




---

**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 sixtieth session**

held in Geneva from 27 June to 6 July 2022

**Contents**

	<i>Paragraph(s)</i>	<i>Page</i>
I. Attendance.....	1-6	6
II. Opening of the session (Organizational matters) .....	7-9	6
III. Adoption of the agenda (agenda item 1) .....	10-12	7
IV. Explosives and related matters (agenda item 2) .....	13-35	7
A. Review of test series 6 .....	19	7
B. Improvement of test series 8 .....	20	8
C. Review of tests in Parts I, II and III of the Manual of Tests and Criteria .....	21-22	8
1. Manual of tests and Criteria, sections 1.2.1.4.3 and 20.2.5 on self-heating test N.4 for organic peroxides.....	21	8
2. Parameters for specification of Koenen test apparatus.....	22	8
D. “UN” standard detonators .....	23	8
E. Review of packing instructions for explosives .....	24	8
F. Energetic samples .....	25	8
G. Issues related to the definition of explosives .....	26-27	8
1. Exit from Class 1 for very low hazard energetic articles.....	26	8
2. Issues related to the definition of Class 1 .....	27	9
H. Review of packaging and transport requirements for ammonium nitrate emulsions .....	28	9
I. Miscellaneous .....	29-35	9
1. Introduction of a new entry for 5-trifluoromethyltetrazole, sodium salt (TFMT-Na) in acetone as a desensitized explosive in the Dangerous Goods List .....	29-30	9



2.	Classification of nitrocellulose membrane filters for diagnostic and other life science applications.....	31-32	9
3.	New special provisions and special packing provisions of UN 2029 .....	33	10
4.	New UN entry for N-Nitroiminoimidazolidine .....	34	10
5.	Classification of fireworks .....	35	10
V.	Listing, classification and packing (agenda item 3) .....	36-52	10
A.	Minor corrections to the proper shipping names for UN Nos. 0511, 0512 and 0513 .....	36	10
B.	Unify terminology for “base material” in the Spanish language version.....	37	10
C.	Specific activity and activity concentration .....	38	11
D.	Assignment of packing groups to articles .....	39	11
E.	Proposal to create a UN number for disilane .....	40-41	11
F.	Revision of classification of tetramethylammonium hydroxide .....	42-43	11
G.	Transport provisions for small quantities of environmentally hazardous paints and printing inks (and related material).....	44	11
H.	Reviewing the location of the UN specification marking – additional proposal for ST/SG/AC.10/C.3/2021/52 .....	45	12
I.	Proposal for exemption of manufactured articles containing small amounts of gallium (update of ST/SG/AC.10/C.3/2021/53) .....	46	12
J.	Addition of an entry for butylenes mixtures to the alphabetical index of substances and articles .....	47	12
K.	Classification of Monkeypox virus.....	48-50	12
L.	Addition of Class 8 as subsidiary hazard to UN 1040 ETHYLENE OXIDE or ETHYLENE OXIDE WITH NITROGEN up to a total pressure of 1 MPa (10 bar) at 50 °C .....	51	13
M.	Fire suppression devices that contain a pyrotechnic material .....	52-53	13
VI.	Electric storage systems (agenda item 4) .....	54-68	13
A.	Testing of lithium batteries .....	54	13
B.	Hazard based system for classification of lithium batteries.....	55	13
C.	Transport provisions .....	56-64	13
1.	Lithium battery test summary.....	56	13
2.	Amendments to packing instruction P903 – subparagraph (2).....	57	14
3.	Reuse, repair and re-purposing lithium-ion cells and batteries and implications on safety and testing requirements in section 38.3 of the Manual of tests and Criteria .....	58-59	14
4.	Lithium ion batteries testing – short circuit test issue .....	60	14
5.	Applicability of “make available” for the lithium battery test summary .....	61-62	14
6.	Proposed amendments to packing instruction LP903.....	63	14
7.	Provisions of 2.9.4 for lithium batteries transported under special provision 310.....	64	15
D.	Damaged or defective lithium batteries .....	65	15
E.	Sodium-ion batteries.....	66	15
F.	Miscellaneous .....	67-68	15

1.	Introduction in China of proficiency testing for lithium batteries in accordance with sub-section 38.3 of the Manual of Tests and Criteria .....	67	15
2.	Suggestions for a further study on test items in sub-section 38.3 of the Manual of Tests and Criteria .....	68	15
VII.	Transport of gases .....	69-73	16
A.	Global recognition of UN and non-UN pressure receptacles.....	69	16
B.	Limited quantities for division 2.2.....	70	16
C.	Miscellaneous .....	71-73	16
1.	Updated ISO standards in Class 2 .....	71	16
2.	Reference to outdated standards .....	72	16
3.	Report of the informal working group on the pV-product limit for pressure receptacles.....	73	16
VIII.	Miscellaneous proposals for amendments to the Model Regulations on the Transport of Dangerous Goods.....	74-89	17
A.	Marking and labelling.....	74	17
	Consideration of the use of the lithium battery Class 9 hazard label (Model N° 9A) on vehicles powered by lithium batteries .....	74	17
B.	Packagings, including the use of recycled plastics material .....	75-82	17
1.	Correction to P200, Un 1001 and UN 3374 .....	75	17
2.	Revision of packing instructions in 5.5.3.3.1 and 5.5.3.3.2.....	76	17
3.	Amendment to packing instruction IBC03 special packing provision B11 .....	77	17
4.	Proposal for amendments to paragraph 6.1.5.2.4 of Chapter 6,1 of the Model Regulations concerning the preliminary testing of plastics packagings .....	78	17
5.	Problems with the practical implementation of P650.....	79	18
6.	Use of recycled plastics material .....	80-81	18
7.	Comments on the United Nations Agenda 2030 as it affects plastic packagings for dangerous goods .....	82	18
C.	Portable tanks.....	83-84	19
1.	Transport of certain ALKALI METAL DISPERSIONS (UN 1391) and ALKALI METAL DISPERSIONS, FLAMMABLE (UN 3482) in portable tanks .....	83	19
2.	Report of the informal working group on fibre-reinforced plastics service equipment for portable tanks.....	84	19
D.	Other miscellaneous proposals .....	85-89	19
1.	New transitional measures for pressure receptacles .....	85	19
2.	Correction of a reference in 6.4.23.2 (c) .....	86	19
3.	Filling ratio and degree of filling.....	87	19
4.	Amendment to 2.0.5.2 .....	88-89	19
IX.	Global harmonization of transport of dangerous goods regulations with the Model Regulations .....	90-91	20
1.	Proposals for amendments emanating from the thirty-fifth session of the Editorial and Technical Group .....	90	20

	2. Alternative text suggestion for paragraph 2.9.2 on genetically modified micro-organisms and genetically modified organisms.....	91	20
X.	Cooperation with the International Atomic Energy Agency .....	92	20
XI.	Guiding principles for the Model Regulations .....	93-95	20
	1. UN 3550 (cobalt dihydroxide powder) packing instruction assignment for transport in flexible Intermediate Bulk Containers .....	93	20
	2. Miscellaneous issues with portable tank instructions and portable tank special provisions.....	94-95	20
XII.	Issues relating to the Globally Harmonized System of Classification and Labelling of Chemicals .....	96-100	21
	A. Testing of oxidizing substances .....	96	21
	B. Simultaneous classification in physical hazards and precedence of hazards ..	97	21
	C. Miscellaneous .....	98-100	21
	1. Amendment of the Manual of Tests and Criteria to appropriately reflect the Globally Harmonized System of Classification and Labelling of Chemicals.....	98	21
	2. Proposal to address issues from the programme of work for the practical classification issues informal correspondence group.....	99	21
	3. Amendments to GHS Chapter 2.17 “Desensitized explosives” .....	100	22
XIII.	Unified interpretations of the Model Regulations .....	101-106	22
	1. Direct delivery of dangerous goods to end customers (overpacks) .....	101-102	22
	2. Online grocery delivery services .....	103	22
	3. Interpretation of the Model Regulations.....	105-106	22
XIV.	Implementation of the Model Regulations .....	107	23
XV.	Dangerous goods safety training and capacity building .....	108	23
XVI.	Other business .....	109-126	23
	1. Review of the work of ECOSOC subsidiary bodies: Summary recommendations.....	109-110	23
	2. Declassification of past document .....	111-113	24
	3. Reference to the Manual of Tests and Criteria to standard ISO 2431:1984....	114	24
	4. UN/OECD seminar in follow-up to the 2020 Beirut port explosion.....	115-117	24
	5. Validation of test Series 8: Applicability of Test Series 8(d) .....	118	25
	6. Request for assistance with approvals for use of flexible-tanks and flexible pillow-bags for use to transport diesel.....	119-120	25
	7. Meeting dates for the sixty-first session .....	121-122	25
	8. Tributes.....	123-125	25
	9. Condolences.....	126	26
XVII.	Adoption of the report .....	127	26

---

**Annexes**

I.	Draft amendments to the twenty-second revised edition of Recommendations on the Transport of Dangerous Goods, Model Regulations (ST/SG/AC.10/1/Rev.22) <sup>1</sup> .....	27
II.	Corrections to the twenty-second revised edition of Recommendations on the Transport of Dangerous Goods, Model Regulations (ST/SG/AC.10/1/Rev.22) <sup>1</sup> .....	27
III.	Modifications to the sixth version of the Guiding Principles for the Development of Model Regulations on the Transport of Dangerous Goods, (English only) <sup>1</sup> .....	27
IV.	Draft amendments to the Manual of Tests and Criteria (ST/SG/AC.10/11/Rev.7 and Amend.1) <sup>1</sup> ..	27

---

<sup>1</sup> For practical reasons, these annexes have been published as an addendum with the symbol ST/SG/AC.10/C.3/120/Add.1.

## Draft report

### I. Attendance

1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its sixtieth session from 27 June to 6 July 2022 with Mr. Duane Pfund (United States of America) as Chair and Mr. Claude Pfauvadel (France) as Vice-Chair.
2. Experts from the following countries took part in the session: Australia, Austria, Belgium, Brazil, Canada, China, Finland, France, Germany, Italy, Japan, Luxembourg, Mexico, Netherlands, Poland, Republic of Korea, Russian Federation, 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 the Latvia and Turkey also took part.
4. Representatives of the European Union and the Intergovernmental Organization for International Carriage by Rail (OTIF) also attended.
5. Representatives of the Food and Agriculture Organization (FAO), the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO) and the World Health Organization (WHO) were also present.
6. Representatives of the following non-governmental organizations took part in the discussion on items of concern to those organizations: Australasian Explosives Industry Safety Group (AEISG), Compressed Gas Association (CGA), Council on Safe Transportation of Hazardous Articles (COSTHA), Dangerous Goods Advisory Council (DGAC), Dangerous Goods Trainers Association (DGTA), European Association for Advanced Rechargeable Batteries (RECHARGE), European Association of Automotive Suppliers (CLEPA), European Chemical Industry Council (Cefic), European Cylinder Makers Association (ECMA), European Industrial Gases Association (EIGA), Institute of Makers of Explosives (IME), International Air Transport Association (IATA), International Confederation of Container Reconditioners (ICCR), International Confederation of Drums Manufacturers (ICDM), International Confederation of Plastics Packaging Manufacturers (ICPP), International Council of Intermediate Bulk Container Associations (ICIBCA), International Dangerous Goods & Containers Association (IDGCA), International Organization for Standardization (ISO), International Tank Container Organisation (ITCO), Medical Devices Transport Council (MDTC), Metal Packaging Europe (MPE), PRBA — The Rechargeable Battery Association, Responsible Packaging Management Association of Southern Africa (RPMASA), Stainless Steel Container Association (SSCA), Sporting Arms and Ammunition Manufacturers' Institute (SAAMI) and World LPG Association (WLPGA) and Liquid Gas Europe (European LPG Association).

### II. Opening of the session

#### Organizational matters

*Informal document:* INF.29/Rev.1 (Secretariat)

7. The sixtieth session of the Sub-Committee was held from 27 June to 6 July 2022, in a hybrid format, with the possibility of participation online or in person, following the format described in informal document INF.29/Rev.1.
8. Following the impact of the COVID-19 pandemic, the United Nations Office in Geneva would like to return back to “Business As Usual”. Therefore, the Sub-Committee sessions in 2023 will be organized as in-person meetings only.

9. Upon the request of the Division of Conference Management (DCM) of the United Nations Office at Geneva, the Sub-Committee was invited to take an online survey on the quality of conference services provided at the session<sup>2</sup>.

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

*Documents:* ST/SG/AC.10/C.3/119 (Provisional agenda)  
ST/SG/AC.10/C.3/119/Add.1 (List of documents)

*Informal documents:* INF.1 and INF.2 (List of documents)  
INF.23 (Reception by NGOs)  
INF.29/Rev.1 (Working arrangements and provisional timetable)

10. The Sub-Committee adopted the provisional agenda prepared by the secretariat after amending it to take account of informal documents INF.1 to INF.51.

11. The Sub-Committee was informed that the secretariat was in the process of preparing a corrigendum to the seventh revised edition of the Manual of Tests and Criteria to correct some errors.

12. The Sub-Committee was also informed that the UNECE and OTIF secretariats were in the process of finalizing the publications of the new 2023 editions of the RID, ADR and ADN which are expected to be published before the end of 2022.

### IV. Explosives and related matters (agenda item 2)

13. After preliminary consideration in plenary, all documents under agenda item 2 as listed in informal document INF.2 were referred to the Explosives Working Group (EWG), which met from 27 to 30 June 2022 under the chairmanship of Mr. E. de Jong (Netherlands).

14. The Sub-Committee also requested the EWG to consider document ST/SG/AC.10/C.3/2022/25, informal document INF.33 (listed under item 3), document ST/SG/AC.10/C.3/2022/11 and informal documents INF.28 and INF.36 (listed under item 10(c)), and section IV of document ST/SG/AC.10/C.3/2022/39 (listed under item 9).

15. Mr. Ed de Jong announced that he will be retiring in September 2023 and that the position of chair of the EWG will then become vacant.

#### Report of the Explosives Working Group

*Informal document:* INF.44 (Chair of the Working Group)

16. The Chair of the EWG commented on the difficulties encountered to allocate an appropriate room, due to the considerable number of interested experts to attend the meeting in person. The Sub-Committee considered the report of the EWG in informal document INF.44 and heard the explanations provided by its chairman.

17. The Sub-Committee concluded the discussion as reflected in paragraphs 19 to 35 below.

18. It was pointed out that the feedback by the EWG on informal documents INF.28 and INF.36 should be considered in plenary by the Sub-Committee as part of its work to the GHS Sub-Committee (see paragraph 100 below). On document ST/SG/AC.10/C.3/2022/39, the EWG felt that there is no need for the assignments of special provision TP1 to UN 0331 (see paragraph 95 below).

#### A. Review of test series 6

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

<sup>2</sup> See website at: <http://conf.unog.ch/dcmsurvey>

**B. Improvement of test series 8**

*Document:* ST/SG/AC.10/C.3/2022/18 (IME)

*Informal documents:* INF.38 (IME)  
INF.44, para. 5 (Chair of the EWG)

20. The Sub-Committee noted the EWG's support of IME continuing its work. While there were suggestions for additional testing and/or modelling there was no consensus on what that work should be. Transport conditions were initially envisioned by IME's work, however the group's feedback on modelling steered in the direction of the small-scale tests to validate the model and explain the phenomena which drive (false) positive results from the smaller scale tests. The representative of IME concluded with a commitment to consider the substantial feedback before proposing next steps.

**C. Review of tests in parts I, II and III of the Manual of Tests and Criteria****1. Manual of Tests and Criteria, sections 1.2.1.4.3 and 20.2.5 on self-heating test N.4 for organic peroxides**

*Informal documents:* INF.5 (Cefic)  
INF.44, para. 6 (Chair of the EWG)

21. The Sub-Committee endorsed the consensus of the EWG to adopt the proposal. However, it was agreed to reintroduce it as an official document at the next session for formal adoption. In addition, polymerizing substances could be included as well as additional work on physical hazard testing.

**2. Parameters for specification of Koenen test apparatus**

*Informal documents:* INF.15 (United Kingdom, United States of America)  
INF.44, para. 7 (Chair of the EWG)

22. The Sub-Committee acknowledged the EWG's support on this work proceeding with round robin tests in which several experts expressed interest in participating.

**D. "UN" standard detonators**

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

**E. Review of packing instructions for explosives**

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

**F. Energetic samples**

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

**G. Issues related to the definition of explosives****1. Exit from Class 1 for very low hazard energetic articles**

*Document:* ST/SG/AC.10/C.3/2022/36 (COSTHA, SAAMI)

*Informal document:* INF.44, para. 8 (Chair of the EWG)



26. The Sub-Committee noted the EWG's support of SAAMI to continue exploratory work to inform future discussions on the potential differentiation of hazards from articles currently in division 1.4S. It may include alternative designations based upon yet to be determined criteria.

## 2. Issues related to the definition of Class 1

*Informal documents:* INF.12 (Sweden)  
INF.44, para. 9 (Chair of the EWG)

27. The Sub-Committee took note of the outcome of the EWG on the inconsistencies and the need to develop explanations and guidance in the Model Regulations. On the proposed amendment to definitions of Class 1 (amendment 3 in informal document INF.44), the Sub-Committee noted that the EWG had endorsed the proposal with some additional amendments (see paragraph 9 in informal document INF.44). However, noting that the amended texts appeared in Chapter 2.1 of the GHS as well, the Sub-Committee invited the expert from Sweden to submit the proposal (including consequential amendments to the GHS, if applicable) for consideration by the TDG and GHS sub-committees at their next session (see also report ST/SG/AC.10/C.4/84, paragraphs 18 and 19).

## H. Review of packaging and transport requirements for ammonium nitrate emulsions

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

## I. Miscellaneous

### 1. Introduction of a new entry for 5-Trifluoromethyltetrazole, sodium salt (TFMT-Na) in acetone as a desensitized explosive in the Dangerous Goods List

*Document:* ST/SG/AC.10/C.3/2022/9 (Cefic)  
*Informal documents:* INF.8 (Cefic)  
INF.44, para. 10 (Chair of the EWG)

29. The Sub-Committee endorsed the recommendation by the EWG and adopted amendment 1 proposed in annex 2 to informal document INF.44 which will be included in the consolidated list of draft amendments adopted at the fifty-eighth, fifty-ninth and sixtieth sessions for confirmation by the Sub-Committee in December 2022 (see annex I).

30. The Sub-Committee noted the continued discussions at the EWG on whether other liquid desensitized explosives entries in Class 3 could be harmonized with respect to special provision SP28. The representative of Cefic will prepare a proposal for consideration at the next session.

### 2. Classification of nitrocellulose membrane filters for diagnostic and other life science applications

*Document:* ST/SG/AC.10/C.3/2022/10 (Cefic)  
*Informal documents:* INF.16 (Cefic, WONIPA)  
INF.44, para. 11 (Chair of the EWG)

31. The Sub-Committee noted the EWG's recommendation to accept amendment 2 proposed in annex 2 of informal document INF.44. It was highlighted that these nitrocellulose membrane filters are particularly used as substrate for COVID-19 rapid test devices. Cefic had accepted the limit of nitrocellulose content of 53 g/m<sup>2</sup>, which was covered by a test result. The EWG would like to see how the product behaves in packaging. Additional single package testing will be made by Cefic using inner packaging configurations subjected to a burner that is used for airbags. A specification or specific language for "tightly packed" will be made in the proposed special provision.

32. Following the discussion, the Sub-Committee preferred that the amendments proposed in amendment 2 would be re-submitted by Cefic as an official document for consideration at the next session. The representative of Cefic was invited to share with delegates the appropriate part of standard ISO 15105.

### **3. New special provisions and special packing provisions of UN 2029**

*Document:* ST/SG/AC.10/C.3/2022/40 (China)

*Informal document:* INF.44, para. 12 (Chair of the EWG)

33. The Sub-Committee noted the conclusion and comments by the EWG about the potential explosivity in confinement and the need to amend the proposed special provision. The EWG had raised questions on proper classification, packaging requirements and requested more information on toxicity and quantities utilized worldwide. The EWG had suggested that China conduct testing for self-reactivity and based on results also consider Class 1.

### **4. New UN entry for N-Nitroiminoimidazolidine**

*Document:* ST/SG/AC.10/C.3/2022/43 (China)

*Informal document:* INF.44, para. 13 (Chair of the EWG)

34. The Sub-Committee noted that the EWG did not support the proposal at this time. The EWG would however welcome additional, data and information including confirmation of the heat flux with direct measurement (heat gauges), including information on the incident referred to in the official document. It was recommended to resume discussion at a future session based on a further proposal by China.

### **5. Classification of fireworks**

*Informal documents:* INF.10 (Netherlands)

INF.44, para. 14 (Chair of the EWG)

35. The Sub-Committee took note that the EWG had agreed to continue discussion in future meetings on the following topics: (i) review of the default table given the new and novel compositions being encountered on the fireworks market, (ii) the clarification in the description of the 6(c) test on the arrangement of packages, witness panels and 0.15 m<sup>3</sup> requirement, and (iii) ideas for building confidence in the technical documentation.

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

### **A. Minor corrections to the proper shipping names for UN Nos. 0511, 0512 and 0513**

*Document:* ST/SG/AC.10/C.3/2022/1 (Canada)

36. The Sub-Committee adopted the proposed corrections to the French text of Chapter 3.2 in the Model Regulations (see annex II).

### **B. Unify terminology for “base material” in the Spanish language version**

*Document:* ST/SG/AC.10/C.3/2022/2 (Brazil, Mexico and Spain)

37. The Sub-Committee adopted the amendments proposed in paragraphs 8 and 9 of document ST/SG/AC.10/C.3/2022/2 to clarify the Spanish version of the Model Regulations (see annex I).

### C. Specific activity and activity concentration

*Document:* ST/SG/AC.10/C.3/2022/13 (Spain)

38. The proposal received some general support. The Sub-Committee noted that the International Atomic Energy Agency (IAEA) had recently considered the amendments proposed and had referred to the definition of “specific activity” in 240.1 of the IAEA Specific Safety Guide No. SSG-26. The Sub-Committee requested the secretariat to follow up with IAEA and agreed to resume consideration of this subject at its next session.

### D. Assignment of packing groups to articles

*Document:* ST/SG/AC.10/C.3/2022/17 (Germany, Spain)

39. The Sub-Committee adopted the amendments in proposals 1 to 4 of paragraph 18 in document ST/SG/AC.10/C.3/2022/17 (see annex I). Upon the request by the expert from China on the need to also consider the elimination in 3.2.2 of the packing groups for UN 3269 and UN 3527, the Sub-Committee suggested that this could be discussed at its next session on the basis of a separate proposal.

### E. Proposal to create a UN number for disilane

*Document:* ST/SG/AC.10/C.3/2022/19 (CGA, EIGA)

40. Several experts supported in principle the intent of the proposal. Other experts felt that disilane and other pyrophoric liquefied gases under pressure should be identified in the Dangerous Goods List and in the packing instruction as such with their subsidiary hazard. The expert from China was of the opinion that special packing provision “q” also applies to UN 1911 (diborane). The Sub-Committee considered that this should be the subject of a separate proposal.

41. Following the discussion, the Sub-Committee adopted proposals 1 and 2 in paragraphs 9 and 10 of document ST/SG/AC.10/C.3/2022/19 (see annex I). It was agreed that further work and a broader discussion are needed in the future on pyrophoric liquefied gases.

### F. Revision of classification of tetramethylammonium hydroxide

*Document:* ST/SG/AC.10/C.3/2022/24 (Netherlands)

*Informal document:* INF.22 (DGAC, Cefic)

42. On the revised classification of tetramethylammonium hydroxide (TMAH), most experts supported in principle the amendments proposed in option 1 of paragraph 21 in document ST/SG/AC.10/C.3/2022/24. The Sub-Committee welcomed the additional information and the proposed additional review provided in informal document INF.22. It was noted that the revision would affect the carriage of TMAH and have other implications.

43. The expert from Sweden felt that a transitional measure was needed for the proposed amendments to the Dangerous Goods List in the Model Regulations. The expert from the Netherlands volunteered to come back with a revised proposal at the next session taking into account the comments received.

### G. Transport provisions for small quantities of environmentally hazardous paints and printing inks (and related material)

*Document:* ST/SG/AC.10/C.3/2022/22 (WCC)

44. The Sub-Committee did not support either option proposed in document ST/SG/AC.10/C.3/2022/22. It was noted that an increase of the quantity limit in special provision 375 would have a safety impact on all dangerous goods assigned to UN 3077 and

UN 3082. Similar concerns were expressed on the amendment to special packing provision PP1. It was agreed that further work was needed to justify the proposed options. The representative of WCC volunteered to undertake additional research taking into account the comments received and to come back with a new proposal for the next session.

#### **H. Reviewing the location of the UN specification marking - additional proposal for ST/SG/AC.10/C.3/2021/52**

*Document:* ST/SG/AC.10/C.3/2022/41 (China)

45. Recalling the discussion at the previous session on document ST/SG/AC.10/C.3/2021/52, the Sub-Committee adopted the proposed amendments to 6.1.3.1 in the Model Regulations (see annex I).

#### **I. Proposal for exemption of manufactured articles containing small amounts of gallium (update of ST/SG/AC.10/C.3/2021/53)**

*Document:* ST/SG/AC.10/C.3/2022/44 (China)

46. The Sub-Committee adopted the amendments in document ST/SG/AC.10/C.3/2022/44, but preferred to keep in square brackets the amendment related to air transport in special provision 366 (see annex I), subject to the confirmation by the ICAO Dangerous Goods panel at their November 2022 session. The secretariat was requested to supplement the alphabetical index of the Model Regulations accordingly.

#### **J. Addition of an entry for butylenes mixtures to the alphabetical index of substances and articles**

*Informal document:* INF.7 (Secretariat)

47. The Sub-Committee adopted the proposed amendments as modified (see annex I).

#### **K. Classification of Monkeypox virus**

*Informal documents:* INF.24 (Germany)  
INF.35 (United States of America)

48. The Sub-Committee considered that the classification of the Monkeypox virus in Category A (without restrictions) was not justified by the risk group assigned to it according to international guidelines and that it does not correspond to the assessment of other viruses of risk group 3 in the Model Regulations. It was agreed to treat the Monkeypox virus like most other viruses of risk group 3 and accordingly to classify it as “category A (cultures only)”. The Sub-Committee adopted the amendments to the table in 2.6.3.2.2.1 as proposed in paragraph 9 of informal document INF.24 (see annex I).

49. The expert from Germany announced her intention to prepare a multilateral agreement for RID/ADR to allow the carriage of clinical samples and other materials potentially contaminated with the Monkeypox virus under UN 3373 or UN 3291 and invited RID/ADR contracting states/parties to sign it.

50. The Sub-Committee noted concerns on the note proposed in informal document INF.35. Some experts needed more time to study the proposal and its impacts on harmonized international classification. The expert from the United States of America offered to review the proposal taking into account the comments received and submit a new document for the next session.

**L. Addition of Class 8 as subsidiary hazard to UN 1040 ETHYLENE OXIDE or ETHYLENE OXIDE WITH NITROGEN up to a total pressure of 1 MPa (10 bar) at 50 °C**

*Informal document:* INF.25 (Germany)

51. In the absence of a data sheet and due to lack of time, most experts were not in the position to support the proposal in informal document INF.25. After an exchange of views, the expert from Germany said that she would submit an official document for the next session with detailed data sheet.

**M. Fire suppression devices that contain a pyrotechnic material**

*Document:* ST/SG/AC.10/C.3/2022/25 (COSTHA)

*Informal documents:* INF.33, INF.41 and INF.45 (COSTHA)  
INF.44, para. 15 (Chair of the EWG)

52. The Sub-Committee welcomed the presentation of informal document INF.45 and the discussion during a lunchtime informal meeting on Monday, 27 June 2022. During an exchange of views on the amendments proposed in informal document INF.41, several experts expressed concerns on the new special provision and raised caution that such fire suppression dispersing devices might be excluded from both Class 1 and Class 9. Others questioned the relevance of such fire suppression dispersing devices on safety and environment. It was also noted that the EWG could not reach an agreement on the proposal as reflected in paragraph 15 of their report in informal document INF.44.

53. The representative of COSTHA acknowledged that the discussion included both technical considerations appropriate for the EWG and policy considerations appropriate for the Sub-Committee. He volunteered to prepare a revised proposal for the next session that would take account of the comments received.

**VI. Electric storage systems (agenda item 4)**

**A. Testing of lithium batteries**

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

**B. Hazard-based system for classification of lithium batteries**

*Informal document:* INF.11 (France, RECHARGE)

55. The Sub-Committee welcomed informal document INF.11 on the outcome of the recent meetings of the informal working group on hazard-based classification of lithium batteries and cells. It was noted that a group of testing laboratories was focusing on the definition of testing protocols as outlined in paragraph 15 and its two-step verification process in paragraph 17 of informal document INF.11. Further work is needed to finalize the testing protocols. Interested delegates were invited to participate in the forthcoming meeting scheduled to be held on 7 July 2022. The Chair of the informal working group recalled that the work had been carried out by videoconference throughout the pandemic, slowing down the progress, and the group had envisaged to continue its work beyond the initial timetable in informal document INF.52 (fifty-fifth session).

**C. Transport provisions**

**1. Lithium battery test summary**

*Document:* ST/SG/AC.10/C.3/2022/38 (PRBA, RECHARGE, MDTC)

56. The Sub-Committee did not support the proposal in document ST/SG/AC.10/C.3/2022/38 to amend 38.3.5 (i) of the Manual of Tests and Criteria. It was

also pointed out that the existing text is clear enough. The representative of PRBA withdrew the proposal.

## **2. Amendments to packing instruction P903 – subparagraph (2)**

*Document:* ST/SG/AC.10/C.3/2022/42 (China)

*Informal document:* INF.6 (China)

57. There was no support for either of the two options proposed in document ST/SG/AC.10/C.3/2022/42. Some experts felt that the proposed amendment would allow an unpackaged carriage of smaller cells or batteries. The expert from China announced to do some further studies and to come back with a new proposal at a future session.

## **3. Reuse, repair and re-purposing lithium-ion cells and batteries and implications on safety and testing requirements in sub-section 38.3 of the Manual of Tests and Criteria**

*Informal documents:* INF.26 and INF.47 (PRBA, RECHARGE)

58. The Sub-Committee welcomed the information presented in informal document INF.26. It welcomed the initiative of the representatives of PRBA and RECHARGE to set up an informal working group to further discuss this subject and to develop in this respect comprehensive requirements. It was noted that this activity would also contribute to the ongoing discussion on circular economy.

59. The Sub-Committee considered informal document INF.47 and adopted the terms of reference for the new informal working group on reuse, repair and re-purposing lithium-ion cells and batteries as amended (replace in paragraph 4(d) “proposals to amend” by “consideration of”).

## **4. Lithium ion batteries testing: short circuit test**

*Informal document:* INF.27 (RECHARGE)

60. The document received some comments on possibilities and practicalities on how the short circuit test could be achieved according to the requirements of 38.3.2.1 of the Manual of Tests and Criteria. The representative of RECHARGE announced his intention to undertake further work on this issue and report back to the Sub-Committee at the next session.

## **5. Applicability of “make available” for the lithium battery test summary**

*Document:* ST/SG/AC.10/C.3/2022/20 (IATA)

*Informal documents:* INF.32/Rev.1 (MDTC)  
INF.43 (IATA)

61. Some experts reported on difficulties within industry on the availability of the test summary in the transport chain as a whole and that the wording “make available” in 2.9.4 (g) need to be clarified. It was agreed that the test summary must be publicly available without any request to those with a legitimate need for it. The expert from France added that a similar discussion was ongoing on the European level and a possible quick response (QR) code on the “battery passport” could be a possible solution in future. Some experts preferred to keep the current text and to insert an explanation note on the meaning of “make available” and on the liability of the data provided in the test summary.

62. Finally, the Sub-Committee adopted the new note to 2.9.4 proposed in informal document INF.43 as amended (see annex I).

## **6. Proposed amendments to packing instruction LP903**

*Document:* ST/SG/AC.10/C.3/2022/37 (PRBA, RECHARGE)

*Informal documents:* INF.30 (China)  
INF.40 (PRBA, RECHARGE)

63. There was support for the proposal in document ST/SG/AC.10/C.3/2022/37, as amended by informal document INF.30. However, several experts endorsed the suggestion

by the expert from Sweden to supplement the general provisions in 4.1.1 with explanatory text. Following the discussion, the Sub-Committee adopted the amendments to packing instruction LP903 proposed in informal document INF.40 as amended (see annex I).

## **7. Provisions of 2.9.4 for lithium batteries transported under special provision 310**

*Documents:* ST/SG/AC.10/C.3/2022/30 (Belgium)  
ST/SG/AC.10/C.3/2022/32 (PRBA, RECHARGE)

*Informal documents:* INF.21 (Switzerland)  
INF.49 (Belgium)  
INF.51 (IATA)

64. Views were divided on the proposed options. Most experts were in favour of proposal 1 in document ST/SG/AC.10/C.3/2022/30, including the clarifications in informal document INF.21. Others preferred to either insert a positive list or be more specific on the pre-production prototypes and the small series production of cells and batteries. Following the discussion under agenda item 6 (d) on document ST/SG/AC.10/C.3/2022/7, also proposing to amend special provision 310, the Sub-Committee adopted the amendment as proposed in informal document INF.51 (see paragraph 88 below and annex I).

## **D. Damaged or defective lithium batteries**

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

## **E. Sodium-ion batteries**

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

## **F. Miscellaneous**

### **1. Introduction in China of proficiency testing for lithium batteries in accordance with sub-section 38.3 of the Manual of Tests and Criteria**

*Informal document:* INF.19 (China)

67. The Sub-Committee took note of the information provided and acknowledged China's inputs in conducting their national proficiency testing project. It was agreed by several delegates to consider the practicality issues identified in the project on the shock and vibration tests. The representatives of PRBA volunteered to start a dialogue with laboratories on these issues with the objective to develop a short guidance document on respective sub-section 38.3 in the Manual of Tests and Criteria.

### **2. Suggestions for a further study on test items in sub-section 38.3 of the Manual of Tests and Criteria**

*Informal document:* INF.20 (China)

68. The document received some comments including information on the historical background of the test procedure in 38.3.4.2.2 of the Manual of Tests and Criteria (see document ST/SG/AC.10/C.3/2010/81 and informal document INF.13 (thirty-fifth session)). Some experts restrained from starting lengthy discussions on the thermal test again, while others endorsed the idea to review the test provisions to adapt to technical progress and geographical climate conditions. The expert from China announced his intention in this document was to raise the awareness rather than try to change any specific test parameter and that, taking account of the comments received, he may come back at a future session with a proposal on the adaptation of the test provisions to real use/transport conditions for the different modes and a better practicability.

## VII. Transport of gases (agenda item 5)

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

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

### B. Limited quantities for division 2.2

#### Increase of the limited quantity volume for Division 2.2 compressed gases

*Document:* ST/SG/AC.10/C.3/2022/26 (COSTHA)

*Informal document:* INF.34 (COSTHA)

70. Some experts acknowledged a preference for a harmonized approach to the transport of this type of gas cylinders. They considered that the proposal should be limited to the four proposed gases only and expressed a preference for an additional special provision. Others requested more detailed information on a list of gases concerned and recommended to differentiate between surface and air transport. Some experts did not support the increase of the limited quantity volume from 120 ml to 1000 ml for Division 2.2 compressed gases. The representative of COSTHA concluded that he would work with the delegations that provided comments and submit a more detailed proposal for the next session.

### C. Miscellaneous

#### 1. Updated ISO standards in Class 2

*Document:* ST/SG/AC.10/C.3/2022/14 (ISO)

71. The Sub-Committee adopted proposals 1, 3 and the editorial amendment in paragraph 12 of document ST/SG/AC.10/C.3/2022/14 (see annex I). Consideration of proposals 2 and 4 was deferred to the next session, as well as some additional editorial amendments to 4.1.6.1.2, 4.1.6.1.8 (e) and 6.2.1.6.1 (d). Regarding proposals 2 and 4, the representative of ISO offered to include more detailed information on the meaning of “small quantities” in Clause 9.4 of standard ISO 9809-4:2021 (proposal 2) and the use of ball valves (proposal 4) considering that those were excluded from the scope of other standards listed in 6.2.2.3.

#### 2. Reference to outdated standards

*Informal document:* INF.31 (ISO)

72. Some experts did not support the insertion into the Guiding Principles of a new paragraph on the deletion of entries in the standards tables. Most experts considered that it was necessary to consider such deletions of references to standards on a case-by-case basis. The representative of ISO clarified that the intent of the new paragraph was addressed to the standards for design and construction of new pressure receptacles only.

#### 3. Report of the informal working group on the pV-product limit for pressure receptacles

*Informal document:* INF.37 (Germany)

73. The Sub-Committee noted the report of the intersessional working group on the pV-product limit for pressure receptacles. It confirmed the continuation of the work and invited the group to report back at the next session.



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

### **A. Marking and labelling**

#### **Consideration of the use of the lithium battery Class 9 hazard label (Model No. 9A) on vehicles powered by lithium batteries**

*Informal document:* INF.9 (IATA)

74. Most experts considered that the proposed option 2 was preferable. The expert from France said that option 1 would nevertheless allow to include other types of batteries. After an exchange of views, the representative of IATA suggested to reach out the delegates who commented and prepare a document for the next session.

### **B. Packagings, including the use of recycled plastics material**

#### **1. Correction to P200, UN 1001 and UN 3374**

*Document:* ST/SG/AC.10/C.3/2022/8 (EIGA)

75. The Sub-Committee adopted the proposed corrections to packing instruction P200 as proposed in document ST/SG/AC.10/C.3/2022/8 (see annex II). It was noted that the intent of the initial amendment was to apply the special packing provisions to all test pressures listed. The representative of EIGA volunteered to coordinate with the secretariat to bring a proposal to the next session with further editorial amendments that could help prevent misinterpretations of the tables in P200.

#### **2. Revision of packing instructions in 5.5.3.3.1 and 5.5.3.3.2**

*Document:* ST/SG/AC.10/C.3/2022/12 (Spain)

76. The Sub-Committee adopted the amendment proposed in document ST/SG/AC.10/C.3/2022/12, as amended, including an additional amendment to special packing provision PP41 (see annex I).

#### **3. Amendment to packing instruction IBC03 special packing provision B11**

*Document:* ST/SG/AC.10/C.3/2022/35 (United Kingdom)

77. The Sub-Committee considered the historical background of packing instruction IBC03 in 4.1.4.1 of the Model Regulations. Some delegations were not in favour of B11 and pointed out that it has not been transposed into RID/ADR/ADN but argued that given that B11 would remain in the Model Regulations it was best to amend it as proposed in the proposal. The Sub-Committee adopted the amendments to special packing provision B11 proposed in document ST/SG/AC.10/C.3/2022/35 as amended (see annex I).

#### **4. Proposal for amendments to paragraph 6.1.5.2.4 of Chapter 6.1 of the Model Regulations concerning the preliminary testing of plastics packagings**

*Informal document:* INF.4 (IDGCA)

78. Views were divided on the proposal to clarify the provisions in 6.1.5.2.4. Some experts considered that a possible alternative to a standard was acceptable under the condition that the requirement guaranteed at least the same level of safety. In this respect, it was suggested to also consider standard ISO 13274. Others felt the current text was clear enough and more information was needed on the concerns. The representative of IDGCA offered to come back with a more detailed proposal at the next session.

## 5. Problems with the practical implementation of P650

*Document:* ST/SG/AC.10/C.3/2022/15 (Spain)

*Informal document:* INF.46 (Spain)

79. The Sub-Committee supported in principle the intent of the proposal in document ST/SG/AC.10/C.3/2022/15 to clarify packing instruction P650. Following the discussion, it adopted the amendments proposed in informal document INF.46 as amended (see annex I). Some delegations preferred to study the coherence of the note on “capability” in other parts of the Model Regulations. It was agreed to keep the adopted amendments in square brackets subject to confirmation by the Sub-Committee at its next session.

## 6. Use of recycled plastics material

*Document:* ST/SG/AC.10/C.3/2022/29 (Belgium)

80. Upon the proposal by Belgium, the Sub-Committee considered during a lunchtime informal meeting the use of recycled plastics material and noted the following outcome:

(a) Most experts acknowledged the need to carefully consider the use of recycled plastics material for packagings for the safe transport of dangerous goods worldwide by enhancing and modernizing the Model Regulations. It was suggested to promote the use of recycled plastics material by evaluating relevant standards and practices with a view to modernizing the current Model Regulations to better reflect technical progress of recycling of polymers to date. It was also proposed to broaden the scope for the use of recycled plastics material by providing in the Model Regulations a framework and description of new provisions linked to the use of recycled plastics material. Several delegates shared their experiences and believed more information, practical examples and data was needed from the packaging and polymer industries that already use innovative technologies to produce recycled plastics material for packagings not intended to carry dangerous goods.

(b) On the ISO working group reviewing standard ISO 16103:2005 it was suggested that the Sub-Committee work in parallel to anticipate, in an efficient way, possible amendments in the Model Regulations. Thus, the Sub-Committee should regularly be updated on the status of the work of the ISO working group. It was acknowledged that such detailed requirements and specifications on the use of recycled plastics material currently already exist to ensure the goal of economic efficiency, quality, and most important safety.

81. As a practical way forward, the Sub-Committee invited all delegates to provide more detailed data and more practical experiences at future sessions. Experts were invited to notify their standards body to participate in the ISO working group. The ISO working group was invited to regularly report to the Sub-Committee to ensure consideration of possible amendments to the Model Regulations resulting in an enhanced safe transport of dangerous goods based on packagings made of recycled plastics material.

## 7. Comments on the United Nations Agenda 2030 as it affects plastic packagings for dangerous goods

*Document:* ST/SG/AC.10/C.3/2022/34 (ICPP, ICCR, ICIBCA)

82. In line with the United Nations agenda 2030 goals, the Sub-Committee noted general support to promote the use of recycled plastics material while ensuring the safe use of plastics packagings for dangerous goods. However, most experts preferred modernizing the existing safety provisions as opposed to adopting the amendments proposed in document ST/SG/AC.10/C.3/2022/34. It was agreed that more work was needed in view of the outcome of the informal meeting on the use of recycled plastics material. The representative of ICPP offered to prepare a new proposal for the next session.

## C. Portable tanks

### 1. Transport of certain ALKALI METAL DISPERSIONS (UN 1391) and ALKALI METAL DISPERSIONS, FLAMMABLE (UN 3482) in portable tanks

*Informal document:* INF.13 (United States of America)

83. The proposal received general support. Some experts recommended to also consider (i) special provision TP2 instead of TP1, (ii) special provision TE5 of 6.8.4 in ADR, and (iii) the respective requirements of the Guiding Principles. Other experts suggested to extend the scope of the proposal to other dispersions. The expert from the United States of America volunteered to revise the proposal taking account of the comments received and to submit an official document for consideration at the next session.

### 2. Report of the informal working group on fibre-reinforced plastics service equipment for portable tanks

*Informal document:* INF.39 (Chair of FRP service equipment)

84. The Sub-Committee noted the report in informal document INF.39 on the good progress made during the intersessional period and the virtual meeting on Monday, 27 June 2022. The Sub-Committee welcomed the group's intention to submit for the next session an official document with proposed amendments to the Model Regulations.

## D. Other miscellaneous proposals

### 1. New transitional measures for pressure receptacles

*Document:* ST/SG/AC.10/C.3/2022/6 (EIGA)

85. Recalling the discussion at the previous session, the Sub-Committee adopted the transitional measures proposed in paragraphs 4 to 6 of the document, as amended (see annex I).

### 2. Correction of a reference in 6.4.23.2 (c)

*Document:* ST/SG/AC.10/C.3/2022/16 (Germany)

86. The Sub-Committee adopted the proposed correction (see annex II).

### 3. Filling ratio and degree of filling

*Document:* ST/SG/AC.10/C.3/2022/23 (Spain)

*Informal document:* INF.18 (Spain)

87. Following an exchange of views on the definition of "filling ratio" and "degree of filling", the Sub-Committee adopted the amendments consolidated in annex 1 of informal document INF.18, as amended (see annex I). It was agreed to keep the adopted amendments in square brackets, subject to confirmation by the Sub-Committee at its next session.

### 4. Amendment to 2.0.5.2

*Document:* ST/SG/AC.10/C.3/2022/7 (IATA)

*Informal document:* INF.51 (IATA)

88. On the classification of articles containing lithium cells or batteries from small production runs or pre-production prototypes, the Sub-Committee adopted the amendments proposed in informal document INF.51, as amended (see annex I). It was noted that the amendments to special provision 310 were in line with those considered under item 4 (c) on the basis of document ST/SG/AC.10/C.3/2022/30 and informal document INF.49, as amended.

89. On the proposal to also include sodium ion batteries, the Sub-Committee preferred to go forward in a two-step approach and to consider at its next session a further proposal on this subject. The representative of IATA volunteered to prepare an official document.

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

### **1. Proposals for amendments emanating from the thirty-fifth session of the Editorial and Technical Group**

*Document:* ST/SG/AC.10/C.3/2022/31 (IMO)

90. The Sub-Committee adopted the amendments proposed in document ST/SG/AC.10/C.3/2022/31 for the alignment of the Model Regulations with the International Maritime Dangerous Goods (IMDG) code (see annex I).

### **2. Alternative text suggestion for paragraph 2.9.2 on genetically modified micro-organisms and genetically modified organisms**

*Document:* ST/SG/AC.10/C.3/2022/33 (Netherlands)

*Informal document:* INF.48 (Netherlands)

91. Following the comments received on the proposal in document ST/SG/AC.10/C.3/2022/33, the Netherlands presented informal document INF.48 with a modification to avoid any misunderstanding of the term “ready for use”, which was adopted by the Sub-Committee (see annex I).

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

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

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

### **1. UN 3550 (cobalt dihydroxide powder) packing instruction assignment for transport in flexible Intermediate Bulk Containers**

*Document:* ST/SG/AC.10/C.3/2022/3 (ICPP, RPMASA)

93. The Sub-Committee adopted the amendments to the Guiding Principles proposed in document ST/SG/AC.10/C.3/2022/3, as amended (see annex III).

### **2. Miscellaneous issues with portable tank instructions and portable tank special provisions**

*Document:* ST/SG/AC.10/C.3/2022/39 (Secretariat)

*Informal document:* INF.44, para. 16 (Chair of the EWG)

94. Recalling its recommendation at previous sessions to regularly update the Guiding Principles, the Sub-Committee welcomed the information provided by the secretariat, including the proposed amendments. The Sub-Committee adopted proposals 1 and 2 in document ST/SG/AC.10/C.3/2022/39, as amended (see annex III).

95. On the assignment of portable tank instruction TP1 (section IV in document ST/SG/AC.10/C.3/2022/39), the Sub-Committee endorsed the conclusion of the EWG to remove in the Model Regulations the assignment of TP1 to UN 0331. On the proposal in section V, it was agreed to amend UN Nos. 1442 and 1381 to remove the assignment of portable tank instruction TP31. On the unused portable tank instructions (section VI), the Sub-Committee preferred to keep those in the Model Regulations and agreed to insert an

explanatory note into the Guiding Principles. The secretariat was requested to prepare an official document for the next session.

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

### **A. Testing of oxidizing substances**

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

### **B. Simultaneous classification in physical hazards and precedence of hazards**

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

### **C. Miscellaneous**

#### **1. Amendment of the Manual of Tests and Criteria to appropriately reflect the Globally Harmonized System of Classification and Labelling of Chemicals**

*Document:* ST/SG/AC.10/C.3/2022/11 (Germany)

*Informal document:* INF.44, para. 17 (Chair of the EWG)

98. Taking into account the conclusions of the EWG on document ST/SG/AC.10/C.3/2022/11, the TDG Sub-Committee adopted the amendments proposed in paragraphs 5 and 9 of the document (see annex IV), subject to the confirmation by the GHS Sub-Committee (see report ST/SG/AC.10/C.4/84, paragraphs 9-12). On the amendments proposed in paragraphs 10 to 12, it was agreed to resume discussion at the next session on the basis of a new document by Germany.

#### **2. Proposal to address issues from the programme of work for the practical classification issues informal correspondence group**

*Document:* ST/SG/AC.10/C.3/2022/21 (United States of America)

99. The Sub-Committee took note of the proposal to insert guidance in the GHS on how to convert experimental toxicity values using exposure times other than 1 or 4 hours. The expert from China suggested to replace the accepted exposure times for conversion in 3.1.5.3.2 from “30 minutes to 8 hour exposures” to “30 minutes to 6 hour exposures” in accordance with OECD Guideline 39. The expert from Germany suggested to include a table about the available “n” values for different chemicals based on rat models for lethal endpoints. Noting that the Model Regulations give guidance on how to convert exposure times from 1 to 4 hours for inhalation toxicity in Chapter 2.6, a member of the secretariat invited the Sub-Committee to consider whether it would be appropriate to introduce guidance on conversion of toxicity values for other exposure times in the Model Regulations as well. It was noted that the GHS Sub-Committee would be informed about the outcome of the discussion<sup>3</sup>.

---

<sup>3</sup> *Note by the secretariat:* The GHS Sub-Committee considered this topic under item (2) of its agenda. The outcome of the discussions is summarized in paragraphs 26 to 28 of the report of the Sub-Committee on its forty-second session (document ST/SG/AC.10/C.4/84).

### 3. Amendments to GHS Chapter 2.17 “Desensitized explosives”

*Informal documents:* INF.28 and INF.36 (Germany and United States of America)  
INF.44, para. 18 (Chair of the EWG)

100. The Sub-Committee noted and endorsed the recommendations from the EWG contained in paragraph 18 of informal document INF.44. It was pointed out that the proposed amendments will not have an impact on the existing transport conditions of desensitized explosives.

## XIII. Unified interpretation of the Model Regulations (agenda item 11)

### 1. Direct delivery of dangerous goods to end customers (overpacks)

*Document:* ST/SG/AC.10/C.3/2022/27 (COSTHA)

101. The Sub-Committee noted differences in the definition of “overpack” between the Model Regulations and the ADR, and also in the interpretations of and implementation by countries. Some experts were of the opinion that the use of bags for domestic deliveries of dangerous goods to end consumers are no longer international transport and therefore not part of the Model Regulations. Others reported that their enforcement bodies consider such delivery bags as overpack according to the Model Regulations. Most delegations who spoke agreed that the identification of the goods transported should remain visible in any case. For the sake of clarity for consignors, the expert from France, chairing the Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods, stated that it was better to have harmonization of RID/ADR/ADN with the Model Regulations and that it was usually the goal pursued by the Joint Meeting. However, if such harmonization of the definition of “overpack” would be undertaken, then another appropriate framework to regulate the proposed practice should be found, for example by amending part 7 on the provisions concerning transport operations to keep the flexibility in the practice of current deliveries.

102. The Sub-Committee welcomed the contributions and agreed to continue discussion of this subject at its next session based on a proposal by COSTHA and taking account of the outcome of the Joint Meeting.

### 2. Online grocery delivery services

*Document:* ST/SG/AC.10/C.3/2022/28 (COSTHA)

103. Upon the inquiry of COSTHA on how national delivery companies and services apply the national regulations for retail packagings (e.g. in paper or plastics bags regardless of whether they are considered as a “suitable outer packaging” or “overpack”, in particular regarding the marking), some experts reported on their experiences and solutions implemented at national level through guidelines for domestic deliveries or derogations on limited quantities and packing provisions according to chapters 3.4 and 4.1 of the Model Regulations.

104. The representative of COSTHA invited all those who made comments to send them in writing and said that a revised proposal would be submitted to the next session.

### 3. Interpretations of the Model Regulations

*Informal document:* INF.14 (United States of America)

105. There was support for the proposals in informal document INF.14 to provide interpretation of the provisions in the Model Regulations. It was recalled that the ultimate goal of all regulations was to provide provisions as clear as possible to avoid any interpretation issue. However, it was recognized that in some cases, interpretation guidance could be helpful. On the proposal of placing on the website of the Model Regulations consolidated interpretations similarly to the existing webpages addressing interpretation of ADR/ADN provisions, it was noted that both agreements were legally binding, and their legal

texts offer little flexibility in interpretation, while the Model Regulations were recommendations with no legal status per se until implemented through a legally binding instrument. It was suggested to follow the same procedure used for interpretations of ADR/RID, i.e.: to publish only interpretations adopted unanimously and submitted on the basis of a specific template to ensure a detailed justification.

106. The Sub-Committee acknowledged the contributions and agreed to resume discussion of this subject at its next session based on a document by the United States of America.

#### **XIV. Implementation of the Model Regulations (agenda item 12)**

107. In the view of drafting the report to ECOSOC on the Sub-Committee's activities on the transport of dangerous goods in the current biennium 2021-2022, a member of the secretariat invited delegations to provide information on the implementation of the Model Regulations in their countries.

#### **XV. Dangerous goods safety training and capacity building (agenda item 13)**

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

#### **XVI. Other business (agenda item 14)**

##### **1. Review of the work of ECOSOC subsidiary bodies: Summary recommendations**

*Informal document:* INF.17 (Secretariat)

109. The Sub-Committee considered informal document INF.17 during a lunchtime informal meeting on Friday, 1 July 2022 and noted several contributions and suggestions on possible actions to the summary recommendations in the annex to the ECOSOC decision as follows:

(a) Delegations were invited to add in the justification part of their future proposals the interlinkage to the sustainable development goals, when applicable;

(b) It was recommended to add a specific agenda item on the follow-up to the Agenda 2030 to ensure regular discussions by the Sub-Committee;

(c) It was suggested inserting a summary of the activities of the sub-committees on this subject into the draft report of the Secretary-General on the work of the Committee of Experts and its sub-committees;

(d) One expert suggested to consider organising one online session per biennium, based on the experience gained in the hybrid sessions organized during the COVID-19 pandemic, and with the idea to both facilitate broader attendance and participation in the Sub-Committee's activities according to the principle of the Agenda 2030 "Leaving no one behind" and to avoid travelling with the aim to contribute to the principle of the Agenda 2030 "Take urgent action to combat climate change and its impacts".

(e) To ease the access by delegates to more detailed information and background information on Agenda 2030 and the review of the work of ECOSOC subsidiary bodies, the secretariat volunteered to insert a new entry on the homepage of the Committee of Experts and its sub-committees<sup>4</sup>.

110. The TDG Sub-Committee agreed to coordinate with the GHS Sub-Committee on the follow-up actions listed above and to come back at the next session with a common recommendation for consideration.

<sup>4</sup> [unece.org/transport/dangerous-goods/ecosoc-bodies-dealing-chemicals-safety](https://unece.org/transport/dangerous-goods/ecosoc-bodies-dealing-chemicals-safety).

## 2. Declassification of past documents

*Document:* ST/SG/AC.10/C.3/2022/5 (Secretariat)

*Informal document:* INF.3 (Secretariat)

111. The Sub-Committee welcomed the information in document ST/SG/AC.10/C.3/2022/5 and requested the secretariat to take the necessary steps to declassify the following sets of documents:

- E/CN.2/CONF.5/R.xxx (Committee of Experts on the Transport of Dangerous Goods)
- ST/SG/AC.10/R.xxx (Committee of Experts on the Transport of Dangerous Goods)
- ST/SG/AC.10/C.1/R.xxx (Group of Experts on Explosives of the Committee of Experts on the Transport of Dangerous Goods)
- ST/SG/AC.10/C.2/R.xxx (Group of Rapporteurs of the Committee of Experts on the Transport of Dangerous Goods)
- ST/SG/AC.10/C.3/R.xxx (Sub-Committee of Experts on the Transport of Dangerous Goods)

112. The Sub-Committee requested that any documents pertaining to these sets currently in the Official Document System (ODS) be made available to the public without restriction.

113. For documents pertaining to these sets which are currently only in paper form the Sub-Committee requested that they are digitized (with optical character recognition) and uploaded to ODS in the future. The Sub-Committee requested that those documents also be made available to the public without restriction.

## 3. Reference in the Manual of Tests and Criteria to standard ISO 2431:1984

*Document:* ST/SG/AC.10/C.3/2022/45 (Secretariat)

114. The Sub-Committee noted the request by the ADN Safety Committee to consider an update of the reference to standard ISO 2431. However, following an intervention by the expert from the Netherlands, the Sub-Committee noted that other references to standards could be considered for an update in the Manual of Tests and Criteria too (seven standards were dated, while thirteen standards were not dated). It was also pointed out that updating of standards was done on a case-by-case basis, to ensure delegations had time to assess the changes from one version of the standard to another. The Sub-Committee invited the secretariat to consult with ISO on updates to the standards at stake and consider resubmitting an official document for submission for the next session.

## 4. UN/OECD seminar in follow-up to the 2020 Beirut port explosion

*Document:* ST/SG/AC.10/C.3/2022/4 (OECD, UNECE)

115. The Sub-Committee noted the outcome of the online seminar held on 14 December 2021 on the 2020 Beirut port explosion, on lessons learned, experiences and good practices in managing risks of ammonium nitrate storage, handling and transport in port areas, preventing accidents and mitigating their consequences.

116. A member of the secretariat informed the Sub-Committee that the Bureau of the Industrial Accidents Convention has recently approved the inclusion in the Convention's workplan for 2023-24 a follow-up activity on risk management on this subject, which builds on the outcomes of the UN/OECD seminar and its preceding survey. It also entails the preparation of an online webpage/repository for information and good practice, which can be supplemented by promotional materials to share information on related:

- (i) international legal and policy instruments; and
- (ii) existing guidance, national experiences, lessons learned and good practices.

117. The representative of IVODGA welcomed the UN/OECD outcome document and said that a further "White Paper" on storage and handling of dangerous goods in preparation



for, or after, sea-transport was published and publicly available on their website<sup>5</sup>. The representative of AEISG added that delegates may find related information in the AEISG Code of Practice – Storage and Handling of Solid Ammonium Nitrate on their website<sup>6</sup>. The representative of RPMASA underlined the need for capacity building on this subject in the Southern Africa region.

#### **5. Validation of Test Series 8: Applicability of Test Series 8(d)**

*Informal document:* INF.42 (RPMASA)

118. The Sub-Committee noted the late submission of informal document INF.42 and invited the representative of RPMASA to consider resubmitting it for discussion at the next session. She informed that an informal intersessional discussion was being arranged to resolve differences and to provide a document for the next meeting.

#### **6. Request for assistance with approvals for use of flexible-tanks and flexible pillow-bags for use to transport diesel**

*Informal document:* INF.50 (RPMASA)

119. The Sub-Committee noted the request for assistance and also some comments on the concerns raised. As a short-term solution for assisting Ukraine in their harvesting, it was noted that for land transport some contracting parties to the ADR may consider the draft multilateral agreement as reflected in the annex of informal document INF.50. Some countries recalled that the Sub-Committee had already discussed the possible use of flexitanks and that it was concluded at that time that their use shouldn't be considered as a general practice and that introducing provisions in the Model Regulations should not be recommended. The Sub-Committee noted again that flexible tanks could be used in certain countries for the carriage of liquid fuels with competent authority approval and that such use might be justified and authorized in exceptional circumstances. Approval of this use should be accompanied by appropriate safety requirements.

120. It was noted that similar challenges were experienced in other regions with the use of flexitanks. The representative of RPMASA invited interested parties to contact her with a view to progressing formal requirements for test and approval.

#### **7. Meeting dates for the sixty-first session**

121. The Sub-Committee noted the meeting dates and document submission deadlines for its sixty-first session as follows:

- Meeting dates: From 28 November to 6 December 2022;
- Deadline for submission of official documents: 2 September 2022 (for official documents submitted for consideration by the TDG Sub-Committee).

122. The eleventh session of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals will be held on 9 December 2022.

#### **8. Tributes**

123. The Sub-Committee was informed that Mr. Lionel Aufauvre (France) took over new responsibilities and will no longer attend future sessions. The Chair thanked him warmly for his contribution to the work of the Sub-Committee and wished him all success in his new endeavours.

124. Learning that Mr. David Gilabert (Switzerland) retired and will no longer attend future sessions, the Sub-Committee thanked him for his contributions to the activities of the Sub-Committee over more than twenty-five years and wished him a long and happy retirement.

<sup>5</sup> [1639490320\\_Warehousing White Paper\\_December 2021.pdf](https://www.ievodga.com/1639490320_Warehousing_White_Paper_December_2021.pdf) (ivodga.com).

<sup>6</sup> <https://www.aeiscg.org.au/wp-content/uploads/STORAGE-AND-HANDLING-OF-SOLID-AMMONIUM-NITRATE-EDITION-1-JUNE-2022.pdf>

125. The Sub-Committee was informed that Mr. David Boston (IME) took his retirement and would no longer attend the sessions. The Chair expressed his deep appreciation to Mr. Boston for all his work over the previous twenty-seven years, and particularly for servicing the EWG since 2008. The Sub-Committee offered Mr. Boston its best wishes for a long and happy retirement.

**9. Condolences**

126. The Sub-Committee learned with great sadness of the passing of Mr. John (Jack) Currie, who, as Administrator of IVODGA, had played a significant role over many decades in the fruitful work of the Sub-Committee. The Chair requested the representative of IVODGA to send Mr. Currie's family the sincerest condolences of the Sub-Committee.

**XVII. Adoption of the report (agenda item 15)**

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

## **Annex I**

### **Draft amendments to the twenty-second revised edition of Recommendations on the Transport of Dangerous Goods, Model Regulations (ST/SG/AC.10/1/Rev.22)**

(see ST/SG/AC.10/C.3/120/Add.1)

## **Annex II**

### **Corrections to the twenty-second revised edition of Recommendations on the Transport of Dangerous Goods, Model Regulations (ST/SG/AC.10/1/Rev.22)**

(see ST/SG/AC.10/C.3/120/Add.1)

## **Annex III**

### **Modifications to the sixth version of the Guiding Principles for the Development of Model Regulations on the Transport of Dangerous Goods, (English only)**

(see ST/SG/AC.10/C.3/120/Add.1)

## **Annex IV**

### **Draft amendments to the Manual of Tests and Criteria (ST/SG/AC.10/11/Rev.7 and Amend.1)**

(see ST/SG/AC.10/C.3/120/Add.1)

---