a full review of Chapter 6.5 was not justified from a safety point of view. It was noted that informal working groups should only be convened to address issues requiring additional time or expertise, when this could not be made available during the plenary.

115. The expert from the United Kingdom explained that the proposed revision was not intended to review the current requirements but to increase harmonization of approaches between chapters 6.1 and 6.5 and ensure better alignment with 6.6. and 6.7. He concluded

that he would take account of the comments made and consider coming back in the future with a list of items to be addressed for consideration by the Sub-Committee.

6. Multiple marking of packagings, including IBCs and large packagings, indicating conformity with more than one successfully tested design type

Document: ST/SG/AC.10/C.3/2018/49 (CEFIC, DGAC)

Informal documents: INF.44 (United Kingdom)
INF.53 (CEFIC)

116. The Sub-Committee confirmed that packagings (including IBCs and large packagings) may conform to more than one design type and be marked accordingly and considered that it was not necessary to amend the definition of IBC to clarify this further as the current definition does not preclude to test and approve an IBC additionally as a packaging.

117. The Sub-Committee adopted the proposals in ST/SG/AC.10/C.3/2018/49, paragraphs 12 and 13, as amended by informal document INF.53, with an additional amendment to 4.1.1.3.1 (see annex I).

7. Minimum wall thickness for metal IBCs

Document: ST/SG/AC.10/C.3/2018/34 (SSCA)

Informal document: INF.60 (SSCA)

118. Views were divided on the proposal to delete the minimum wall thickness requirement for metal IBCs in 6.5.5.1.6. Some experts considered that this requirement guaranteed a minimum level of safety and that more information was needed to assess the potential impact of this deletion on the IBC performance level. Others on the contrary, felt that the concerns expressed about resistance to corrosion or extreme heat conditions during long multimodal journeys were more related to the expected lifetime of the IBC than to the wall thickness requirements.

119. Noting the request of several experts for additional time to consult stakeholders at national level, the Sub-Committee decided to defer the decision on this issue and invited the representative of SSCA to submit the proposal in informal document INF.60 as an official document for the next session.

8. Marking of the date of manufacture on packagings of types 1H and 3H and inner receptacles of composite IBCs

Document: ST/SG/AC.10/C.3/2018/46 (Belgium)

Informal document: INF.63 (Belgium)

120. The proposal in ST/SG/AC.10/C.3/2018/21 was adopted as amended by informal document INF.63 with some additional changes (see annex I).

C. Portable tanks

1. Additional provisions applicable to the transport of Class 8 substances in portable tanks

Document: ST/SG/AC.10/C.3/2018/18 (Canada)

121. There was support for further clarification of the provisions in 4.2.1.17.1. However, the proposal as written raised concerns about the interpretation of the periodicity and scope

of the proposed inspection, as regards the reference to 6.7.2.18.8 (e) and the 2.5 and 5-year inspection and testing requirements for portable tanks in Chapter 6.7.

122. The expert from Canada withdrew the proposal and said that she would submit a revised document for the next session that would take account of the comments made.

2. Holding time: information in the transport document

Document: ST/SG/AC.10/C.3/2018/42 (Belgium)

123. The Sub-Committee adopted the proposal in paragraphs 6 and 7 of the document (see annex I).

3. Clarification of portable tank special provision TP19

Document: ST/SG/AC.10/C.3/2018/43 (Belgium)

124. The Sub-Committee adopted option 2 of the proposal in paragraph 6 of the document with some amendments (see annex I).

4. Portable tanks with expired inspection dates and those switched from general cargo to dangerous goods content

Informal document: INF.15 (United Kingdom)

125. Several experts noted that in their view, portable tanks used for general cargo should be subject to the 5-year inspection and test in accordance with Chapter 6.7 before being put in service for transport of dangerous goods. Others pointed out that they have had no time to consider this issue before the session.

126. The Sub-Committee invited the expert from the United Kingdom to take account of the comments made and to submit an official document for the next session.

5. Design pressure calculations

Informal document: INF.54 (Russian Federation)

127. There was some support in principle for the proposal but noting that it had been circulated as a late informal document, the Sub-Committee invited the expert from the Russian Federation to take account of the comments made and submit an official document for the next session.

6. Proposal for a new Chapter 6.10

Informal documents: INF.55 (Russian Federation)

INF.64 (United States of America on behalf of the working group)

128. The proposal for a new Chapter 6.10 was addressed within the framework of the work of the informal working group on fibre-reinforced plastics (FRP) tanks.

129. The Sub-Committee took note of the outcome of the meeting of the informal working group in informal document INF.64, including its intention to convene a meeting on 26 and 27 November, in parallel to the Sub-Committee's plenary session.

7. Minimum shell thickness for portable tanks used for the carriage of non-refrigerated liquefied gases

Document: ST/SG/AC.10/C.3/2018/41 (Belgium)

130. The Sub-Committee agreed that the current text should be clarified but could not reach consensus on the proposed text. After some discussion, the expert from Belgium withdrew the proposal and said that he would submit a new one for the next session that would take account of the comments made.

D. Other miscellaneous proposals

1. Correction to the Model Regulations

Document: ST/SG/AC.10/C.3/2018/15 (Germany)

131. The Sub-Committee adopted the proposals in paragraphs 4 and 5 of the document. It was noted that special provision 323 should also be removed from the dangerous goods list against UN Nos. 3101 to 3120 (see annex III).

2. Deletion of expired portable tank instructions

Document: ST/SG/AC.10/C.3/2018/31 (Germany)

132. The Sub-Committee adopted the proposals in paragraphs 4 and 5 of the document with some corrections (see annex I).

3. Inconsistencies in section 1.1.1.2 (a) between language versions

Document: ST/SG/AC.10/C.3/2018/40 (Netherlands)

133. The Sub-Committee confirmed that “means of transport” was the correct term in the English version and noted the inconsistencies in translation between the English and French versions in 1.1.1.2 (a). Several experts considered that the most appropriate term in French in this context would be “moyen de transport”. However, it was pointed out that this term was already defined in Chapter 1.2 and translated into English as “conveyance” which did not seem to be an appropriate term for 1.1.1.2 (a).

134. The expert from the Netherlands was invited to work with other interested delegations to find a suitable solution for the inconsistencies between language versions in 1.1.1.2 (a) while respecting the terminology already used in the Model Regulations and defined in Chapter 1.2.

4. Use of “conductivity” and “conductance” in Chapter 6.7

Document: ST/SG/AC.10/C.3/2018/56 (France)

135. The proposal in paragraph 6 of the document was adopted (see annex I).

5. Harmonisation of the requirement “structurally serviceable”

Informal document: INF.13 and Add.1 (CEFIC)

136. Several experts noted that the concept of “structurally serviceable” in 7.1.3.3 (b) had initially been introduced to address transport of explosives in bulk and expressed concern about the impact of extending its scope to dangerous goods of all classes transported in large containers. They were also concerned about the deletion of the 19 mm requirement as they felt it provided clear guidance to users on the assessment of damage. After an exchange of views, it was suggested to seek the advice of the Working Group on Explosives on the

rationale behind the 19 mm and the specific scope of current 7.1.3.3 (b). Others felt that for the purposes of the Model Regulations it would be more appropriate to replace specific criteria with a general requirement for expertise. The expert from Germany pointed out that structural serviceability requirements were already implemented for land transport of dangerous goods of all classes in large containers, at least in countries contracting parties to RID and ADR, as these provisions were incorporated in paragraph 7.1.4 of RID and ADR.

137. The expert from Germany thanked all experts who provided comments and said that she would continue to work on this issue with other interested delegations with a view to submit a revised proposal.

6. Definition of “Flash point”

Informal document: INF.48 (Russian Federation)

138. Some experts expressed concern at the potential unintended consequences of the proposal (e.g. conflicts with the standards listed in 2.3.3 for the determination of flash point). Others mentioned that the proposed definition was not in line with that in Chapter 1.2 of the GHS and noted that the proposal was not justified from a safety point of view. On these grounds, the Sub-Committee did not support the introduction of a definition of flash point in the Model Regulations.

IX. Global harmonization of transport of dangerous goods regulations with the Model Regulations (agenda item 7)

A. Proposal to include special provision 653 of the ADR in the Model Regulations

Document: ST/SG/AC.10/C.3/2018/16 (EIGA)

139. Most of the experts who expressed an opinion considered that the exemption was justified for land transport but were reluctant to extend it to multimodal transport. Some felt that filling provisions and training requirements should be addressed. Others wished to have more information about the rationale behind the proposal substantiated with data. The representative of EIGA said that he would take account of the comments made and submit a revised proposal for the next session.

B. Review of Canada’s transport of dangerous goods training provisions

Document: ST/SG/AC.10/C.3/2018/17 (Canada)

140. The Sub-Committee welcomed the information provided by the expert from Canada and noted that she would continue to share their experience with the implementation of competency-based training.

141. The expert from Brazil informed the Sub-Committee that discussions on implementation of competency-based training had started at national level, and that competent authorities intended to conduct a national survey on how to implement the ICAO technical instructions.

142. The representative of ICAO said that the 2017 edition of the guidance materials for competency-based training had been revised to take account of the feedback received from countries and of the provisions of the 2019-2020 edition of the ICAO Technical Instructions.

She informed the Sub-Committee that she intended to submit a document for the next session with information about the updates from the previous edition.

143. The representative of IATA pointed out that competency-based programs should recognize the need of and provide flexibility for training delivered by third parties, as this was particularly important for small enterprises without resources to deliver such training in-house.

144. The Sub-Committee encouraged countries to continue to provide information on activities related to the development and implementation of competency-based training.

C. Amendments to 7.1.5.4.5

Document: ST/SG/AC.10/C.3/2018/39 (Netherlands)

145. Some experts were in favour of the proposal as they considered that the level of safety applied for the transport of dangerous goods by road should be applied for all modes of transport. Some others felt that the mention to “thermal insulation” in sub-paragraphs (c), (d) and (e) was redundant. A few others requested more time to consult stakeholders at national level and to consider the implications of the proposal.

146. In view of the above, the Sub-Committee decided to place the amendments in paragraph 5 of document ST/SG/AC.10/C.3/2018/39 between square brackets for confirmation at the next session (see annex I). The addition of “non-flammable” in 7.1.5.4.5 (b) (i) was not adopted, as several experts considered it unnecessary.

D. Proposal for an informal working group on competency-based training initiatives

Informal document: INF.35 (DGTA)

147. The Sub-Committee did not support the establishment of an informal working group on competency-based training initiatives at this stage. Most of the experts who expressed an opinion considered that it would be premature to address this issue from a multimodal point of view before more experience from the implementation at modal level was available.

148. Others felt that the terms of reference for the work (objectives, issues to be addressed, etc) should be defined before considering the need for the establishment of an informal working group. The representative of DGTA said that he would submit a document to a future session laying out more specific goals for consideration by the Sub-Committee.

X. Cooperation with the International Atomic Energy Agency (agenda item 8)

A. Harmonization between the IAEA INFCIRC225 Rev.5 and the Model Regulations

Document: ST/SG/AC.10/C.3/2017/33/Rev.1 (WNTI)

149. The Sub-Committee adopted the proposal to update the reference to INFCIRC/225/Rev.4 in 1.4.3.2.3 of the Model Regulations (see annex I).

B. Harmonization with the IAEA Regulation for the Safe Transport of Radioactive Material

Document: ST/SG/AC.10/C.3/2018/54 (IAEA)

Informal document: INF.8 (IAEA)

150. The representative of IATA raised concern about the consequences of the new wording of paragraph 1.5.2.5 for consignors and carriers. He considered that it was not realistic to require them to establish arrangements for preparedness and response for each shipment, as these arrangements were the responsibility of national competent authorities and differed from one country to another. He felt that, if implemented, the new provision would increase the number of denial of shipments for transport of radioactive material. The representative of IAEA explained that the intent of 1.5.2.5 was to ensure that carriers and consignors included arrangements for preparedness and response consistent with those existing at national or international level and reiterated that it was not expected from them to develop additional arrangements to replace, or in addition to, those established at national or international level.

151. Having considered the concerns expressed by the representative of IATA, the Sub-Committee decided to defer the decision on the adoption of paragraph 1.5.2.5 and the related references in 1.5.2.6 to the next session, to allow experts enough time to consider the implications of its implementation. The representative of IAEA said that he would submit an official document for the next session with additional background on this proposal to help the Sub-Committee take an informed decision.

152. The Sub-Committee considered unnecessary to amend the current definitions of IBC and freight containers and did not adopt the editorial proposed amendments.

153. Except for the amendments to 1.5.2.5 and 1.5.2.6 and to the definitions of IBC and freight containers, the Sub-Committee adopted the amendments in ST/SG/AC.10/C.3/2018/54 for alignment of the Model Regulations with the 2018 edition of the IAEA Regulations for the Transport of Radioactive Material (SSR-6, Rev.1), with a correction to 2.7.2.3.3.8 (see annex I).

XI. Guiding principles for the Model Regulations (agenda item 9)

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

XII. Issues relating to the Globally Harmonized System of Classification and Labelling of Chemicals (agenda item 10)

A. Criteria for water-reactivity

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

B. Testing of oxidizing substances

Document: ST/SG/AC.10/C.3/2018/35 (France)

Informal document: INF.56 (France)

156. The Sub-Committee supported continuation of the work on the refinement of the proposals in document ST/SG/AC.10/C.3/2018/35.

157. Some experts wished to receive more information about the results of the interlaboratory tests. Others felt that the tests specifications could be further developed to include for instance, details on false positives or a better description of the tests materials (e.g. to avoid those which may have an impact on the test results, such as metal mixing tools). A few others questioned the definition of “total mass loss” in terms of “time”, the reference to a resistance wire with a diameter of less than 1 mm instead of 1.00 mm (most commonly used), or the prevalence of judgement based on previous experience or expert judgement over tests results, where the test results show that the tested mixture does not meet the criteria.

158. The expert from France explained that the proposals in document ST/SG/AC.10/C.3/2018/35 addressed issues identified during the interlaboratory tests. Having heard the opinions expressed during the discussion, he invited experts to seek the advice of national laboratories and to share their feedback with him. The Sub-Committee noted that he intended to revise the proposals in the light of the comments made and submit a revised document to the next session.

159. Regarding the proposal for further work in informal document INF.56, the Sub-Committee considered that the issues already identified in document ST/SG/AC.10/C.3/2018/35 should be addressed before new items could be considered for further work. The expert from France agreed with that view and said he would not continue his efforts in the direction outlined in informal document INF.56 if it was not supported by the Sub-Committee.

C. Updating of references to OECD Guidelines

160. Documents under this agenda sub-item were considered during the joint session (see paragraph 167).

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

161. Documents under this agenda sub-item were considered during the joint session (see paragraph 176).

E. Joint work with the GHS Sub-Committee

162. The TDG and GHS sub-committees held their third joint session in the afternoon of 3 July with Mr. Duane Pfund (Chairperson of the TDG Sub-Committee) as Chairman. During the joint meeting, the sub-committees addressed items 1 to 6 below.

1. Review of Chapter 2.1

Document: ST/SG/AC.10/C.3/2018/33 - ST/SG/AC.10/C.4/2018/7 (Sweden)

Informal documents: TDG/INF.9 – GHS/INF.10 (Sweden)
TDG/INF.33 – GHS/INF.15 (United States, IME, SAAMI)
TDG/INF.46 – GHS/INF.16 (GHS) (Sweden)

163. There was general support for continuing work on this issue as well as for the suggested path forward for the revision of the classification criteria for explosives in the GHS. It was pointed out that this new classification scheme would not require new testing and would continue to ensure consistency with the current classification for transport purposes (i.e. classification within divisions for transport would remain unchanged). Therefore, no impact on related transport or storage provisions is expected, as long as the explosives remain in their transport configuration (e.g. as packaged for transport).

164. Some concerns were raised however on the applicability of the proposed GHS classification scheme to non-intentional explosives or energetic samples, the scope of the new Category 1 (which would cover low and high hazards, contrary to the current GHS practice whereby Category 1 corresponds to the highest degree of hazard within a hazard class), or the possibility of ending up with two different classifications for the same explosive depending on whether or not the classification is determined on its transport configuration.

165. The expert from Sweden informed the sub-committees that possible ways forward to address some of the concerns raised had already been identified and were under discussion. The sub-committees invited him to continue the work and to submit an official document for the next session, to allow experts enough time to conduct the necessary consultations at national level, evaluate the potential impacts and take an informed decision.

2. Updating of references to ISO 10156

Document: ST/SG/AC.10/C.3/2018/2 - ST/SG/AC.10/C.4/2018/2 (EIGA)

166. The TDG Sub-Committee adopted the updating of the references to the ISO standard in the Model Regulations proposed in paragraph 5 of the document, with an additional consequential amendment to 2.2.2.1 (a) (ii) and to the note under 2.2.2.1 (b) (see annex I). Amendments concerning the GHS were noted, pending endorsement by the GHS Sub-Committee at its thirty-fifth session (see ST/SG/AC.10/C.4/70, paragraphs 11 and 12).

3. Updating of references to OECD Guidelines

Document: ST/SG/AC.10/C.3/2018/30 (European Union)

Informal documents: INF.34 (CEFIC)
TDG/INF.71 – GHS/INF.28 (DGAC)

167. There was support for the proposal in ST/SG/AC.10/C.3/2018/30, as amended by informal document INF.71, with some additional changes proposed orally during the session. However, several experts felt that more time was needed to consider them. The representative of the European Union said that she would revise the proposal in the light of the comments made and submit an official document for the next session.

4. Classification of aerosols and chemicals under pressure

Documents: ST/SG/AC.10/C.3/2018/5 - ST/SG/AC.10/C.4/2018/3 (CEFIC, EIGA)
ST/SG/AC.10/C.3/2018/60 - ST/SG/AC.10/C.4/2018/11 (FEA)

Informal document: TDG/INF.51- GHS/INF.17 (Germany)

168. There was general support for the proposal to introduce provisions addressing chemicals under pressure in the GHS, as amended by informal document INF.51.

169. A few experts questioned the 50% cut-off value. They pointed out that it was not mentioned in special provision 362 in the Model Regulations. The representative of EIGA explained that at present there was not a clear criteria to determine what could be considered a gas mixture and a chemical under pressure and that the 50% cut-off was acceptable for industry as a harmonized value to this end. He volunteered to submit a proposal for amendment to special provision 362 to align it with the proposed GHS criteria, if appropriate. He also pointed out that the proposed criteria would allow classification based on the hazards present, both during intended use and accidental release situations.

170. Others noted that there were different approaches in the proposal for the classifications of chemicals under pressure for transport and other sectors and expressed concerns about their implications (e.g. different classifications for the same chemical among sectors). They invited the authors of the proposal to clearly identify the differences between both approaches, to help the sub-committees assess whether these divergencies were justified or whether further harmonization among sectors was necessary. It was also suggested to include the same definition of chemical under pressure proposed for the GHS in the Model Regulations.

171. The representative of EIGA said that both CEFIC and EIGA would be leading an intersessional informal working group to revise the proposal in the light of the comments made and submit a new document for consideration by both sub-committees at the next session. Experts from the TDG and the GHS sub-committees interested in this work were invited to contact the representatives of EIGA (Mr. Pierre Wolfs) or CEFIC (Ms. Eva Kessler).

172. It was noted that the proposals addressing consequential amendments to Chapter 2.3 of the GHS would be considered during the thirty-fifth session of the GHS Sub-Committee (see ST/SG/AC.10/C.4/70, paragraphs 13 and 14).

5. Classification of physical hazards according to the GHS

Informal document: TDG/INF.20-GHS/INF.13 (Germany)

173. There was support for the development of guidance in the context of GHS.

174. Some experts felt that, if undertaken, more clarity on the need for and scope of the guidance should be provided. Others noted that some of the combinations identified as “not possible” were addressed in transport, e.g. oxidizing flammable solids (covered under UN No. 3097) and considered that all possible combinations would have to be carefully reviewed on a case by case basis to ensure that there were no contradictions with transport of dangerous goods regulations. It was pointed out that transport regulations addressed combination of hazards from a different perspective than the GHS. While GHS did not establish a precedence of hazards, the Model Regulations differentiated between primary and subsidiary hazards (Chapter 2.0, paragraph 2.0.3). The expert from Germany explained that the combinations shown in informal document INF.20 served a different purpose and could be used to identify redundant hazards from the classification, hazard communication or

testing point of view (e.g. tests for determining a given hazard may not be appropriate due to other hazardous properties of the chemicals).

175. The sub-committees took note of the proposal by Germany to lead an intersessional informal working group to further study this question during the next biennium, in accordance with the tasks listed in paragraph 4 of the document. No decision was taken on the establishment of the working group at this time. It was noted that the TDG Sub-Committee should be involved in this work, if undertaken, on its capacity as GHS focal point for physical hazards.

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

Document: ST/SG/AC.10/C.3/2018/1-ST/SG/AC.10/C.4/2018/1 (Chairman of the Working Group)

Informal documents: INF.3, 4 and 5 (Chairman of the Working Group)

176. The sub-committees noted that work on the revision of sections 1 and 10 of the Manual of Tests and Criteria had been completed and that work on the revision of the remaining sections was expected to be completed before the end of the biennium (see also paragraphs 36 and 37).

F. Miscellaneous

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

XIII. Other business (agenda item 11)

A. Outcome of the ninety-ninth session of the IMO Maritime Safety Committee

Informal document: INF.58 (IMO)

178. The representative of IMO welcomed the work on FRP tanks. He said that the related work under the agenda of Maritime Safety Committee was held in abeyance pending a decision of the TDG Sub-Committee and hoping that work could be completed on time, with a view to take account of its outcome in the IMDG Code for mandatory application as from 1 January 2024, if possible. The expert from Germany concurred with the representative of IMO on the importance of the work on FRP tanks at Sub-Committee level to ensure multimodal harmonization. As an example, she mentioned that in Germany, FRP tanks were not approved for maritime transport because the current wall thickness requirements were suitable for metal tanks only, while this was applied differently in other countries.

179. The representative of IMO also informed the Sub-Committee of a decision regarding footnotes taken by the IMO Maritime Safety Committee at its ninety-ninth session. He explained that footnotes introduced for reference purposes only and which were not part of the adopted amendments would not appear in the authentic text of mandatory instruments (e.g. the IMDG Code). He said that, as a follow-up to this decision, a comprehensive review of all footnotes in the IMDG Code would be undertaken next year and that he would keep the Sub-Committee informed about its outcome. He invited the Sub-Committee to take this decision into consideration when drafting provisions to be included in the Model Regulations

and to avoid inserting regulatory text in footnotes to avoid issues related to their transposition in legal texts.

B. Availability of label and mark models in electronic format

Document: ST/SG/AC.10/C.3/2018/12 (Switzerland)

180. A member of the secretariat pointed out that the request to provide “print-ready” labels and marks went beyond the role and responsibilities of the secretariat. She explained that such responsibilities did not include providing high-resolution files that could be used by third-parties for commercial purposes. It was noted that this kind of graphic material was prepared in-house for the purposes of its publication in the Model Regulations only and that the secretariat was not in a position to provide “print-ready” labels and marks fully compliant in all sizes and dimensions with the applicable provisions of Part 5 of the Model Regulations (e.g. line width, minimum height of letters and numbers, distances between lines and labels edges, etc) to be used for other purposes. If these labels and marks were made publicly available, the risk of them being used in real-life situations for labelling and marking of all types of means of containment could not be totally excluded.

181. It was also noted that the labels and marks in electronic form, as prepared to be printed in the Model Regulations, could be made available to interested governmental experts upon request. The Sub-Committee welcomed the offer from the secretariat, took note of the concerns expressed and decided not to pursue this matter further.

C. Corrections to the French version of the Model Regulations

Document: ST/SG/AC.10/C.3/2018/55 (France)

182. The corrections to the French version of the Model Regulations were adopted (see annex III).

D. Inconsistencies between language versions in 5.4.1.5.1

Informal document: INF.25 (Belgium)

183. There was agreement on the interpretation of the provision in 5.4.1.5.1, as follows: the total quantity of dangerous goods shall be indicated in the transport document for each item of dangerous goods bearing a different UN number, proper shipping name or packing group. Since most experts considered that the existing English version was clear, the Sub-Committee invited the expert from Belgium to take account of the comments made and submit a revised proposal for the next session to align the French text with the English version.

E. Scope of 1.1.1.2

Document: ST/SG/AC.10/C.3/2018/57 (Netherlands)

Informal document: INF.30 (Netherlands)

184. Noting that additional provisions to exempt dangerous goods that are not consignments may need to be developed in the future, some experts suggested that it would be appropriate to extend the scope of current 1.1.1.2 to address them in a general way, rather than introducing specific exemptions on an individual basis. However, acknowledging that the development of broader general provisions would need further consideration, and noting the current need for appropriate provisions for lithium battery powered cargo tracking units and data loggers in use during transport, the Sub-Committee expressed its intent to confirm

at the next session, in the absence of a new proposal, the decision taken at its fifty-first session on the adoption of a new 1.1.1.2 (c) (see ST/SG/AC.10/C.3/102, par. 57-59 and Annex II).

185. The Sub-Committee encouraged the expert from the Netherlands to continue working on this issue.

XIV. Adoption of the report (agenda item 12)

186. The Sub-Committee adopted the report on its fifty-third session based on a draft prepared by the secretariat.

Annex I

Draft amendments to the twentieth revised edition of Recommendations on the Transport of Dangerous Goods, Model Regulations (ST/SG/AC.10/1/Rev.20)

(see ST/SG/AC.10/C.3/106/Add.1)

Annex II

Draft amendments to the sixth revised edition of the Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria (ST/SG/AC.10/11/Rev.6) (as amended by ST/SG/AC.10/11/Rev.6/Amend.1)

(see ST/SG/AC.10/C.3/106/Add.1)

Annex III

Corrections to the twentieth revised edition of Recommendations on the Transport of Dangerous Goods, Model Regulations (ST/SG/AC.10/1/Rev.20)

(see ST/SG/AC.10/C.3/106/Add.1)
