



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

Thirty-sixth session

Geneva, 30 November – 9 December 2009

Report of the Sub-Committee of Experts on the Transport of Dangerous Goods on its thirty-sixth session

(30 November to 9 December 2009)

Contents

	<i>Paragraphs</i>	<i>Page</i>
I. Attendance.....	1-10	4
II. Adoption of the agenda (agenda item 1)	11	5
III. Explosives and related matters (agenda item 2)	12-14	5
A. Classification of sporting cartridges and associated power device cartridges	12-13	5
B. Report of the informal working group on Test Series 7.....	14	5
IV. Listing, classification and packing (agenda item 3)	15-38	6
A. Excepted quantities	15-16	6
1. Excepted quantity limits for chlorosilanes	15	6
2. Excepted quantity provisions for aviation regulated substances	16	6
B. Packing	17-22	6
1. Materials compatibility requirements for gases in pressure receptacles	17-20	6
2. Maximum net quantity (packing instructions).....	21	7
3. Packing or aerosols according to P003.....	22	7
C. Portable tanks instructions for Division 4.3 liquids.....	23-27	7

D.	Classification	28-38	7
1.	Clarification of text related to classification of lithium cells and batteries in the Manual of Tests and Criteria.....	28-29	7
2.	Special provision 274	30-31	8
3.	Classification of nitroglycerin solution in alcohol.....	32-33	8
4.	Pressurized adhesives in gas cylinders	34-36	8
5.	Assignment of special provision 354 to the appropriate UN entries	37	8
6.	Classification of pesticides	38	8
V.	Electric storage systems (agenda item 4)	39-52	9
A.	Revision of packing instruction P903	39-45	9
B.	Special provision 240 (E-Bikes)	46-47	9
C.	New proper shipping name for ultracapacitors	48-51	10
D.	Dual electrical and chemical properties matrix of electrical storage systems.....	52	10
VI.	Miscellaneous proposals of amendments to the Model Regulations on the Transport of Dangerous Goods (agenda item 5).....	53-84	11
A.	Packaging issues	53-73	11
1.	Salvage pressure receptacles	53-54	11
2.	Permitted packaging types in packing instructions	55-58	11
3.	Use of 4N and 1N2 metal packagings	59-61	11
4.	Reference to standard ISO 10460.....	62	12
5.	Flexible bulk containers	63-65	12
6.	Safe stacking load on IBCs	66-67	12
7.	Air ventilation of packagings, including IBCs	68-69	13
8.	Design temperature range for pressure receptacles	70-73	13
B.	Application of hazard label for environmentally hazardous substances	74-75	13
C.	Transport of different substances in the same tank compartment or the same tank	76-78	13
D.	Fuels in machinery and equipment	79-82	14
E.	“De minimis” quantities of dangerous goods	83-84	14
VII.	Electronic data interchange (EDI) for documentation purposes (agenda item 6)....	85	15
VIII.	Cooperation with the International Atomic Energy Agency (IAEA) (agenda item 7)	86-87	15
IX.	Global harmonization of transport of dangerous goods regulations with the United Nations Model Regulations (agenda item 8)	88-107	15
A.	Fourteenth session of the International Maritime Organization (IMO) Sub-Committee on Goods, Solid Cargoes and Containers (DSC).....	89-103	15
B.	Position of the word WASTE in the transport document	104	17
C.	Outcome of the ICAO Dangerous Goods Panel meetings	105	17

D.	Outcome of the September RID/ADR/ADN Joint Meeting sessions	106-107	18
X.	Issues relating to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) (agenda item 10)	108-112	18
A.	Pictograms for gases under pressure	108	18
B.	Implementation of the acute toxicity criteria of the GHS	109-110	18
C.	Criteria to assign packing groups to corrosive substances	111	18
D.	Implementation of the GHS criteria in Class 8 of the United Nations Model Regulations on the Transport of Dangerous Goods	112	19
XI.	Other business (agenda item 11)	113-115	19
A.	Developing and maintaining experts on the regulations applicable to safe, secure and efficient transport of dangerous goods	113	19
B.	Economic and Social Council's resolution 2009/19	114	19
C.	Tribute to the Vice-Chairman	115	19
XII.	Adoption of the report (agenda item 12)	116	19
Annexes			
I.	Draft amendments to the sixteenth revised edition of the Recommendations on the Transport of Dangerous Goods, Model Regulations		20
II.	Draft amendments to the fifth revised edition of the Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria		26
III.	Draft amendments to the Guiding Principles		27
IV.	Corrections to the sixteenth revised edition of the Recommendations on the Transport of Dangerous Goods, Model Regulations		28
V.	Report of the Working Group on the corrosivity criteria		29

Report

I. Attendance

1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its thirty-sixth session from 30 November to 9 December 2009.
2. In the absence of the elected Chairman, Mr. R. Richard (United States of America), the Vice-Chairman, Mr. C. Pfauvadel (France) presided over the session and indicated that he was available to the Sub-Committee to chair the next session as well should that be necessary.
3. The expert from the United States of America stated that the Chairman had accepted a temporary six-month assignment in another service and that he was therefore unable to carry out his functions as Chairman at the current session. He could not say how the situation would evolve at the end of that assignment.
4. The expert from the United Kingdom recalled that when the Sub-Committee elected its officers it expected each to be able to discharge his or her duties until the end of the term. He therefore found it extremely regrettable that the Chairman could be prevented fulfilling his duties as a chairman by such administrative assignments. He said that the Sub-Committee should be informed as soon as possible of the situation.
5. The Vice-Chairman too indicated that the Sub-Committee should not be left in uncertainty for too long. The Chairman's participation in the next session should be clarified as soon as possible, and at the latest by the end of his temporary assignment.
6. Experts from the following countries took part in this session: Argentina, Austria, Belgium, Brazil, Canada, China, Finland, France, Germany, Italy, Japan, Kenya, Netherlands, Norway, Poland, Portugal, Russian Federation, South Africa, Spain, Sweden, United Kingdom and United States of America.
7. Under rule 72 of the rules of procedure of the Economic and Social Council, observers from the following countries also took part: Chile, Romania and Switzerland.
8. The Intergovernmental Organisation for International Transport by Rail (OTIF) was also represented.
9. Representatives of the International Atomic Energy Agency (IAEA) and the International Maritime Organization (IMO) were also present.
10. Representatives of the following non-governmental organizations took part in the discussion of items of concern to their organizations: Association of Hazmat Shippers, Inc. (AHS); Compressed Gas Association (CGA); Council on Safe Transportation of Hazardous Articles (COSTHA); Dangerous Goods Advisory Council (DGAC); European Cosmetic, Toiletry and Perfumery Association (COLIPA); European Industrial Gases Association (EIGA); European Liquefied Petroleum Gas Association (AEGPL); 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 Association for the Promotion and Management of Portable Rechargeable Batteries (RECHARGE); International Confederation of Container Reconditioners (ICCR); International Confederation of Drum 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 Containers Association (IDGCA); International Electrotechnical

Commission (IEC); International Federation of Airline Pilots' Associations (IFALPA); International Federation of Pharmaceutical Manufacturers and Associations (IFPMA); International Organization for Standardization (ISO); International Paint and Printing Ink Council (IPPIC); International Tank Container Organization (ITCO); International Vessel Operators Hazardous Materials Association (VOHMA); KiloFarad International (kFI); Portable Rechargeable Battery Association (PRBA); Responsible Packaging Management Association of Southern Africa (RPMASA); Sporting Arms and Ammunition Manufacturers' Institute (SAAMI); US Fuel Cells Council (USFCC).

II. Adoption of the agenda (agenda item 1)

Documents: ST/SG/AC.10/C.3/71 (Provisional agenda)
ST/SG/AC.10/C.3/71/Add.1 (List of documents)

Informal documents: INF.1, INF.2 (List of documents) and INF.5 (Provisional timetable)

11. The Sub-Committee adopted the provisional agenda prepared by the secretariat after amending it to take account of informal documents (INF.1 to INF.60).

III. Explosives and related matters (agenda item 2)

A. Classification of sporting cartridges and associated power device cartridges

Document: ST/SG/AC.10/C.3/2009/38 (SAAMI)

Informal documents: INF.9 (SAAMI)
INF.46 (Australia)

12. Some experts supported the approach advocated by SAAMI in informal document INF.9, which would permit transport of certain 1.4S goods in accordance with the provisions of Chapter 3.4 relating to dangerous goods packed in limited quantities. Other experts were opposed, as they considered that there was no justification for treating such 1.4S goods differently from others, basically for commercial reasons. Specifically, they considered that for safety reasons the transport of such cartridges should not be exempted from documentation and marking requirements in land transport.

13. The representative of SAAMI was invited to take note of the comments and possibly to submit a new proposal with more technical information at the next session. Several experts considered that such a document should first be discussed in the plenary before being submitted to the Working Group on Explosives, as it would deal with matters of principle as well as technical questions.

B. Report of the informal working group on Test Series 7

Informal document: INF.28 (United Kingdom)

14. The Sub-Committee took note of the interim report on the group's work. Official proposals would be submitted at the next session.

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

A. Excepted quantities

1. Excepted quantity limits for chlorosilanes

Document: ST/SG/AC.10/C.3/2009/29 (ICCA)

15. The Sub-Committee adopted the proposal by ICCA to assign E0 to all chlorosilanes and to silicon tetrachloride (see annexes I and III).

2. Excepted quantity provisions for aviation regulated substances

Document: ST/SG/AC.10/C.3/2009/48 (ICAO)

16. The Sub-Committee adopted the proposal to assign the code E1 rather than E0 to UN Nos. 3334 and 3335. The change entails a consequential amendment to the Guiding Principles (see annexes I and III).

B. Packing

1. Materials compatibility requirements for gases in pressure receptacles

Document: ST/SG/AC.10/C.3/2009/30 (United Kingdom)

Informal documents: INF.29 (United Kingdom)

INF.32 (Belgium)

INF.48 (EIGA)

17. The proposal by the United Kingdom, which was supported in principle by several experts, gave rise to a number of comments and it was decided to refer it for consideration by a lunchtime working group.

Informal document: INF.53 (Report of the working group)

18. The Sub-Committee adopted the proposals of the working group (see annex I). It noted that a working group of ISO was currently revising standard ISO 11114-1 and had provisionally identified some new gases incompatible with aluminium alloys, to which special packing provision “a” should be assigned in the table of packing instruction P200. The amendment was placed in square brackets, which would be removed unless ISO issued a conclusion to the contrary before the last session of the biennium.

19. Industry organizations were also requested to consider the proposal by the United Kingdom to add a new entry in Table 3 of instruction P200 for UN No. 1295 TRICHLOROSILANE, to which special packing provision “a” would be assigned.

Informal document: INF.14 (Germany)

20. Several experts were not very favourable to the proposal to insert a requirement in 6.2.2.5.4.9 since in any case it did not seem to them that it would be possible, when issuing the type approval certificate, to guarantee compatibility between the material of a given pressure receptacle and every gas that might be carried in that receptacle. The expert from Germany took note of the various comments made and said that she might revisit the issue.

2. Maximum net quantity (packing instructions)

Document: ST/SG/AC.10/C.3/2009/42 (ICCA)

21. In view of the number of comments on the proposals to amend the packing instructions to indicate the maximum net quantity authorized, ICCA would consider submitting a revised proposal. Interested experts were requested to send him their comments in writing.

3. Packing of aerosols according to P003

Informal document: INF.26 (FEA)

22. The Sub-Committee did not wish to take a decision on the basis of an informal document and invited FEA to submit their proposal officially at the next session. With respect to the reference to the maximum mass for the packaging type, it was underlined that this mass could only be that for which the packaging type had been tested.

C. Portable tanks instructions for Division 4.3 liquids

Document: ST/SG/AC.10/C.3/2009/44 (United States of America)

23. The proposals to amend the Guiding Principles in respect of Division 4.3 substances, and to assign tank codes or TP special provisions were adopted (see annexes I and III).

24. Some experts asked for provision to be made for transitional measures, but others thought they were not necessary, particularly for the special provisions for use, which could be implemented quickly. Concerned industry representatives were asked to give the matter some thought and submit proposals if they believed it was necessary.

25. The expert from Germany and the representative from ICCA prepared a proposal (informal document INF.49) for assigning a new special provision TP38 to UN No. 3148, packing group I, which was adopted with some modifications (see annex I).

Informal document: INF.20 (United States of America)

26. Some experts would have preferred to retain the prohibition on transport in portable tanks of Division 4.3 substances prone to ignite in contact with water or moist air. It was noted, however, that such overland transport was authorized in Europe and North America, and other experts therefore supported the proposals subject to certain revisions such as the replacement of T22 by T21.

27. The expert from the United States of America said that he would submit a new proposal after having reviewed the various regulations currently in force.

D. Classification

1. Clarification of text related to classification of lithium cells and batteries in the Manual of Tests and Criteria

Document: ST/SG/AC.10/C.3/2009/47 (ICAO)

Informal document: INF.23 (Sweden)

28. The Sub-Committee agreed to add a NOTE at the end of paragraph 38.3.2.1 of the Manual, as proposed by ICAO, but decided to place it in square brackets, as the clarification of current texts was also the subject of discussion in the informal working group on lithium batteries (see annex II).

29. The expert from Sweden withdrew the proposal contained in informal document INF.23.

2. Special provision 274

Informal document: INF.8 (CEFIC)

30. The Sub-Committee adopted the proposal to add special provision 274 to UN No. 1707 and to delete it from UN No. 2571, so as to respect the criterion under which provision 274 was assigned to the n.o.s. entries under Division 6.1 (see annex I).

31. The expert from France expressed the wish that the criteria for assigning that special provision appear in the Guiding Principles. It was suggested that ICCA, which had carried out the work to streamline assignment of the provision, should submit a proposal.

3. Classification of nitroglycerin solution in alcohol

Informal documents: INF.10/Rev.1 (IATA)
INF.51 (Belgium)

32. The Sub-Committee adopted the proposal to assign a new special provision to UN No. 0144 specifying that solutions with more than 1% but not more than 5% alcohol may also be classified under UN No. 3064 in certain conditions (see annex I).

33. The expert from Belgium proposed that a corresponding provision should thus be assigned to UN No. 3064. He was asked to draw up a proposal, which was adopted (see annex I).

4. Pressurized adhesives in gas cylinders

Document: ST/SG/AC.10/C.3/2009/41 (ICCA)

Informal document: INF.16 (ICCA)

34. The proposal to provide two entries for pressurized chemicals in gas cylinders was the subject of numerous comments.

35. It was agreed to convene a working group during a lunch break to allow ICCA to take note of those detailed comments and to prepare a new proposal for the next session.

Informal document: INF.54 (ICCA)

36. The Sub-Committee took note of the report of the working group and the revised proposal, but most experts said they would like ICCA to submit a new proposal for the next session on the basis of the report and the comments thereon.

5. Assignment of special provision 354 to the appropriate UN entries

Informal document: INF.50 (Switzerland)

37. The Sub-Committee noted the remarks by the observer from Switzerland, but most experts could not comment as the informal document had been submitted late. Some experts considered that it would not be appropriate to revise the classification of existing substances on the basis of the tank provisions which had been assigned to them.

6. Classification of pesticides

Informal document: INF.12 (Germany)

38. The Sub-Committee confirmed that pesticides presenting several hazards had to be classified in the same way as any other dangerous goods in accordance with the provisions

of 2.0.3, including the table of precedence of hazard. It was underlined nevertheless that this table included an exception to the general rule for pesticides presenting packing group III hazards of class 3 and division 6.1 since they had to be classified in division 6.1 rather than class 3.

V. Electric storage systems (agenda item 4)

A. Revision of packing instruction P903

Document: ST/SG/AC.10/C.3/2009/31 (United Kingdom)

Informal document: INF.31/Rev.1 (United Kingdom)

39. The expert from the United Kingdom explained that his proposal to revise packing instruction P903 was based on the work of ICAO relating to packing instructions 965 to 970 of the ICAO Technical Instructions.

40. Some experts said that it would perhaps be desirable to discuss the question of the packing of lithium batteries in the informal working group on lithium batteries.

41. It was decided to discuss point by point the comments concerning instruction P903 in informal document INF.31/Rev.1.

42. For section (1) (a), the industry was requested to check whether provision should be made for other types of packaging.

43. The ensuing discussion showed that a large number of outstanding minor issues remained, including: consistency between the last paragraph of (1) (a) and that of (1) (b); consistency between the title of (1) (b) and the text; the possible use of the term “large battery” and the introduction of a definition of large batteries into the Model Regulations; use of the word “packaging” instead of “package” in the second indented subparagraph of (2) (a); interpretation of the text in (2) (a), in particular whether a non-tested outer packaging containing a tested inner packaging should be considered, for the purposes of marking and labelling, as an overpack; the location of the definition of the word “equipment”, and the definition itself – namely how to deal with batteries that were packed together with equipment other than the apparatus for which the batteries were required; and consistency between the wording of the additional requirement and that of similar provisions in other packing instructions in respect of protection against short circuits.

44. The expert from the United Kingdom said that he would draw up a new proposal, and asked for any further comments to be submitted in writing.

Informal document: INF.22 (Sweden)

45. The expert from Sweden said that she would draw up a new proposal for devices that were intentionally active in transport.

B. Special provision 240 (E-Bikes)

Document: ST/SG/AC.10/C.3/2009/35 (Germany)

Informal document: INF.33 (RECHARGE, PRBA)

46. The proposal by Germany gave rise to a discussion on whether vehicles powered by lithium batteries should, according to their size, be classified as vehicles (for example UN Nos. 3171 and 3166) or as batteries contained in equipment (UN Nos. 3091 or 3481). It was agreed that the matter would be considered by a working group during the lunch breaks.

Informal document: INF.57 (Report of the working group)

47. The Sub-Committee agreed to include the texts proposed by the working group, with some editorial corrections, as adopted texts in the report (see annex I), but in square brackets for further discussion at the next session for clarification in particular of the meaning of the terms “vehicle” and “large equipment”.

C. New proper shipping name for ultracapacitors

Document: ST/SG/AC.10/C.3/2009/43 (kFI)

Informal document: INF.52 (kFI)

48. The proposal for a new entry for ultracapacitors had been the subject of numerous comments which, along with kFI’s replies, were summarized in informal document INF.52.

49. After an extensive discussion, the Vice-Chairman identified three distinct cases:

(a) Charged ultracapacitors, the main danger of which was the electric charge, which took precedence over the danger posed by the dangerous substances they contained. Their transport was normally not authorized;

(b) Discharged ultracapacitors, which presented no electrical hazard but did present a chemical hazard owing to the dangerous substances they contained. As the quantities involved were generally small, such ultracapacitors could generally benefit from exemptions for dangerous goods packed in limited quantities;

(c) Ultracapacitors that had already been used and whose operation had generated hydrogen, a flammable gas, which remained in the ultracapacitor, sometimes at high pressures of up to 15 bar.

50. It was proposed that the representative of kFI should prepare a document presenting several options that would allow the Sub-Committee to take a decision.

51. The representative of kFI said that he would present a document with two options, one aimed at classifying all ultracapacitors in Class 9, the other classifying them in the class corresponding to the dangerous substances they contained. He pointed out that the danger related to hydrogen generation was relatively minor, as the quantities involved were minimal, despite the increase in internal pressure.

D. Dual electrical and chemical properties matrix of electrical storage systems

Informal document: INF.34 (RECHARGE and PRBA)

52. The Sub-Committee welcomed the work done by RECHARGE and PRBA and considered that the matrix should be kept as a reference document. It further noted the opinion according to which it was not necessary to deal with electricity storage systems in a special section of the Model Regulations, and also the recommendation that the regulatory scheme currently applicable to them should not be modified.

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

A. Packaging issues

1. Salvage pressure receptacles

Document: ST/SG/AC.10/C.3/2009/16/Rev.1 (Germany)

Informal documents: INF.21 (United Kingdom)
INF.42 (CGA)

53. Several experts noted that the amendments proposed to the document submitted by the expert from Germany, contained in the informal documents, were relatively extensive, and that since they had been submitted late it had been impossible to hold proper prior discussions on them at the national level.

54. The Sub-Committee decided to defer discussion until the next session. The submitted documents would be discussed by a working group that would meet in parallel during the session.

2. Permitted packaging types in packing instructions

Document: ST/SG/AC.10/C.3/2009/32 (IATA)

55. The proposal was a follow-up to the discussions at the last session (ST/SG/AC.10/C.3/70, paras. 39 and 40). However, opinions differed concerning the very idea of systematically indicating the packaging codes whose use was permitted. Some experts considered that the proposal unjustifiably limited the types of packagings authorized by instructions P004, P901, P902 and P903, even if the packagings in question probably corresponded to those used in practice.

56. If the proposed logic was followed, other instructions such as P302, P401, P402, P408, P500 and P621 would have to be revised as well, although that was not justified from the point of view of safety.

57. The representative of IATA said that referring to packagings that met a given performance level without indicating the packing code was sometimes interpreted as meaning that the packagings did not have to bear the mark corresponding to the tested design type. That problem, it was suggested, could be settled more simply by improving the wording of the current text.

58. The representative of IATA said that he would prepare a new proposal for the next session.

3. Use of 4N and 1N2 metal packagings

Document: ST/SG/AC.10/C.3/2009/39 (Italy)

59. The Sub-Committee was generally in favour of authorizing metal packagings other than steel or aluminium (for example, titanium), at least in cases where the same type of packaging (boxes or drums) was already authorized in steel or aluminium.

60. It was, however, noted that the proposal specifically covered explosive substances and articles, some of which were not intended for use with boxes or drums. Certain packing instructions were also specific to given substances (for example, P800, for gallium and mercury), and it was important to ensure that there was no risk of incompatibility with the metal used.

61. The expert from Italy said that he would prepare a new proposal to take into account the comments and to set out in detail the amendments to be made to each of the packing instructions in question (for example, indicating the authorized net mass, if applicable, etc.). The proposal should also be studied by the Working Group on Explosives.

4. Reference to standard ISO 10460

Informal document: INF.4 (ISO)

62. The proposed amendment to 6.2.2.4 was adopted (see annex I).

5. Flexible bulk containers

Document: ST/SG/AC.10/C.3/2009/51 (IDGCA)

Informal documents: INF.3 and INF.39 (IDGCA)

63. Several experts welcomed the significant improvement in the IDGCA proposal that took account of the comments made at the previous sessions and they supported the principle of introducing provisions to the Model Regulations to allow flexible bulk containers to be used. The version contained in informal document INF.39 included fresh improvements, but the document had been distributed very late.

64. Several comments were made on the proposed text, for example, on the need to set an upper limit for capacity; provide information on the performance of flexible bulk containers after they were used for a certain time; provide for periodic inspections; clarify the language to be used for protection against water (water-tight, sift-proof and hermetically sealed); mark authorized stacking loads; and provide for equipment to retain the container on the vehicles.

65. Delegations were urged to provide written comments to the IDGCA representative so that he could submit a new proposal that would be discussed at the beginning of the next session, so as to make it possible for a lunchtime working group to enter into detailed discussions during the session.

6. Safe stacking load on IBCs

Document: ST/SG/AC.10/C.3/2009/37 (ICPP)

Informal document: INF.24 (Sweden)

66. ICPP considered that 6.5.2.2.2 should be amended to indicate clearly that the maximum stacking load applied only to transport and not to any other situation such as storage. After discussion, although ICPP withdrew its proposal to add the term “during transport” on the symbol, the proposed amendment of the text was put to the vote and rejected.

67. The expert from Sweden said that she would submit her proposal (INF.24) to require a stacking symbol for large packagings too in an official document for the next session.

7. Air ventilation of packagings, including IBCs*Informal document:* INF.37 (Germany)

68. Some experts did not support introducing new requirements for air ventilation of packagings, including IBCs, to avoid a reduction of pressure inside packagings. Others would have preferred discussing this proposal on the basis of an official document and in the presence of representatives of the packaging industry.

69. The expert from Germany said that she would consider whether or not submitting an official proposal after analysis of the comments made.

8. Design temperature range for pressure receptacles*Informal document:* INF.11 (Germany)

70. The Sub-Committee agreed that the expert from Germany should prepare a proposal for including the definition of gases also in section 1.2.1.

71. Some experts were also in favour of introducing the notion of design temperature range in Chapter 6.2 for the design of pressure receptacles. Others considered however that a lower limit of -40 °C was too stringent for the design of pressure receptacles in general, even though this proposal could be understood in the context of use of such receptacles in cold climatic regions.

72. It was also mentioned that the introduction of a design temperature range could have consequences on references to ISO standards in 6.2.2.1, since these standards might not be compatible with such new requirements.

73. The expert from Germany, noting that CGA, EIGA, ECMA and AEGPL wished to be consulted, said that she would give more thought to the issue after consultation with interested parties.

B. Application of hazard label for environmentally hazardous substances*Document:* ST/SG/AC.10/C.3/2009/33 (IATA)*Informal documents:* INF.25 (IATA)

INF.27 (Sweden)

INF.56 (United Kingdom)

INF.59 (IATA)

74. It was noted that for environmentally hazardous substances, the text currently required both the hazard label and the environmentally hazardous substances mark. There was apparently no reason to add a new requirement to that effect under 5.2.1.6.4. However, as some consignors failed to apply the Class 9 label when the mark was applied to UN Nos. 3077 and 3082, it was decided to add a NOTE to 5.2.1.6.3, so as to remove any ambiguity (see annex I).

75. The proposal by the expert from Sweden to require that the mark and the label be located adjacent to one another was considered excessive.

C. Transport of different substances in the same tank compartment or the same tank*Document:* ST/SG/AC.10/C.3/2009/36 (Germany)

76. Some experts expressed reservations concerning the proposed definition of a “dangerous reaction”. The expert from Germany emphasized that the definition proposed for 1.2.1 merely took up the current texts of 4.1.1.6 and 4.1.2.6. Her proposal was aimed at ensuring that tanks or tank compartments were cleaned before being refilled if there was a risk of a dangerous reaction between the new dangerous substance and the slops of the previous cargo.

77. Certain comments were, however, made about the proposed texts, in particular relating to the meaning of “person responsible for filling” (legal or physical person), the justification of the need to purge the tank, and the respective responsibilities of those involved (consignors, carriers, fillers, consignees of the previous cargo, etc.). It was emphasized for example that it was not necessarily the filler who would clean a tank.

78. The expert from Germany asked the various delegations to submit their remarks to her in writing so that she could prepare a new proposal.

D. Fuels in machinery and equipment

Document: ST/SG/AC.10/C.3/2009/40 (United Kingdom)

Informal document: INF.43 (Australia)

79. Opinions were divided on what rules to apply to the transport of machines or equipment fitted with tanks for liquid fuel required for the functioning of the machinery or equipment, in view of the fact that the tanks could sometimes contain large quantities of fuel equivalent to those transported in tanks, for example for generator sets.

80. Most of the experts considered that when the machinery or equipment was transported with a full tank, risk prevention measures were essential.

81. Several suggestions were made, which included: subjecting such fuel tanks to the tests for intermediate bulk containers (IBCs); requiring labelling, placarding, or a transport document; ensuring consistency of the provisions with those relating to UN Nos. 3166 and 3363; establishing separate entries for such types of machinery or equipment; and providing for other situations, for example medical equipment fitted with gas tanks.

82. The expert from the United Kingdom asked for the comments to be submitted to him in writing so that he could draft a new proposal.

E. “De minimis” quantities of dangerous goods

Document: ST/SG/AC.10/C.3/2009/45 (United States of America)

Informal document: INF.55 (United States of America)

83. After an initial discussion, the expert from the United States of America prepared a new proposal (INF.55) in order to reflect the various comments made. The points requiring a decision were left in square brackets. They were then put to the vote, one by one, and the following was decided:

(a) “De minimis” exceptions could be applied to dangerous goods assigned to codes E4 and E5;

(b) It was not necessary to limit the number of packages in any freight vehicle, as was the case for the dangerous goods packed in excepted quantities in 3.5.5, since for “de minimis” quantities the packages were not identified with marking or labelling, and it was thus impossible to check them.

84. The proposed amendment to 3.5.1.4, as amended, was adopted (see annex I).

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

85. This item was not discussed since no document had been submitted.

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

Informal document: INF.38 (IAEA)

86. The Sub-Committee noted the information provided as regards the topics to be considered in the revision of the IAEA safety regulations. An initial draft proposal of amendments would be submitted to the Sub-Committee in March 2011 at the first session of the 2011-2012 biennium.

87. Several experts questioned the intents of the IAEA regarding amendments to chapter 1.4 as regards security provisions. The representative of IAEA said that annex 2 to informal document INF.38 only contained an example of amendment, and that IAEA was seeking the views of experts of the Sub-Committee before submitting an official proposal. Comments could be sent to A.Eriksson@iaea.org.

IX. Global harmonization of transport of dangerous goods regulations with the United Nations Model Regulations (agenda item 8)

88. The Sub-Committee welcomed the fact that IMO, ICAO and UNECE had taken action on Economic and Social Council resolution 2009/19 by promptly transmitting information on the problems encountered by their competent bodies in their work on harmonization of their national modal regulations with the sixteenth revised edition of the United Nations Model Regulations.

A. Fourteenth session of the International Maritime Organization (IMO) Sub-Committee on Goods, Solid Cargoes and Containers (DSC)

Informal document: INF.30 (IMO)

89. The Sub-Committee took note of the information transmitted and comments were made on various points in the report, as indicated below. The expert from France, speaking as the Chairperson of the International Maritime Organization (IMO) Sub-Committee on Goods, Solid Cargoes and Containers, said that, if necessary in the light of the comments, she would submit proposals for amendments to the Model Regulations.

Paragraph 3.2.5

90. A member of the secretariat pointed out that the last sentence of 2.0.2.5 had not been added to 3.1.3.2 by the United Nations Sub-Committee because it dealt with classification and was not absolutely needed in section 3.1.3, which dealt rather with the determination of the UN No. and the proper shipping name.

Paragraph 3.2.6

91. The IMO decision meant that the transport of UN Nos. 3166 and 3171 would be regulated only for air and sea transport. This could be indicated by a new special provision replacing SP 106 for these UN Nos., for example the old SP 123 which had been deleted previously (see annex I).

Paragraph 3.2.7

92. Special provisions 349 and 353 came from RID and ADR and the terminology used was accordingly that of RID and ADR, in order to ensure consistency with, in particular, the provisions of part 2 of RID and ADR, and of articles 2 and 4, paragraph 3, of ADR. The terminology of SP 900 of the IMDG Code was consistent with the terminology of the SOLAS Convention (ch. VII, pt. A, rule 2) and it would seem logical for IMO to adopt the terminology used in SP 349 and 353 with a view to consistency. This discrepancy did not affect the substance.

Paragraph 3.2.9.9

93. It was recalled that the proper shipping name for UN No. 1471 had always been LITHIUM HYPOCHLORITE, DRY or LITHIUM HYPOCHLORITE MIXTURE. IMO may wish to provide information why the words “DRY with more than 39% available chlorine (8.8% available oxygen)” should be added after “MIXTURE”.

Paragraph 3.2.11

94. A corrigendum to the sixteenth revised edition of the Recommendations on the Transport of Dangerous Goods will be issued to assign B13 to UN No. 3487, packing group III, and to refer to UN Nos. 3485, 3486 and 3487 in special provision B13 in packing instruction IBC08 (see annex IV).

95. A special provision should be added under packing instruction LP02 to indicate that large packagings are not authorized for carriage of UN Nos. 2208 and 3486 by sea (see annex I).

Paragraph 3.2.13

96. The wording of TP37 was brought in line with that of the IMDG Code (see annex I).

Paragraph 3.2.15

97. The Sub-Committee agreed that paragraph 5.2.1.7.2 concerning orientation arrows should be corrected (see annex I).

Paragraph 3.2.16

98. The Sub-Committee noted that paragraph 5.4.1.1.2 of the Model Regulations could not be introduced in the IMDG Code because the IMDG Code could not apply to non-maritime transport operations occurring before transport by sea.

Paragraph 3.4 (UN Nos. 1486, 1498 and 1499)

99. Several experts regretted the IMO decision to introduce a special provision 964 exempting certain forms of potassium nitrate, sodium nitrate and mixtures thereof provided that these substances did not meet the criteria. They considered that these substances were all oxidizing substances, regardless of the particle form and size. They recalled that these entries had been introduced in the Model Regulations on the basis of experience, before the

development of test and criteria for classification of oxidizing substances. The tests and criteria had been developed for classification of new substances or solutions and mixtures, but they should not be used for dangerous goods mentioned by name in the dangerous goods list which had not been assigned special provision 223. It was also mentioned that some countries envisaged to review the current test and criteria for division 5.1 solids since they felt that they were not entirely satisfactory. They underlined that classification was a multimodal issue and should not be dealt separately by modal bodies since this could entail serious problems in a multimodal chain of transport, i.e in this case, labelling and marking of all packages in port areas for onward carriage after the maritime leg.

100. A member of the secretariat noted that special provision 223 had not been included in ADR, RID, nor ADN. According to these international instruments applicable to inland transport, all substances of divisions 4.1, 4.2, 4.3 and 5.1 which are mentioned by name in the dangerous goods list may be classified as non-dangerous on the basis of the test procedures of the Manual of Tests and Criteria and of the criteria. Therefore the IMO decision for these three UN numbers was indeed inconsistent with the UN Recommendations, but was not inconsistent with the more general approach followed by Contracting Parties to ADR, RID or ADN. He recalled also that the criteria had also been introduced in the GHS for wider applications.

101. The observer from Chile mentioned that her country was the largest producer of such substances in the world and had extensive experience in handling, storing and transporting them. She considered that there was no specific problems associated with the transport of these nitrates in this special form and she provided examples of other substances considered for such exemptions in the Model Regulations (sulphur and commercial grades of calcium nitrate fertilizers).

102. The Sub-Committee considered that, in absence of more detailed information on the technical data that led IMO to take this decision, it could not provide appropriate advice at this time on such a complex issue. Experts were invited to provide written documents for the next session to justify their views, after which the Sub-Committee position could be communicated to IMO.

Informal documents: INF.58 (France)
INF.58/Add.1 (Secretariat)

103. The Sub-Committee adopted corrections and amendments to the Model Regulations to take account of the outcome of the discussion of informal document INF.30 (see annexes I and IV).

B. Position of the word WASTE in the transport document

Document: ST/SG/AC.10/C.3/2009/34 (United Kingdom)

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

104. The expert from the United Kingdom withdrew his proposal since the RID/ADR/ADN Joint Meeting had agreed to align ADR, RID and ADN with the Model Regulations.

C. Outcome of the ICAO Dangerous Goods Panel meetings

Document: ST/SG/AC.10/C.3/2009/46 (ICAO)

105. The Sub-Committee noted with satisfaction the information provided by ICAO and that an update would be provided on the basis of the outcome of the October 2009 Dangerous Goods Panel session.

D. Outcome of the September RID/ADR/ADN Joint Meeting sessions

Informal documents: INF.40 and INF.41 (Secretariat)

106. The Sub-Committee noted the information provided, and that the secretariat would prepare more detailed proposals as appropriate for the next session.

107. The Sub-Committee also noted that the new provisions for limited quantities would be introduced in RID, ADR, and ADN as from 1 January 2011 with a transitional provision until 31 December 2015. At the request of the industry, these provisions had been laid down in a more user-friendly way than in the Model regulations, and the secretariat was invited to propose such an option for the Model Regulations for the next session.

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

A. Pictograms for gases under pressure

Document: ST/SG/AC.10/C.3/2009/52 (Germany, United Kingdom and EIGA)

108. The Sub-Committee noted that this proposal was intended for the Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (GHS Sub-Committee) and that it was not likely to affect the labelling system of the Model Regulations on the Transport of Dangerous Goods.

B. Implementation of the acute toxicity criteria of the GHS

Informal document: INF.13 (Germany)

109. Some experts supported the proposal of harmonization of the toxicity criteria in the Model Regulations with the newly adopted GHS criteria. However they thought that the way of introducing these new criteria should be consistent with the way of introducing the corrosivity criteria. Others felt that the Sub-Committee should wait until some experience has been gained with their implementation in the supply and use sectors.

110. Delegations were invited to provide written comments to the expert from Germany who would prepare a revised proposal.

C. Criteria to assign packing groups to corrosive substances

Document: ST/SG/AC.10/C.3/2009/28 (Spain)

Informal document: INF.60 (Spain)

111. The Sub-Committee adopted a table summarizing the current criteria for assigning packing groups to corrosive substances (see annex I). Depending on the outcome of the discussion on the harmonization of the corrosivity criteria with the GHS, this table might have to be updated.

D. Implementation of the GHS criteria in Class 8 of the United Nations Model Regulations on the Transport of Dangerous Goods

Documents: ST/SG/AC.10/C.3/2009/15 (Netherlands)
ST/SG/AC.10/C.3/2009/49 (DGAC)
ST/SG/AC.10/C.3/2009/50 (United Kingdom)

Informal documents: INF.3 of the thirty-fifth session (Netherlands)
INF.6 (Secretariat)
INF.15 (DGAC)
INF.17 (Netherlands)
INF.18 (CEFIC)
INF.36 (Germany)
INF.45 (Australia)

112. As agreed at the last session this issue was discussed at working group level, with participation of experts of the GHS Sub-Committee. The report of the working group and its conclusions, endorsed by the Sub-Committee, are reproduced in annex V.

XI. Other business (agenda item 11)

A. Developing and maintaining experts on the regulations applicable to safe, secure and efficient transport of dangerous goods

Informal document: INF.35 (COSTHA)

113. The Sub-Committee took note of the action undertaken by COSTHA in the context of the project “Enhancing the Image of the Dangerous Goods/Hazardous Materials Professional, Blueprint for Success” and of the highlights of its pilot survey.

B. Economic and Social Council’s resolution 2009/19

Informal document: INF.7 (Secretariat)

114. The Sub-Committee noted with satisfaction that the Council had adopted on 29 July 2009 and without modification the draft resolution prepared by the Committee at its December 2008 session.

C. Tribute to the Vice-Chairman

115. The Sub-Committee warmly thanked the Vice-Chairman for having accepted to chair the session at such short notice when he was made aware of the absence of the Chairman.

XII. Adoption of the report (agenda item 12)

116. The Sub-Committee adopted the report on its thirty-sixth session and its annexes on the basis of a draft prepared by the secretariat.

Annex I

Draft amendments to the sixteenth revised edition of the Recommendations on the Transport of Dangerous Goods, Model Regulations

Chapter 1.1

1.1.1.7 Insert a new sub-section 1.1.1.7 to read as follows:

“1.1.1.7 Application of standards

Where the application of a standard is required and there is any conflict between the standard and these Regulations, the Regulations take precedence.”.

(Reference document: informal document UN/SCETDG/36/INF.53)

Chapter 2.0

2.0.2.5 In the first sentence, add “meeting the classification criteria of these Regulations” after “A mixture or solution”.

2.0.2.9 Add “meeting the classification criteria of these Regulations” after “A mixture or solution”.

(Reference document: informal document UN/SCETDG/36/INF.58)

Chapter 2.8

2.8.2.5 Add the following table at the end:

“Table summarizing the criteria in 2.8.2.5

<i>Packing Group</i>	<i>Exposure Time</i>	<i>Observation Period</i>	<i>Effect</i>
I	≤ 3 min	≤ 60 min	Full thickness destruction of intact skin
II	> 3 min ≤ 1 h	≤ 14 d	Full thickness destruction of intact skin
III	> 1 h ≤ 4 h	≤ 14 d	Full thickness destruction of intact skin
III	-	-	Corrosion rate on either steel or aluminium surfaces exceeding 6.25 mm a year at a test temperature of 55 °C when tested on both materials

”.

(Reference document: informal document UN/SCETDG/36/INF.60 as amended)

Chapter 3.1

3.1.3.2 In the first sentence, add “meeting the classification criteria of these Regulations” after “A mixture or solution”.

3.1.3.3 Add “meeting the classification criteria of these Regulations” after “A mixture or solution”.

(Reference document: informal document UN/SCETDG/36/INF.58)

Chapter 3.2

3.2.1 Dangerous Goods List

For UN No. 0144, in column (6), insert “358”.

(Reference document: informal document UN/SCETDG/36/INF.10/Rev.1)

For UN Nos. 1162, 1196, 1250, 1298, 1305, 1724, 1728, 1747, 1753, 1762, 1763, 1766, 1767, 1769, 1771, 1781, 1784, 1799, 1800, 1801, 1804, 1816, 1818, 2434, 2435, 2437, 2985, 2986, 2987, 3361 and 3362, amend the code in column (7b) to read “E0”.

(Reference document: ST/SG/AC.10/C.3/2009/29)

For UN No. 1707, in column (6), insert “274”.

(Reference document: informal document UN/SCETDG/36/INF.8)

For UN Nos. 2208 and 3486, add “L3” against “LP02” in column (9).

(Reference document: informal document UN/SCETDG/36/INF.58/Add.1)

For UN No. 2571, in column (6), delete “274”.

(Reference document: informal document UN/SCETDG/36/INF.8)

For UN No. 2965 and for UN No. 3129, Packing Group I, in column (11), insert “TP13”.

(Reference document: ST/SG/AC.10/C.3/2009/44)

For UN No. 3064, add “359” in column (6).

(Reference document: informal document UN/SCETDG/36/INF.51 as amended)

[For UN Nos. 3091 and 3481, insert “360” in column (6).]

(Reference document: informal document UN/SCETDG/36/INF.57 as amended)

For UN No. 3129, Packing Group II, and for UN No. 3148, Packing Group II, in column (11), insert “TP7”.

(Reference document: ST/SG/AC.10/C.3/2009/44)

For UN No. 3129, Packing Group III, and for UN No. 3148, Packing Group III, in column (11), replace “TP1” with “TP2 TP7”.

(Reference document: ST/SG/AC.10/C.3/2009/44)

For UN No. 3148, Packing Group I, in column (10), replace “T9” with “T13”.

(Reference document: ST/SG/AC.10/C.3/2009/44)

For UN No. 3148, Packing Group I, add “TP38” in column (11).

(Reference document: informal document UN/SCETDG/36/INF.49)

For UN Nos. 3166 and 3171, replace “106” with “123” in column (6).

(Reference document: informal document UN/SCETDG/36/INF.58)

For UN Nos. 3334 and 3335, amend the code in column (7b) to read “E1”.

(Reference document: ST/SG/AC.10/C.3/2009/48)

Chapter 3.3

[3.3.1 **SP240** Amend to read as follows:

“240 This entry only applies to vehicles powered by wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries and equipment powered by wet batteries or sodium batteries transported with these batteries installed. Examples of such vehicles are electrically-powered cars. Examples of such equipment powered by sodium or wet batteries are [motorcycles, scooters, E-bikes], lawnmowers, wheelchairs or other mobility aids. Equipment powered by lithium metal batteries or lithium ion batteries shall be consigned under the entries UN 3091 LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or UN 3091 LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT or UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or UN 3481 LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, as appropriate. Hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, transported with the battery(ies) installed shall be consigned under the entries UN 3166 VEHICLE, FLAMMABLE GAS POWERED or UN 3166 VEHICLE, FLAMMABLE LIQUID POWERED, as appropriate. Vehicles which contain a fuel cell shall be consigned under the entries UN 3166 VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or UN 3166 VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED, as appropriate.”.

SP312 Replace “or lithium batteries” with “, lithium metal batteries or lithium ion batteries” (twice).]

(Reference document: informal document UN/SCETDG/36/INF.57 as amended)

3.3.1 Insert the following new special provisions:

“123 Subject to these Regulations only when transported by air or by sea.”.

(Reference document: informal document UN/SCETDG/36/INF.58 as amended)

“358 Nitroglycerin solution in alcohol with more than 1% but not more than 5% nitroglycerin may be classified in Class 3 and assigned to UN 3064 provided all the requirements of packing instruction P300 are complied with.”.

(Reference document: informal document UN/SCETDG/36/INF.10/Rev.1)

“359 Nitroglycerin solution in alcohol with more than 1% but not more than 5% nitroglycerin shall be classified in Class 1 and assigned to UN 0144 if not all the requirements of packing instruction P300 are complied with.”.

(Reference document: informal document UN/SCETDG/36/INF.51 as amended)

[“360 Vehicles only powered by lithium metal batteries or lithium ion batteries shall be consigned under the entry UN 3171 BATTERY-POWERED VEHICLE.”.]

(Reference document: informal document UN/SCETDG/36/INF.57 as amended)

Chapter 3.5

3.5.1 Insert a new sub-section 3.5.1.4 to read as follows:

“3.5.1.4 Excepted quantities of dangerous goods assigned to codes E1, E2, E4 and E5 are not subject to these Regulations provided that:

- (a) The maximum net quantity of material per inner packaging is limited to 1 ml for liquids and gases and 1 g for solids;
- (b) The provisions of 3.5.2 are met, except that an intermediate packaging is not required if the inner packagings are securely packed in an outer

packaging with cushioning material in such a way that, under normal conditions of transport, it cannot break, be punctured, or leak its contents; and for liquid dangerous goods, the outer packaging contains sufficient absorbent material to absorb the entire contents of the inner packagings;

(c) The provisions of 3.5.3 are complied with; and

(d) The maximum net quantity of dangerous goods per outer packaging does not exceed 100 g for solids or 100 ml for liquids and gases.”.

(Reference document: informal document UN/SCETDG/36/INF.55 as amended)

Chapter 4.1

4.1.4.1 Packing Instruction **P002**:

In special packing provision PP85, at the end, add the following sentence: “For transport by sea, bags are not allowed as single packagings”.

(Reference document: informal document UN/SCETDG/36/INF.58/Add.1)

Packing Instruction **P200**, paragraph (4):

Amend the first line reading “Keys for the column “Special packing provisions”” to read “Special packing provisions”.

Amend the first heading reading “Material compatibility (for gases see ISO 11114-1:1997 and ISO 11114 – 2:2000” to read “Material compatibility”.

Amend sub-paragraph a to read:

“a : Aluminium alloy pressure receptacles shall not be used.”.

Amend sub-paragraph d to read:

“d: When steel pressure receptacles are used, only those bearing the “H” mark in accordance with 6.2.2.7.4 (p) are permitted.”.

[Packing Instruction **P200**, Table 2:

For UN Nos. 1008, 1076, 1741, 1859, 1911, 2189 and 2418, insert “a” in column “Special packing provisions”.

Packing Instruction **P200**, Table 3:

For UN No. 1052, insert “a” in column “Special packing provisions”.]

(Reference document: informal document UN/SCETDG/36/INF.53)

[Packing Instruction **P903**:

In the second row, third paragraph, at the end, insert “constructed of suitable material of adequate strength and design, in relation to the packagings capacity and its intended use. It should be also constructed” before “in such a manner” and add the following new sentence at the end “[Large equipment] can be offered for transport unpackaged or on pallets when the battery is afforded equivalent protection by the equipment in which it is contained.”.]

(Reference document: informal document UN/SCETDG/36/INF.57 as amended)

4.1.4.3 **LP02** Add a new special packing provision L3 to read as follows:

“**L3** For UN Nos. 2208 and 3486, transport by sea in large packagings is prohibited”.

(Reference document: informal document UN/SCETDG/36/INF.58/Add.1)

Chapter 4.2

4.2.5.3 **TP37** Amend to read as follows:

“TP37 Portable tank provision T14 may continue to be applied until 31 December 2016 except that until that date:

- (a) For UN Nos. 1810, 2474 and 2668, T7 may be applied;
- (b) For UN No. 2486, T8 may be applied; and
- (c) For UN No. 1838, T10 may be applied.”.

(Reference document: informal document UN/SCETDG/36/INF.58/Add.1)

4.2.5.3 Insert a new portable tank special provision TP38 to read as follows:

“TP38 The portable tank instruction T9 prescribed in the Model Regulations annexed to the 16th revised edition of the Recommendations on the Transport of Dangerous Goods may continue to be applied until 31 December 2018.”.

(Reference document: informal document UN/SCETDG/36/INF.49 as amended)

Chapter 5.2

5.2.1.6.3 Add the following new Note at the end:

“**NOTE:** The labelling provisions of 5.2.2 apply in addition to any requirement for packages to bear the environmentally hazardous substance mark.”.

(Reference document: informal document UN/SCETDG/36/INF.59)

5.2.1.7.2 Amend to read as follows:

“5.2.1.7.2 Orientation arrows are not required on:

- (a) Outer packagings containing pressure receptacles except cryogenic receptacles;
- (b) Outer packagings containing dangerous goods in inner packagings each containing not more than 120 ml, with sufficient absorbent material between the inner and outer packagings to completely absorb the liquid contents;
- (c) Outer packagings containing division 6.2 infectious substances in primary receptacles each containing not more than 50 ml;
- (d) Type IP-2, type IP-3, type A, type B(U), type B(M) or type C packages containing Class 7 radioactive material;
- (e) Outer packagings containing articles which are leak-tight in all orientations (e.g. alcohol or mercury in thermometers, aerosols, etc.); or
- (f) Outer packagings containing dangerous goods in hermetically sealed inner packagings each containing not more than 500 ml.”.

(Reference document: informal document UN/SCETDG/36/INF.58 as amended)

Chapter 6.2

6.2.2.4 Insert the following new row in the table:

ISO 10460:2005	Gas cylinders – Welded carbon-steel gas cylinders – Periodic inspection and testing <i>NOTE: The repair of welds described in clause 12.1 of this standard shall not be permitted. Repairs described in clause 12.2 require the approval of the competent authority which approved the periodic inspection and test body in accordance with 6.2.2.6.</i>
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(Reference document: informal document UN/SCETDG/36/INF.4)

Annex II

Draft amendments to the fifth revised edition of the Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria

[38.3.2.1 At the end, insert a new Note to read as follows:

“NOTE: Batteries are subject to the tests required by special provisions 188 and 230 of Chapter 3.3 of the Model Regulations irrespective of whether the cells of which they are composed have been so tested.”.]

(Reference document: ST/SG/AC.10/C.3/2009/47)

Annex III

[English only]

Draft amendments to the Guiding Principles

In Part 3, guiding principles for Chapter 3.5, Excepted quantities, in the table:

For Class 3 with subsidiary risk, insert a new footnote reading “Chlorosilanes (UN Nos. 1162, 1196, 1250, 1298, 1305, 2985) shall not be transported as excepted quantities.”.

For Class 6.1, insert a new footnote reading “Chlorosilanes (UN Nos. 3361, 3362) shall not be transported as excepted quantities.”.

For Class 8, insert a new footnote reading “Chlorosilanes (UN Nos. 1724, 1728, 1747, 1753, 1762, 1763, 1766, 1767, 1769, 1771, 1781, 1784, 1799, 1800, 1801, 1804, 1816, 2434, 2435, 2437, 2986, 2987) and silicon tetrachloride (UN No. 1818) shall not be transported as excepted quantities.”.

Renumber existing footnotes accordingly.

(Reference document: ST/SG/AC.10/C.3/2009/29)

In existing footnote g, replace “, 3258, 3334 and 3335” with “and 3258”.

(Reference document: ST/SG/AC.10/C.3/2009/48)

In Part 4, 4.3, Guidelines for assigning portable tank requirements to substances listed in the dangerous goods list, in the table under B, Guidance for groups of substances based on Class or Division, Packing Group and Subsidiary Risk:

For Division 4.3, Liquids of Packing Group I with subsidiary risk “Any other than 6.1/8”, replace “T15” with “T13^{ab}”.

(Reference document: ST/SG/AC.10/C.3/2009/44)

Annex IV

Corrections to the sixteenth revised edition of the Recommendations on the Transport of Dangerous Goods, Model Regulations

Chapter 3.2

3.2.1 Dangerous Goods List

For UN No. 3487, Packing Group III, add “B13” against “IBC08” in column (9).

(Reference document: informal document UN/SCETDG/36/INF.58)

Chapter 4.1

4.1.4.2 **IBC08** Amend B13 to read as follows:

“B13 For UN Nos. 1748, 2208, 2880, 3485, 3486 and 3487, transport by sea in IBCs is prohibited.”.

(Reference document: informal document UN/SCETDG/36/INF.58)

Annex V

Report of the Working Group on the corrosivity criteria

1. In accordance with the decision of the Sub-Committee at its last session (ST/SG/AC.10/C.3/70, para. 82) a working group on corrosivity criteria was convened during the thirty-sixth session of the Sub-Committee, under the chairmanship of the Vice-Chairman, Mr. C. Pfauvadel (France), to discuss the proposal by the expert from the Netherlands (ST/SG/AC.10/C.3/2009/15) to align the criteria of Chapter 2.8 of the UN Model Regulations on the Transport of Dangerous Goods concerning corrosive substances with those of Chapter 3.2 (skin corrosion/irritation) of the third revised edition of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

2. The following documents were discussed:

Documents: ST/SG/AC.10/C.3/2009/15 (Netherlands)
ST/SG/AC.10/C.3/2009/49 (DGAC)
ST/SG/AC.10/C.3/2009/50 (United Kingdom)

Informal documents: INF.3 of the thirty-fifth session (Netherlands)
INF.6 (Secretariat)
INF.15 (DGAC)
INF.17 (Netherlands)
INF.18 (CEPIC)
INF.36 (Germany)
INF.45 (Australia)

3. The working group noted that the criteria currently contained in the UN Model Regulations on the Transport of Dangerous Goods were not in contradiction with those of the GHS, in the sense that:

(a) The transport regulations addressed only corrosivity, not irritation;

(b) The criteria for corrosivity based on test results were the same as those for Category 1 in the GHS, packing groups I, II and III corresponding to sub-categories 1A, 1B and 1C of the GHS.

4. Several delegations considered that it was not necessary to introduce the full text of the GHS related to corrosivity for the following reasons:

(a) The GHS allows classification of substances as corrosive on the basis of a conservative approach, according to which substances presenting extreme pH values may be considered as corrosive without further testing. This may cause confusion because this can lead to default classification of certain substances into Class 8, packing group I, although such substances may prove not to be corrosive at all after testing. In addition, the use of the GHS pH criterion alone is not appropriate for the assignment to packing groups or GHS sub-categories;

(b) The GHS classification criteria for mixtures can lead to more stringent classification than classification based on the test results.

5. This GHS conservative approach, intended to allow the industry to classify their products more stringently without the need for testing, would be likely to bring confusion if not properly explained to transport operators. In particular safety data sheets (SDSs) provided to the carriers and showing extreme pH values could lead them to question the classification provided by the consignor on the basis of test results.

6. GHS experts participating in the working group session clarified that:
 - (a) A substance classified as corrosive on the basis of extreme pH values could be considered as non-corrosive on the basis of test results;
 - (b) The fact that a substance did not possess an extreme pH value did not mean that it was not corrosive.
7. In this respect, it was mentioned that OECD guideline 404, which is referred to in the UN Model Regulations, states that substances with an extreme pH value may be considered as corrosive without further testing. The working group felt that this was not correct and that the wording of this guideline should be amended to reflect more precisely how to deal with such situations for classification purposes.
8. Similarly, it was clarified that test results always override the calculation methods indicated in the GHS for classification of mixtures.
9. The expert from the Netherlands raised the question whether a classification method such as the calculation method for mixtures could be considered as a separate block in the building block approach.
10. The understanding of the working group was that classification methods were not separate blocks in the building block approach, and that all methods leading to classification in a given block were part of the same block.
11. It was also noticed that different classification lists had, for the time being, been issued, e.g. in the transport regulations and the European legislation for supply and use, which were based on different classification methods. These lists showed different classifications for the same concentrations of corrosive substances in solution. This put into question the effectiveness of the GHS for bringing intersectoral or worldwide harmonization. The transport of dangerous goods list was supposed to be based on test results, although some substances had been classified a long time ago most probably on the basis of experience. Other lists have been developed either on the basis of test results or of conservative approaches. At this time, the GHS Sub-Committee had not yet addressed this question of validating the classification of individual substances and it would be useful to consider this in future, at least for those substances which are most commonly carried as listed in the UN Model Regulations.
12. As a conclusion, the working group considered that:
 - (a) There was no need to reproduce in full the GHS text in the UN Model Regulations because the criteria contained therein were in line with the GHS;
 - (b) Chapter 2.8 of the UN Model Regulations should be amended to underline the correlation between transport packing groups I, II and III and GHS sub-categories 1A, 1B and 1C;
 - (c) Notes should be included to explain the applicability and limitations of the use of extreme pH values, calculation methods for mixtures and bridging principles to deduce classification and their relationship with transport criteria.
13. The expert from the Netherlands would prepare a proposal of amendment to Chapter 2.8 in consultation with interested delegations.
14. The representative of ICCA drew attention to the fact that the notion of bridging principles had already been introduced in Chapter 2.9 of the UN Model Regulations in relation to classification of environmentally hazardous substances. As this principle was also relevant for corrosivity and toxicity, she wondered whether it should be included in Chapter 2.0 of the UN Model Regulations rather than being repeated in several class specific chapters.

15. Some experts were of the view that this bridging principle was only valid for health and environmental hazards, and that it should not be applied to physical hazards. In addition, according to the decisions taken, it would not be introduced in Chapter 2.8 and the question of alignment of section 2.6.1 concerning acute toxicity with the GHS text was still under discussion. This would therefore remain an open question depending on further discussions on how to better align the UN Model Regulations on the Transport of Dangerous Goods classification criteria with those of the GHS.
