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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 Transport of Dangerous Goods**

**Report of the Sub-Committee of Experts on the Transport of  
Dangerous Goods on its forty-fourth session**

held in Geneva from 25 November to 4 December 2013

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## I. Attendance

1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its forty-fourth session from 25 November to 4 December 2013.
2. Experts from the following countries took part in the session: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Republic of Korea, South Africa, 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 Romania 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 International Atomic Energy Agency (IAEA), the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO) 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); European Association of Automotive Suppliers (CLEPA); European Chemical Industry Council (CEFIC); European Industrial Gases Association (EIGA); European Metal Packaging (EMPAC); Federation of European Aerosol Associations (FEA); International Air Transport Association (IATA); International Association for Soaps, Detergents and Maintenance Products (AISE); International Confederation of Container Reconditioners (ICCR); International Confederation of Drums Manufacturers (ICDM); International Confederation of Intermediate Bulk Container Associations (ICIBCA); International Confederation of Plastics Packaging Manufacturers (ICPP); International Council of Chemical Associations (ICCA); International Dangerous Goods and Container Association (IDGCA); International Federation of Airline Pilots' Associations (IFALPA); International Federation of Freight Forwarders Associations (FIATA); International Fibre Drum Institute (IFDI); International Organization for Standardization (ISO); International Paint and Printing Ink Council (IPPI); International Tank Container Organisation (ITCO); KiloFarad International (KFI); Responsible Packaging Management Association of Southern Africa (RPMASA); Sporting Arms and Ammunition Manufacturers' Institute (SAAMI); and the World Nuclear Transport Institute (WNTI).

## II. Adoption of the agenda (agenda item 1)

*Documents:* ST/SG/AC.10/C.3/87 (Provisional agenda)  
ST/SG/AC.10/C.3/87/Add.1 (List of documents)

*Informal documents:* INF.1, INF.2 (List of documents)  
INF.17 (Secretariat) (Resolution 2013/25 of the Economic and Social Council)  
INF.21 (Provisional timetable)  
INF.40 (Reception by NGOs)

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.59).

8. The Sub-Committee noted that the Economic and Social Council had on 25 July 2013 adopted resolution 2013/25, thus taking up the proposed resolution submitted by the Committee in December 2012 with no changes (ST/SG/AC.10/40, annex IV).

### **III. Listing, classification and packing (agenda item 2)**

#### **A. Classification of polymerizing substances**

*Document:* ST/SG/AC.10/C.3/2013/62 (DGAC)

9. The principle behind the proposal was supported by most delegations, with some differences of opinion, however, on how to deal with the issue (Division 4.2 or Class 9, a new Division 4.4, criteria to be applied using the current test methods, proper shipping name for substances stabilized by temperature control, and also for those stabilized using inhibitors). The representative of DGAC would prepare a new proposal with more detailed regulations for the next session.

#### **B. Classification inconsistencies (application of criteria versus dangerous goods list)**

##### **1. Classification under UN No. 2213 (Paraformaldehyde)**

*Document:* ST/SG/AC.10/C.3/2013/42 (ICCA)

10. Rather than introducing a new special provision for a specific case, the Sub-Committee considered that it would be preferable to apply special provision 223 to UN No. 2213 and to leave it for the industry to classify the substance as appropriate, applying the appropriate tests if the substance contained impurities that altered its properties. It was decided to proceed in that manner (see annex I).

##### **2. Clarification of the assignment to the entry FORMIC ACID with more than 85% acid by mass (UN No. 1779)**

*Document:* ST/SG/AC.10/C.3/2013/53 (ICCA)

11. The proposal to assign a new special provision was not supported. Several experts considered that since special provision 223 was not assigned to the UN number in question, the classification as indicated in the list of dangerous goods for various acid concentrations had to be applied.

##### **3. Classification inconsistencies (application of criteria versus dangerous goods list)**

*Informal documents:* INF.33 and INF.33/Rev.1 (ICCA)

12. The representative of ICCA introduced a text for the guiding principles, as requested at the previous session. Discussion showed that there were differences of opinion over the interpretation of the Model Regulations. Following these discussions, the ICCA representative withdrew her proposal and said that she would submit a new official proposal at the next session.

## C. Miscellaneous

### 1. Clarification of the definition of aerosol, UN No. 1950

*Document:* ST/SG/AC.10/C.3/2013/51 (France)

13. The proposed amendment of the definition of aerosol in 1.2.1, clarifying that UN No. 1950 covered articles, was adopted (see annex I).

### 2. Special provision 240

*Document:* ST/SG/AC.10/C.3/2013/59 (IATA)

*Informal document:* INF.24 (RECHARGE)

14. The representative of IATA would prepare a new document for the next session, taking into consideration the conclusions of the ICAO Dangerous Goods Panel (DGP) and the comments of RECHARGE.

### 3. Transport of halogenated monomethyldiphenylmethanes that may form dioxins

*Document:* ST/SG/AC.10/C.3/2013/55 (Germany)

15. Noting that halogenated monomethyldiphenylmethanes have similar chemical and ecotoxicological properties to polychlorinated biphenyls (PCBs) and polychlorinated terphenyls (PCTs) but by definition were not included in the shipping names for UN Nos. 3151 and 3152, the Sub-Committee adopted, with amendments, option 2 in the document from Germany, extending the scope of those two shipping names (see annex I).

### 4. Bulk transport of aluminium smelting by-products or aluminium remelting by-products (UN No. 3170)

*Informal documents:* INF.11 (Norway)  
INF.19 (Spain)  
INF.45 (Norway and Spain)

16. The Sub-Committee noted that the assignment of code BK1 (bulk transport in sheeted bulk containers permitted) to UN No. 3170 is inconsistent with subsection 4.3.2.2, which does not permit bulk transport of Class 4.3 goods in sheeted containers.

17. Several experts pointed out that only code BK2 is assigned in the IMDG Code and considered that it would not be appropriate to authorize maritime transport of dangerous goods in BK1 containers that react with water, notably owing to the risk of pockets of hydrogen forming in ships' holds.

18. Some experts pointed out, however, that for inland transport, such goods had been transported in sheeted bulk containers for many years without mishap and in light of that experience requested an exception to be made, at least for inland transport.

19. The experts from Norway and Spain said that they would prepare a new proposal for the next session providing, among other things, for cooling of the cargo before loading, and ventilation of containers.

### 5. Packing requirements for UN No. 1873 (perchloric acid)

*Document:* ST/SG/AC.10/C.3/2013/64 (COSTHA)

*Informal document:* INF.50 (COSTHA)

20. The Sub-Committee supported the principle of authorizing plastic inner packagings compatible with perchloric acid, but there were still some diverging views on how to amend

the current requirements. Furthermore, the proposal amounted to a prohibition of single metal packagings, and the consequences for the industry of such a prohibition should be studied, bearing in mind, for example that carriage in metallic tanks was authorized as well. The representative of COSTHA was invited to prepare a new proposal for the next session.

#### **6. Introduction of provisions for the transport of adsorbed ammonia storage systems**

*Document:* ST/SG/AC.10/C.3/2013/50 (France)

*Informal documents:* INF.15 (Austria)  
INF.44 (France)  
INF.51 (France)

21. The Sub-Committee adopted a new special provision, as proposed in informal document INF.51 with some amendments (see annex I). In particular the new provisions would apply to both adsorbed and absorbed ammonia storage systems.

### **IV. Electric storage systems (agenda item 3)**

#### **A. Testing of lithium batteries**

*Informal document:* INF.46 (France)

22. The Sub-Committee took note of the information on the work of the informal working group on testing large lithium batteries, which had convened in Washington from 2 to 4 October 2013 with the participation of experts from the Sub-Committee and from the World Forum for Harmonization of Vehicle Regulations (WP.29). The documentation from that event was currently available on the PRBA website.\*

23. A second session would be held by RECHARGE in Brussels from 11 to 13 February 2014.

#### **B. Safety procedures for damaged or defective lithium batteries**

24. No document was submitted on this agenda sub-item (for reference, see also ST/SG/AC.10/C.3/84, para. 40).

#### **C. Large batteries**

25. No document was submitted on this agenda sub-item (for reference, see also ST/SG/AC.10/C.3/84, para. 86 (c)).

#### **D. Thermal batteries**

26. No document was submitted on this agenda sub-item (for reference, see also ST/SG/AC.10/C.3/86, para. 49).

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\* [www.prba.org/laws-regulations/un-wg-meeting-on-large-lithium-batteries-october-2013/](http://www.prba.org/laws-regulations/un-wg-meeting-on-large-lithium-batteries-october-2013/)

## **E. Miscellaneous**

### **1. Amendments regarding lithium batteries**

*Document:* ST/SG/AC.10/C.3/2013/54 (Germany)

*Informal document:* INF.16 (Austria)

27. The Sub-Committee asked the informal working group on the testing of large batteries to consider these documents at its February 2014 session and report its conclusions to the Sub-Committee at its next session.

### **2. Classification of flow batteries**

*Document:* ST/SG/AC.10/C.3/2013/60 (Austria)

28. The expert from Austria asked a question concerning the classification of redox flow batteries – possibly as UN No. 2794 or 3363. The Sub-Committee noted, however, that there are various kinds of electrodes and electrolytes and there seemed to be no easy answer to the question; it was probably best to address it on a case-by-case basis.

29. The Sub-Committee agreed to return to the question at a later date provided that a delegation submitted another proposal.

### **3. Appropriate hazard communication**

*Document:* ST/SG/AC.10/C.3/2013/49 (ICAO)

*Informal document:* INF.54 (Report of the lunchtime working group)

30. This question was referred to a lunchtime working group, which recommended not changing Class 9 but defining a specific hazard communication symbol that would be more appropriate to lithium batteries than the Class 9 label (and may be extended to other goods of Class 9). The working group recommended a multistep approach, as follows:

- (a) Prepare a proposal for labels for lithium batteries that will characterize specific hazards under Class 9 in accordance with the type of goods (analogous to the way several Class 7 labels are designed);
- (b) Evaluate the way the current marking system will integrate the proposals;
- (c) After a definition of the content of the label, propose a design for the label while considering what kind of hazard characteristics would be represented;
- (d) This work should be coordinated with other work on including articles under Class 9 with appropriate hazard communication tools for this article;
- (e) Keep the various international bodies dealing with the various modes of transport informed about the work in progress.

31. The Sub-Committee approved these recommendations and noted that the expert from the United Kingdom would prepare a proposal for the next session.

## **V. Transport of gases (agenda item 4)**

### **A. Ethylene oxide and propylene oxide mixtures (UN No. 2983)**

*Document:* ST/SG/AC.10/C.3/2013/45 (United States of America)

*Informal document:* INF.39 (United States of America)

32. The proposal to assign packing instruction P001 to these mixtures instead of P200 was adopted (see annex I).

## B. Global recognition of UN and non-UN pressure receptacles

*Informal document:* INF.41 (CGA, ECMA, EIGA)

33. Consideration of the document was assigned to a lunchtime working group, which arrived at the following conclusions:

- (a) It was possible that the solution might not be found in the framework of the Model Regulations and that it might instead fall within the remit of national or regional regulations or other instruments;
- (b) The aim of the intersessional correspondence work should be to facilitate discussions and draw up recommendations that might have to be implemented or followed up outside of the framework of the Sub-Committee;
- (c) The short-term objectives were the following:
  - (i) To enhance recognition of UN pressure receptacles;
  - (ii) To allow for the import/export not only of UN pressure receptacles but also of filled “non-UN” pressure receptacles, bearing in mind that pressure receptacles have a long service life (approximately 50 years) (the terms “import/export” referring here to international transport, not international trade);
  - (iii) To enhance recognition of pressure receptacles containing solids or liquids.

34. In a first phase, the representative of CGA would draw up a draft “plan of action” that would be distributed to the members of the working group for further development by correspondence. The working group would meet at lunchtime or if necessary in the evening at the next session of the Sub-Committee.

35. The Sub-Committee accepted those conclusions.

## C. Miscellaneous

### 1. Proposal to remove TP23 from the requirements for UN No. 1966 HYDROGEN, REFRIGERATED LIQUID

*Document:* ST/SG/AC.10/C.3/2013/37 (EIGA)

36. In the absence of additional technical requirements specified by any competent authority, the proposal was adopted (see annex I).

### 2. Transport of pressure receptacles for fire extinguishers

*Document:* ST/SG/AC.10/C.3/2013/39 (Germany)

*Informal document:* INF.23 (Germany)

37. The proposal for amendment of special provision 225, as amended by informal document INF.23, was adopted (see annex I).

38. Following a remark by the expert from Sweden, the expert from Germany said she would check whether the same principle should apply to other objects and submit a new proposal at the next session as necessary.

### **3. Differentiation between liquefied gases and chemicals under pressure**

*Document:* ST/SG/AC.10/C.3/2013/40 (Germany)

39. The majority of delegations who spoke were not in favour of the proposed amendments and believed that the texts as they stood presented no problem. As a result, the expert from Germany withdrew her proposal and said she might revisit the issue at a later session.

### **4. Packing instructions P200 and P206 for collective entries**

*Document:* ST/SG/AC.10/C.3/2013/46 (Germany)

40. The correction to packing instruction P200, UN No. 1058, was adopted (see ST/SG/AC.10/1/Rev.18/Corr.2).

41. As to the proposed amendments to instructions P200, paragraph 3, and P206, paragraph 3, several delegations considered that this would be better addressed through standards and that it was not desirable to include such detailed calculation formulae in regulations which should contain the essential requirements. Others supported the idea of including more detail.

42. The expert from Germany said that she would submit a new proposal taking account of the comments received.

### **5. References to ISO standards in section 6.2.2**

*Document:* ST/SG/AC.10/C.3/2013/61 (ISO)

*Informal documents:* INF.13 and INF.26 (ISO)

43. The proposals for amendments to section 6.2.2 and to the definition of “tube”, in section 1.2.1, and those of “service life” and “design life” adopted at the last session, and consequential amendments to packing instruction P200, paragraph (4), special packing provision “p” were adopted (see annex I).

### **6. Marking of bundles of cylinders**

*Informal documents:* INF.14 (ISO)  
INF.35 (CGA)

44. The representatives of ISO and CGA withdrew their proposals.

## **VI. Miscellaneous proposals for amendments to the Model Regulations on the Transport of Dangerous Goods (agenda item 5)**

### **A. Fuels in machinery or equipment**

*Document:* ST/SG/AC.10/C.3/2013/67 (DGAC)

*Informal documents:* INF.7 (DGAC)  
INF.27 (Switzerland)  
INF.59 (Report of the lunchtime working group)

45. The Sub-Committee entrusted the consideration of these documents to a lunchtime working group. It endorsed the conclusions of the working group as listed in informal document INF.59, including the following approach:

- (a) Prepare a proposal to introduce a new UN XXXX applicable to engines/machinery powered by flammable liquids/flammable gases/fuels cells. This new UN number should incorporate the provisions of SP 363;
- (b) Develop a proposal to include appropriate hazard communication (e.g. flammability risk label, mention in transport document,...), linked to different quantity thresholds. The communication of “subsidiary risks” (e.g. when also lithium batteries are contained in the same machinery) should be the subject of a separate special provision, also depending on developments for hazard communication for lithium batteries;
- (c) Draft the necessary consequential amendments to various parts of the Regulations (definition of vehicles, SP 363, SP 301, SP 312, SP 240,...). For this work, the working group highlighted the following items for consideration:
- Identification of the types of fuels (with different thresholds, different UN numbers,...);
  - Distinguishing between vehicles (e.g. self-propelled) and machinery;
  - Fuels which are only environmentally hazardous;
  - Evaluation of the already developed modal provisions when drafting new text (e.g. IMDG SP 961 and SP 962, ICAO provisions for vehicles/machinery containing lithium batteries,...);
  - Ongoing work for classification and hazard communication in class 9.

46. The expert from Belgium and the representative of DGAC agreed to prepare a joint proposal for the next session.

## B. Articles containing small quantities of dangerous goods

*Informal document:* INF.36 (United Kingdom)

47. During the discussions, it became clear that of the five options proposed, option 2 found favour with most of the delegations (amendment to special provision 301 to divide the articles concerned into four categories depending on the amount of dangerous goods contained). The expert from the United Kingdom would thus prepare a more detailed proposal for the next session along the lines of option 2.

## C. Used medical devices

*Document:* ST/SG/AC.10/C.3/2013/65 (COSTHA)

*Informal document:* INF.49 (ICAO)

48. The Sub-Committee noted the concerns expressed by COSTHA regarding the implementation of the conditions of paragraph 2.6.3.2.3.9. It took note of the information on the discussions held on that subject by the ICAO Dangerous Goods Panel (DGP), which had addressed the questions of whether it was necessary to carry out a 1.2 metre drop test on the packaging as prepared for transport or to determine package capability through alternative means.

49. Most of the experts were not in favour of option 2 (which eliminated the requirement for the equipment to be retained in the package when dropped, but applied additional requirements comparable to those under packing instruction P650).

50. Opinions differed on option 1 (which referred to a drop test, with some experts favouring the temporary provisions adopted by ICAO) and option 3 (as some experts wished to eliminate the requirement that the equipment should be retained in the event of a drop of 1.2 metres, as such medical devices were extremely expensive, were liable to be damaged if dropped and, because of their high cost, were very carefully wrapped by their consignors).

51. As none of the options were satisfactory for all the experts, some said they preferred to leave the current text as it stood. In the end, COSTHA was asked to continue studying the question in order to find an acceptable compromise.

## **D. Environmentally hazardous substances**

52. No document was submitted on this agenda sub-item (for reference, see also ST/SG/AC.10/C.3/84, para 86 (e) and ST/SG/AC.10/C.3/86, paras 66-67).

## **E. Terminology**

*Informal document:* INF.10 (Romania)

53. The first proposal relating to the definition of “large salvage packaging” was adopted (see annex I). The second proposal relating to the definition of “salvage packaging” was rejected.

## **F. Marking and labelling**

### **1. Excepted quantity provisions regarding counting of packages, markings and documentation**

*Document:* ST/SG/AC.10/C.3/2013/48 (ICCA)

54. Several experts supported the proposal of ICCA under which the number of packages of dangerous goods in excepted quantities would not be limited per transport unit. Others noted that the limitation and the obligation to indicate the number of packages in the documentation were the result of a compromise aimed at taking into consideration the requirements of the different modes of transport.

55. It was eventually considered preferable to let each organization responsible for a mode of transport decide whether a limitation was required for the mode in question. The ICCA representative was asked to bring the question to the attention of the different organizations concerned. She therefore withdrew her proposal.

### **2. Large pictograms on transport packages or cargo transport units**

*Document:* ST/SG/AC.10/C.3/2013/66 (DGAC)

56. The Sub-Committee noted the concerns of DGAC relayed by certain experts and non-governmental organizations resulting from the wider application of the GHS sometimes in a manner that they considered not always in compliance with the provisions of GHS itself and that had the potential for causing considerable confusion among emergency responders or personnel handling packages, for example in airports, or inspection authorities. Other experts did not recognise the problem as they considered that GHS pictograms provide additional information.

57. Overall, the Sub-Committee was not in favour of the DGAC proposal. It was felt that this would be better addressed in the GHS itself. The experts did not consider the Sub-Committee to be competent to deal with questions that did not relate to transport.

58. The practical problems faced by emergency responders and transport workers should be brought to the attention of the GHS Sub-Committee in order to ensure more uniform GHS implementation in the countries that applied it. It would be advisable, for example, to envisage perhaps more detailed provisions for labelling according to GHS criteria that would help to show labelling done to meet the needs of the transport sector without any possible ambiguity and distinguish it from labelling done to meet the needs of other sectors. Provisions to that effect already appeared in the GHS, particularly annex 7, but could be improved. In particular, there might be a limitation on the size of GHS labels to be displayed on cargo transport units or rules about their positioning.

59. The Sub-Committee also stressed the importance of training personnel responsible for labelling to ensure that it was done properly and training of the transport workers and emergency responders who should learn to distinguish between various pictograms and their meaning.

60. The representative of DGAC was invited to consider the issue while taking into account the need for coordination with the GHS Sub-Committee.

*Informal document:* INF.56 (DGAC)

61. The representative of DGAC summarized the discussions from his point of view in an informal document also submitted to the GHS Sub-Committee under the symbol INF.24.

62. Several experts took issue with the fact that the informal document was presented as a summary of the conclusions of the Sub-Committee. During the discussion, many experts had said that they were opposed to the introduction of GHS texts into the Model Regulations, as GHS was not written in a prescribed language; others were not convinced about the problems mentioned by DGAC, at least in the countries where adequate training was provided to the persons involved, and certain conclusions mentioned by DGAC were in fact only suggestions that had been put forward.

63. Following this discussion the representative of DGAC withdrew his document.

### **3. Marking of portable tanks**

*Informal document:* INF.37 (CEFIC)

64. Several experts supported the proposal to authorize reduced size placards for small tanks. It was noted, however, that in RID, ADR and ADN such placards were permitted only for tanks with a capacity of 1,000 litres or less, and not 3,000 litres.

65. The expert from China noted that the proposal had been submitted in an informal document distributed at the last minute before the session and therefore requested that consideration of it should be deferred until the next session to allow for the necessary consultations to be carried out at the national level given the considerable consequences of the proposal.

66. That remark led to a discussion on the status of informal documents. A member of the secretariat indicated that the Sub-Committee should normally work on the basis of official documents submitted according to the rules and available in the working languages. It was for the Sub-Committee to decide for itself if it wished to take decisions on the basis of informal documents, but such decisions must be consensual. He indicated that other bodies, such as the ECE Working Party on the Transport of Dangerous Goods (WP.15), had set rules to that effect which provided that informal documents were not to contain new

proposals and were to contain only commentaries on official proposals, reports of informal groups or information that required no decision (ECE/TRANS/WP.15/190/Add.1, annex).

67. Certain experts also regretted the growing tendency of certain organizations to submit proposals first to modal organizations such as IMO and ICAO on issues concerning multimodal transport instead of submitting them first to the Sub-Committee to avoid discrepancies between various modal regulations.

68. The representative of CEFIC was invited to submit an official proposal at the next session, taking into account certain comments on the details of the proposal.

## **G. Packagings**

### **1. Minimum wall thickness for metal IBCs**

*Document:* ST/SG/AC.10/C.3/2013/57 (SSCA)

69. The majority of experts were against the proposal to delete the minimum wall thickness requirements for metal IBCs, although some said that they would accept the deletion of 6.5.5.1.6 provided that the wall thickness in mm continued to be required in the additional marking under 6.5.2.2. In their view, where metal IBCs were concerned, a minimum thickness was a safety measure, and it was necessary to be able to ascertain the degree of corrosion to the metal. Moreover the arguments were not supported by relevant data.

70. The representative of SSCA withdrew his proposal and said he would gather data and revisit the issue.

### **2. Availability of information on UN-approved packagings**

*Document:* ST/SG/AC.10/C.3/2013/63 (Belgium)

71. Several experts shared the Belgian expert's concern at the irregularities in, or forgery of, certification of "UN" packagings, and the difficulty of obtaining information on the approval of such packagings, or their test reports, when they come from abroad. The expert from Belgium recommended following the example of some countries that had taken the initiative of making information on certificates for "UN" packagings easily available to the public or at least to ensure their availability to the competent authorities and communication between the competent authorities of the various countries.

72. Some experts were in favour of this proposal, but others had certain reservations about their ability to set up adequate databases in their countries or to make this information available to the public. They would rather that these problems were resolved bilaterally between the competent authorities of the countries concerned.

73. It was pointed out, however, that the contact details of the authorities competent to authorize "UN" markings on behalf of a given country were not known in all countries and it was suggested that the secretariat first try to obtain those details. To that end the Sub-Committee requested the expert from Belgium to prepare a draft resolution for the next session, and that would have to be proposed to the Economic and Social Council in the next biennial report in order to allow the secretariat to take the necessary steps to obtain that information at the global level.

**3. Leakproofness testing procedures**

*Informal documents:* INF. 18 and Add.1 and 2 (Sweden)

74. The Sub-Committee commended the work done by Sweden to compare the procedures used by various countries and industries in testing leakproofness. The discussions showed that there were indeed differences in the procedures used but several delegations felt that that did not really present any safety problems and therefore they were not keen to set up an informal working group.

75. The expert from Sweden said that it would nevertheless be desirable to produce standard procedures so as to avoid any distortion of competition, and she might therefore propose some amendments to the current texts.

**4. Use of letter "W" in packaging codes**

*Informal documents:* INF.20 (France)  
INF.30 (Belgium)

76. Opinion was divided on the question raised by France. Some experts considered that the assemblage of packagings that was posing a problem could be considered as a box, to the extent that it presented flat surfaces; others were doubtful that the assemblage could pass the drop test at -18° C; still others pointed out that it was intended for transport of UN No. 3268 (airbags) and could be considered a dedicated handling device for which the performance tests for "UN" packagings were not required, in accordance with packaging instructions P902 and LP902.

**5. Excepted quantity provisions regarding the use of absorbent and cushioning material**

*Document:* ST/SG/AC.10/C.3/2013/47 (ICCA)

*Informal documents:* INF.38 (United States of America)  
INF.55 (ICCA)

77. The Sub-Committee adopted the amendments to 3.5.2 (b) (see annex I).

**6. Conditions for assembling different types of inner packagings in an outer packaging for type "V" packagings**

*Document:* ST/SG/AC.10/C.3/2013/52 (France)

*Informal document:* INF.57 (France)

78. The proposal to clarify the existing text, contained in informal document INF.57, was adopted (see annex I).

**H. Portable tanks****Transport of lithium (UN No. 1415) in portable tanks**

*Document:* ST/SG/AC.10/C.3/2013/70 (United States of America)

79. The proposal to authorize the transport of lithium in T9 portable tanks with special provisions TP7 and TP33 was adopted (see annex I).

80. It was noted that other Division 4.3 substances should be able to be transported in tanks (for example UN Nos. 1407, 1410 and 2806) but the Sub-Committee considered that a separate proposal should be made to decide whether to extend authorization to other

numbers, bearing in mind the current provisions in some other regulations which may differ from the Guiding Principles.

## **VII. Electronic data interchange for documentation purposes (agenda item 6)**

81. No document was submitted under this agenda item (for reference, see also ST/SG/AC.10/C.3/82, paras 122-124).

## **VIII. Cooperation with the International Atomic Energy Agency (agenda item 7)**

### **A. Requirements and controls for transport of radioactive material excepted packages**

*Document:* ST/SG/AC.10/C.3/2013/38 (Spain)

82. The Sub-Committee adopted the proposal to include a reference to 5.1.5.2.3 in paragraph 1.5.1.5.1 for purposes of harmonization with IAEA Regulations. As it was an oversight in the harmonization process, the amendment would be the subject of a corrigendum to the eighteenth revised edition of the Recommendations (see ST/SG/AC.10/1/Rev.18/Corr.2).

### **B. Uranium hexafluoride**

*Informal documents:* INF.12 (Secretariat) (Outcome of the Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods on its autumn 2013 session)  
INF.25 (Secretariat) (Outcome of the Working Party on the Transport of Dangerous Goods on its ninety-fifth session)

83. The Sub-Committee noted that the Joint Meeting had agreed that special provision 172 should no longer be applied to UN Nos. 2977 and 2978 for purposes of harmonization with the Model Regulations. The Joint Meeting and WP.15 both counted on the expertise of the Sub-Committee for that, especially to assign the appropriate classification code for RID/ADR and, in relation to this code, the conditions for passage in tunnels. The question was whether the Sub-Committee could confirm the risks of toxicity or oxidizing properties that emerged from the safety data sheet provided by IAEA in document ST/SG/AC.10/C.3/2011/46 and the information submitted by Austria in informal document INF.36 at the fortieth session but which the industry had indicated were still under investigation.

84. Several experts considered that available data indicated a toxicity hazard, in particular because of the release of hydrogen fluoride in the presence of moisture, but other experts were not prepared to give an opinion on the issue on the basis of the late requests made without an official proposal. It was therefore agreed that the issue could be discussed at the next session provided that it was made the subject of an official proposal.

**C. Outcome of the twenty-seventh meeting of the IAEA Transport Safety Standards Committee (TRANSSC 27)**

*Informal document:* INF.52/Rev.1 (IAEA)

85. The Sub-Committee took note of the information provided. It invited the representative of IAEA to convey its appreciation to the TRANSSC Chairperson, Mr. W. Brach, for his active cooperation and its best wishes for a long and happy retirement.

**IX. Global harmonization of transport of dangerous goods regulations with the Model Regulations (agenda item 8)****A. International Maritime Organization****1. Packagings for water-reactive materials**

*Document:* ST/SG/AC.10/C.3/2013/41 (Germany)

*Informal documents:* INF.3, INF.4 and INF.5 (Germany)

86. The Sub-Committee took note of the decision of IMO to strengthen the provisions on packagings for water-reactive materials and the provisions envisaged.

87. Certain experts expressed their concern about the deviations from the Model Regulations and the risk of disharmony in multimodal transport.

88. The Sub-Committee considered nevertheless that it was legitimate for IMO to take into account the specific risks for maritime transport, particularly the presence of the aquatic environment, air moisture and the problems of condensation involved in the changes in vessels in geographic areas with very different climates.

89. After the representative of IMO specified the work schedule for the introduction of such provisions into the IMDG Code, it was agreed that the expert from Germany would submit a document at the next session putting the proposals in the context of the Model Regulations. The Sub-Committee would then review whether the provisions were relevant to other modes of transport. It was also suggested that those which were relevant only to maritime transport should also be introduced into the Model Regulations and identified as such. The work could also concern current deviations in packing instructions of the IMDG Code (for example the assignment of special provision PP31). The explanations could also be included in the Guiding Principles.

90. Further to the next session, the conclusions of the Sub-Committee would be brought to the attention of the IMO Sub-Committee on the Carriage of Cargoes and Containers (CCC Sub-Committee).

**2. Twentieth session of the Editorial and Technical Group of the IMO Sub-Committee on Dangerous Goods, Solid Cargoes and Containers (DSC)**

*Informal documents:* INF.31 and Add.1 (IMO)

91. The Sub-Committee noted the conclusions of the Editorial and Technical Group, in particular the finalization of draft amendment 37-14 to the IMDG Code, for adoption by the Maritime Safety Committee at its session from 12 to 23 May 2014.

### **3. Provisions applicable to UN No. 3166**

*Document:* ST/SG/AC.10/C.3/2013/44 (Germany)

*Informal document:* INF.28 (Switzerland)

92. The Sub-Committee adopted the proposal, as amended, aimed at taking up a special provision 380 applicable to UN No. 3166, modelled on special provision 970 of the IMDG Code (see annex I).

### **B. ICAO Dangerous Goods Panel, 24th meeting (DGP 24)**

*Informal document:* INF.49 (ICAO)

93. The Sub-Committee took note of the outcome of the DGP 24 meeting for the preparation of amendments to the ICAO Technical Instructions aimed at bringing them into line with the Model Regulations.

94. As for the question raised in paragraph 11, the Sub-Committee confirmed that the reference to appropriate cushioning at the end of 4.1.1.5.2 of the Model Regulations was correct.

95. As for the remark in paragraph 12, the Sub-Committee suggested that the DGP experts should contact their colleagues responsible for the other modes of transport to determine whether it would be appropriate to introduce a size limitation for the lithium batteries used in life-saving appliances (UN Nos. 2990 and 3072).

96. For the problem mentioned in paragraph 13 (reference in the transport document to the relevant paragraphs of 2.7.2.3.5 (a) to (f) for the transport of fissile material, as required in 5.4.1.5.7.1 (f) (i)), the IAEA representative was asked to consult the experts of the Transport Safety Standards Committee (TRANSSC) on the question of how to indicate such a reference, as the paragraph numbers were not the same in the IAEA Regulations, the UN Model Regulations and the modal regulations. A member of the secretariat indicated that the same problem also arose elsewhere, for example for the application of special provision 373.

### **C. Autumn 2013 session of the RID/ADR/ADN Joint Meeting**

*Informal document:* INF.12 (Secretariat)

97. The Sub-Committee took note of the excerpts from report ECE/TRANS/WP.15/AC.1/132. Some of the items brought to its attention had already been discussed under different agenda items, and some corrections had already been planned in informal document INF.43.

98. For special provision 370 (para. 29), it was confirmed that Test Series 2 was to be applied to the whole mixture.

99. For paragraph 37, it was confirmed that any excepted quantities marks that were not visible on a package in an overpack must be fixed on the outside surface of the overpack.

100. For the question relating to the classification of mixtures of dangerous substances with substances presenting hazards only for the environment (paras 59-62), the expert from Germany said that she would raise the issue in an official document at the next session.

101. For special provision 662, it was indicated that the competent authority of the country of approval could be the competent authority of a country which is not party to RID or ADR.

102. For the information coding for electronic data interchange (paras. 79-81), the Sub-Committee will be kept aware of further developments that may occur on the basis of UIC/IRU proposals.

103. For cargo transport units containing a coolant, the Sub-Committee noted that the Joint Meeting had to adopt some deviations to take account of practical implementation in inland transport. This could lead to proposals of amendments to the text of 5.5.3 in future, notably in relation to the requirement of ventilation of cargo transport unit, which is not usual practice for carriage under temperature control, and separation between the driver's cab and the load compartment in case of transport in road vehicles.

104. For flexible bulk containers, the Sub-Committee agreed to amend the second sentence of para. 4.3.1.16.2 to clarify that the vent should be so designed that the ingress of water is prevented. It was underlined that it was already required that they be so designed that the penetration of foreign substances is prevented, and the term "foreign substances" covers water.

105. The Sub-Committee noted the progress made by the informal working group on telematics. Experts in non-ADR or non-RID countries interested in participating in the work of the informal group were invited to contact the expert from France.

106. For special provision 371 (para. 30), the Sub-Committee agreed that the text should be reviewed and the expert from Germany was invited to provide more background information on the test results and their intended interpretation and discuss with other interested experts to draft a new text.

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

107. No document was submitted under this agenda sub-item (for reference, see also ST/SG/AC.10/C.3/84, para. 26).

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

### A. Desensitized explosives

*Document:* ST/S/AC.10/C.3/2013/58 (Germany)

*Informal Document:* INF.53 (Australia)

108. The expert from Australia expressed concern at the proposal to create a new chapter for desensitized explosives in the GHS, since these desensitized explosives were not to be included in Class 1 of the Model Regulations and would remain classified in Class 3 or division 4.1 for transport purposes. Nevertheless, it was recalled that this issue had been discussed at length at previous sessions and that the proposal of Germany corresponded to a principle previously adopted and that should not be put into question at this stage.

109. The Sub-Committee supported the introduction of the proposed Chapter 2.17 in the GHS, and noted that some delegations raised a few technical questions. Therefore the Sub-Committee agreed to endorse all changes proposed to the GHS and agreed to changes in the Manual of Tests and Criteria between square brackets so that comments on details by the experts of the Sub-Committee and those of the GHS Sub-Committee could still be made for consideration in a second reading at the next sessions of both sub-committees.

## **B. Screening procedures for potential explosives**

*Document:* ST/SG/AC.10/C.3/2013/56 (Sweden)

110. The Sub-Committee endorsed the proposal for further consideration by the GHS Sub-Committee.

## **C. Pyrophoric gases**

*Document:* ST/SG/AC.10/C.3/2013/69 (United States of America)

*Informal documents:* INF.8 (United States of America)  
INF.42 (EIGA)

111. The Sub-Committee noted the proposal to include pyrophoric gases as a hazard category in the flammable gases hazard class of the GHS, and comments thereto, which will be further discussed by the GHS Sub-Committee.

## **D. Tests and criteria for oxidizing solids**

112. No document was submitted on this agenda sub-item (for reference, see also ST/SG/AC.10/C.3/84, para.77 and ST/SG/AC.10/C.4/48, para. 10).

## **E. Classification criteria and flammability categories for certain refrigerants**

113. No document was submitted on this agenda sub-item (for reference, see also ST/SG/AC.10/C.3/84, para. 84).

## **F. Criteria for water-reactivity**

114. No document was submitted on this agenda sub-item (for reference, see also ST/SG/AC.10/C.3/86, para. 93).

## **G. Expert judgement/weight of evidence**

115. No document was submitted on this agenda sub-item (for reference, see also ST/SG/AC.10/C.3/84 paras. 16–18 and ST/SG/AC.10/C.4/48, para. 53).

## **H. Corrosivity criteria**

### **1. Joint TDG-GHS working group on corrosivity criteria**

*Informal document:* INF.9 (Secretariat)  
INF.29 (United Kingdom)  
INF.22 (Australia)  
INF.32 (CEFIC)  
INF.34 (CEFIC)

116. The Sub-Committee noted that the joint working group would meet on Tuesday 3 December 2013 in the afternoon. It discussed on a preliminary basis, from a transport perspective, documents submitted to the working group without prejudice to further discussion at the working group session.

117. The Sub-Committee noted the three options (Nos. 2, 5 and 6) presented in INF.29 by the expert of the United Kingdom as a way forward for follow-up to previous discussions, as well as the various comments in the related informal documents. It expressed some disappointment at the fact that this documentation had not been made available earlier, which prevented experts from consulting appropriately relevant entities at national level and defining a national position. Some experts expressed a possible preference for option 6. As a conclusion, the Chairman re-iterated the commitment of the Sub-Committee to work together with the GHS Sub-Committee on the issue of corrosivity criteria.

**2. Clarification of skin criteria for sub-categories 1A and 1B in GHS chapter 3.2 and for Packing Groups I and II in the Model Regulations, paragraph 2.8.2.5**

*Document:* ST/SG/AC.10/C.3/2013/68 (IPPIC)

118. Some experts agreed with IPPIC that there was a gap in the current criteria and that the change proposed would fill this gap simply by lengthening the observation time without changing the exposure time. Others considered that the proposal addressed rare cases and that there was no need to change the existing criteria because applying the OECD Guidelines 404 in full would also allow to fill this gap.

119. After discussion, the Sub-Committee felt that the proposal should be considered by the Joint TDG/GHS Working Group on corrosivity criteria, preferably at this session and, if not possible, at the next session in June 2014 after consideration of the IPPIC document by the GHS Sub-Committee at its forthcoming December 2013 session.

## **XII. Other business (agenda item 11)**

### **A. Review of the Manual of Tests and Criteria**

*Document:* ST/SG/AC.10C./3/2013/43 (Chairman of the Working Group on Explosives)

*Informal document:* INF.6 (Chairman of the Working Group on Explosives)

120. The Sub-Committee noted that these documents had been submitted in advance in order to facilitate comments from all interested delegations prior to their consideration at the next session. The secretariat was requested to keep document -/2013/43 on the agenda for the next session and to discuss with the chairman of the Working Group on Explosives how to submit the other envisaged related documents.

### **B. Corrections to the Recommendations on the Transport of Dangerous Goods, Model Regulations, 18<sup>th</sup> revised edition**

*Informal document:* INF.43 and -/Corr.1 (Secretariat)

121. The Sub-Committee approved the corrections suggested by the secretariat, to be reproduced as ST/SG/AC.10/1/Rev.18/Corr.2.

*Informal document:* INF.58 (ICPP)

122. The Sub-Committee noted that the amendment to 6.5.2.2.4 adopted during the last biennium on the basis of an oral proposal (ST/SG/AC.10/C.3/84, para. 49) and concerning the marking of the date of manufacture caused problems for the industry in the case of composite IBCs.

123. There was no consensus on the proposed deletion of the new sentence. However, given the date shown on the inner receptacle may differ from the date on the outer casing, it was agreed, as an interim solution, to delete the word “primary” from the sentence as a correction (see ST/SG/AC.10/1/Rev.18/Corr.2). The representative of ICPP will prepare a new proposal of amendment to 6.5.2.2.4 for the next session in order to address the issue of marking of composite IBCs.

#### C. Proposed field-portable gas fuel UN 6 (c) test assembly

*Informal document:* INF.47 (United States of America)

124. The Sub-Committee noted that the expert from the United States of America intended to submit a proposal on this issue for the next session, and that comments in this respect could be sent to the Department of Transportation ([brian.vos@dot.gov](mailto:brian.vos@dot.gov) et [joseph.nicklous@dot.gov](mailto:joseph.nicklous@dot.gov)).

#### D. Condolences

125. The Sub-Committee learnt with great sadness that the expert from Norway, Mr. Nils Agerup, had passed away since the last session. He had participated for many years in sessions of the Sub-Committee, the IMO DSC Sub-Committee, the RID/ADR/ADN Joint Meeting and the UNECE WP.15 as member, and later Head of the Norwegian delegation. The Sub-Committee observed a minute of silence in his memory and the Chairman invited the expert from Norway to transmit the Sub-Committee’s condolences to his family.

126. Informed that Mr. Spencer Watson (United States of America) too passed away during this session, the Chairman expressed condolences on behalf of the Sub-Committee and invited the expert from the United States to transmit them to Mr. Watson’s family.

### XIII. Adoption of the report (agenda item 12)

127. The Sub-Committee adopted the report on its forty-fourth session and its annexes on the basis of a draft prepared by the secretariat.

## Annex I

### **Draft amendments to the 18th revised edition of the Recommendations on the Transport of Dangerous Goods, Model Regulations**

#### **Chapter 1.2**

1.2.1 In the definition of “*Aerosol or aerosol dispenser*”, insert “an article consisting of” after “means”.

(Reference document: ST/SG/AC.10/C.3/2013/51 as amended)

1.2.1 In the definition of “*Large salvage packaging*”, replace “or leaking” by “, leaking or non-conforming”.

(Reference document: informal document INF.10 as amended)

1.2.1 In the definition of “*Tube*”, replace “a seamless transportable pressure receptacle” by “a transportable pressure receptacle of seamless or composite construction having”.

(Reference document: ST/SG/AC.10/C.3/2013/61, proposal 3)

1.2.1 Add the following new definitions in alphabetical order:

“*Design life*, for composite cylinders and tubes, means the maximum life (in number of years) to which the cylinder or tube is designed and approved in accordance with the applicable standard;”.

“*Service life*, for composite cylinders and tubes, means the number of years the cylinder or tube is permitted to be in service;”

(Reference document: informal document INF.26)

(Supersedes the amendment adopted at the forty-third session)

#### **Chapter 2.9**

2.9.2, under *Substances and articles which, in the event of fire, may form dioxins*

After “3151 POLYHALOGENATED BIPHENYLS, LIQUID or”, add a new entry to read as follows: “3151 HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID or”

After “3152 POLYHALOGENATED BIPHENYLS, SOLID or”, add a new entry to read as follows: “3152 HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID or”

(Reference document: ST/SG/AC.10/C.3/2013/55 as amended)

#### **Chapter 3.2, Dangerous goods list**

For UN Nos. 1005 and 3516      Add “379” in column (6).

(Reference documents: ST/SG/AC.10/C.3/2013/50 and informal document INF.51 as amended)

For UN No. 1415 Add “T9” in column (10). Add “TP7” and “TP33” in column (11).

(Reference document: ST/SG/AC.10/C.3/2013/70)

For UN No. 1966 Delete “TP23”.in column (11).

(Reference document: ST/SG/AC.10/C.3/2013/37)

For UN No. 2213 Insert “223” in column (6).

(Reference document: ST/SG/AC.10/C.3/2013/42 as amended)

For UN No. 2983 Replace “P200” by “P001” in column (8).

(Reference documents: ST/SG/AC.10/C.3/2013/45 and informal document INF.39)

For UN No. 3151, amend column (2) to read as follows: “POLYHALOGENATED BIPHENYLS, LIQUIDS or HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUIDS or POLYHALOGENATED TERPHENYLS, LIQUIDS”.

(Reference document: ST/SG/AC.10/C.3/2013/55 as amended)

For UN No. 3152, amend column (2) to read as follows: “POLYHALOGENATED BIPHENYLS, SOLIDS or HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLIDS or POLYHALOGENATED TERPHENYLS, SOLIDS”.

(Reference document: ST/SG/AC.10/C.3/2013/55 as amended)

For UN No. 3166 Add “380” in column (6).

(Reference document: ST/SG/AC.10/C.3/2013/44 as amended)

### Chapter 3.3

SP225 Amend the second sentence to read as follows:

“Fire extinguishers shall be manufactured, tested, approved and labelled according to the provisions applied in the country of manufacture.”.

SP225 After the second sentence, insert the following NOTE:

**“NOTE: Provisions applied in the country of manufacture” means the provisions applicable in the country of manufacture or those applicable in the country of use. ”.**

SP225 At the end, insert the following NOTE:

**“NOTE: Pressure receptacles which contain gases for use in the above-mentioned extinguishers or for use in stationary fire-fighting installations shall meet the requirements in Chapter 6.2 and all requirements applicable to the relevant dangerous good when these pressure receptacles are transported separately.”.**

(Reference documents: ST/SG/AC.10/C.3/2013/39 and informal document INF.23)

3.3 Add the following new special provisions:

“379 Anhydrous ammonia adsorbed or absorbed on a solid contained in ammonia dispensing systems or receptacles intended to form part of such systems shall not be subject to the other provisions of these Regulations if the following conditions are observed:

(a) The adsorption or absorption presents the following properties:

- (i) The pressure at a temperature of 20° C in the receptacle is less than 0.6 bar;
- (ii) The pressure at a temperature of 35° C in the receptacle is less than 1 bar;

- (iii) The pressure at a temperature of 85° C in the receptacle is less than 12 bar.
- (b) The adsorbent or absorbent material shall not have dangerous properties listed in Classes 1 to 8;
- (c) The maximum contents of a receptacle shall be 10 kg of ammonia; and
- (d) Receptacles containing adsorbed or absorbed ammonia shall meet the following conditions:
- (i) Receptacles shall be made of a material compatible with ammonia as specified in ISO 11114-1: 2012;
  - (ii) Receptacles and their means of closure shall be hermetically sealed and able to contain the generated ammonia;
  - (iii) Each receptacle shall be able to withstand the pressure generated at 85° C with a volumetric expansion no greater than 0.1%;
  - (iv) Each receptacle shall be fitted with a device that allows for gas evacuation once pressure exceeds 15 bar without violent rupture, explosion or projection; and
  - (v) Each receptacle shall be able to withstand a pressure of 20 bar without leakage when the pressure relief device is deactivated.

When carried in an ammonia dispenser, the receptacles shall be connected to the dispenser in such a way that the assembly is guaranteed to have the same strength as a single receptacle.

The properties of mechanical strength mentioned in this special provision shall be tested using a prototype of a receptacle dispenser filled to nominal capacity, by increasing the temperature until the specified pressures are reached.

The test results shall be documented, shall be traceable and shall be communicated to the relevant authorities upon request.”.

*(Reference documents: ST/SG/AC.10/C.3/2013/50 and informal document INF.51 as amended)*

“380 If a vehicle is powered by a flammable liquid and a flammable gas internal combustion engine, it shall be assigned to UN 3166 VEHICLE, FLAMMABLE GAS POWERED.”.

*(Reference document: ST/SG/AC.10/C.3/2013/44 as amended)*

## **Chapter 3.5**

3.5.2 (b) After the first sentence, amend the remainder of subparagraph (b) to read as follows:

“For liquid dangerous goods, the intermediate or outer packaging shall contain sufficient absorbent material to absorb the entire contents of the inner packagings. When placed in the intermediate packaging, the absorbent material may be the cushioning material. Dangerous goods shall not react dangerously with cushioning, absorbent material and packaging material or reduce the integrity or function of the materials. Regardless of its orientation, the package shall completely contain the contents in case of breakage or leakage.”.

*(Reference document: informal document INF.55)*

## Alphabetic index

Add the following new entries in alphabetical order:

“HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUIDS	9	3151
HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLIDS	9	3152”.

(Reference document: ST/SG/AC.10/C.3/2013/55 as amended)

## Chapter 4.1

4.1.4.1, P200, (4) (p) In the two first paragraphs, replace “or ISO 3807-2:2000” by “, ISO 3807-2:2000 or ISO 3807:2013”, twice. In the last paragraph, replace “conforming to ISO 3807-2:2000” by “fitted with a fusible plug”.

(Reference document: informal document INF.26)

4.1.4.1, P200, table 3 At the end, delete the entry for UN No. 2983.

(Reference documents: ST/SG/AC.10/C.3/2013/45 and informal document INF.39)

## Chapter 4.2

4.2.5.3 Delete TP23 and insert “TP23 Deleted.”.

(Reference document: ST/SG/AC.10/C.3/2013/37)

## Chapter 4.3

4.3.1.16.2 In the last sentence, insert “or the ingress of water” after “foreign substances”.

(Reference document: informal document INF.12)

## Chapter 6.1

6.1.5.1.6 In the NOTE, replace “assembling” by “using”. Add a new last sentence to read as follows: “These conditions do not limit the use of inner packagings when applying 6.1.5.1.7.”.

(Reference documents: ST/SG/AC.10/C.3/2013/57 and informal document INF.10)

## Chapter 6.2

6.2.2.1.1 At the end of the table, replace the three last entries (corresponding to standards ‘ISO 11119-1:2002’, ‘ISO 11119-2:2002’ and ‘ISO 11119-3:2002’) with the following entries:

ISO 11119-1:2002	Gas cylinders of composite construction – Specification and test methods – Part 1: Hoop wrapped composite gas cylinders	Until 31 December 2020
ISO 11119-1:2012	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 1: Hoop wrapped fibre reinforced composite gas cylinders and tubes up to 450 l	Until further notice

ISO 11119-2:2002	Gas cylinders of composite construction – Specification and test methods – Part 2: Fully wrapped fibre reinforced composite gas cylinders with load-sharing metal liners	Until 31 December 2020
ISO 11119-2:2012	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 2: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with load-sharing metal liners	Until further notice
ISO 11119-3:2002	Gas cylinders of composite construction – Specification and test methods – Part 3: Fully wrapped fibre reinforced composite gas cylinders with non-load-sharing metallic or non-metallic liners	Until 31 December 2020
ISO 11119-3:2013	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 3: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with non-load-sharing metallic or non-metallic liners	Until further notice

(Reference documents: ST/SG/AC.10/C.3/2013/61)

6.2.2.1.2 After the entry for standard “ISO 11120:1999”, add the following new entries:

ISO 11119-1:2012	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 1: Hoop wrapped fibre reinforced composite gas cylinders and tubes up to 450 l	Until further notice
ISO 11119-2:2012	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 2: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with load-sharing metal liners	Until further notice
ISO 11119-3:2013	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 3: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with non-load-sharing metallic or non-metallic liners	Until further notice

6.2.2.1.2 Add the following NOTES after the table:

**“NOTE 1:** In the above referenced standards composite tubes shall be designed for a design life of not less than 15 years.

**NOTE 2:** Composite tubes with a design life longer than 15 years shall not be filled after 15 years from the date of manufacture, unless the design has successfully passed a service life test programme. The programme shall be part of the initial design type approval and shall specify inspections and tests to demonstrate that tubes manufactured accordingly remain safe to the end of their design life. The service life test programme and the results shall be approved by the competent authority of the country of approval that is responsible for the initial approval of the tube design. The service life of a composite tube shall not be extended beyond its initial approved design life.”.

(Reference documents: ST/SG/AC.10/C.3/2013/61, proposal 2 as amended in informal document INF.26)

6.2.2.1.3 In the table, for standards “ISO 3807-1:2000” and “ISO 3807-2:2000”, amend the text in column “Applicable for manufacture” to read “Until 31 December 2020”. After this standard, add the following new row:

ISO 3807: 2013	Gas cylinders – Acetylene cylinders – Basic requirements and type testing	Until further notice
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(Reference document: ST/SG/AC.10/C.3/2013/61, proposal 4)

6.2.2.7.4 Insert the following new subparagraphs and note at the end:

- “(q) For composite cylinders and tubes having a limited design life, the letters “FINAL” followed by the design life shown as the year (four digits) followed by the month (two digits) separated by a slash (i.e. “/”).
- (r) For composite cylinders and tubes having a limited design life greater than 15 years and for composite cylinders and tubes having non-limited design life, the letters “SERVICE” followed by the date 15 years from the date of manufacture (initial inspection) shown as the year (four digits) followed by the month (two digits) separated by a slash (i.e. “/”).

**NOTE:** *Once the initial design type has passed the service life test programme requirements in accordance with 6.2.2.1.1 NOTE 2 or 6.2.2.1.2 NOTE 2, future production no longer requires this initial service life mark. The initial service life mark shall be made unreadable on cylinders and tubes of a design type that has met the service life test programme requirements.”.*

*(Reference document: ST/SG/AC.10/C.3/2013/61, proposal 2 as amended in informal document INF.26)*

*(Supersedes the amendment adopted at the forty-third session)*

## Annex II

### **Draft amendments to the 5th revised edition of the Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria**

Texts of document ST/SG/AC.10/C.3/2013/58, annexes II and III B, adopted in square brackets.

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