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## Economic Commission for Europe

### Inland Transport Committee

### Working Party on the Transport of Dangerous Goods

#### 109th session

Geneva, 4–7 May 2021

## Report of the Working Party on its 109th session

Held in Geneva from 4 to 7 May 2021

### Contents

	<i>Paragraphs</i>	<i>Page</i>
I. Organizational matters and attendance.....	1	3
A. Organizational matters.....	2-4	3
B. Attendance.....	5-8	3
II. Opening of the session.....	9	3
III. Adoption of the agenda (agenda item 1).....	10	4
IV. Eighty-third session of the Inland Transport Committee (agenda item 2).....	11-13	4
V. Status of the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) and related issues (agenda item 3).....	14	4
VI. Work of the RID/ADR/ADN Joint Meeting (agenda item 4).....	15-18	5
VII. Proposed amendments to annexes A and B of ADR (agenda item 5).....	19-43	5
A. Construction and approval of vehicles.....	19-33	5
1. Rear protection of vehicles.....	19-22	5
2. Tyre pressure monitoring system.....	23-25	6
3. Engine fire suppression systems and tyre fire protection systems to reduce the likelihood of a BLEVE.....	26-29	6
4. Stability of tank-vehicles.....	30	6
5. Use of battery electric vehicles and hydrogen fuel cell vehicles for the transport of dangerous goods.....	31-33	6
B. Miscellaneous proposals.....	34-43	7
1. Addition of a reference to MEMUs in the Model for report on occurrences during the carriage of dangerous goods.....	34	7
2. Supervision requirements for detonators.....	35	7
3. References to competent authorities in Parts 8 and 9.....	36-39	7

4.	Temperature controlled transport .....	40	7
5.	Editorial amendments.....	41	8
6.	Tunnel restriction code for excepted packages (UN Nos. 2908 to 2911).....	42-43	8
VIII.	Interpretation of ADR (agenda item 6) .....	44-52	8
A.	Application of the requirements concerning the electrical equipment of vehicles in accordance with 9.2.1.1 .....	44-46	8
B.	Application of multilateral agreements.....	47-50	8
C.	Clarification of 5.3.2.2.1 .....	51-52	9
IX.	Programme of work (agenda item 7).....	53-55	9
X.	Any other business (agenda item 8) .....	56-59	9
A.	Discrepancies between high consequence dangerous goods, table 1.10.3.1.2, in relation to Chapter 8.5, special provision S1 (6), and subsection 1.1.3.6 ...	56-57	9
B.	Rules of Procedure of the Working Party .....	58	10
C.	Methodology and systems used for the assignment of tunnel codes for Class 7 goods and for the assignment of code “(-)”.....	59	10
XI.	Adoption of the report (agenda item 9) .....	60-61	10
<b>Annexes</b>			
I.	Draft amendments to annexes A and B of ADR for entry into force on 1 January 2023		11
II.	Corrections to the English version of ADR 2021 .....		23
III.	List of decisions .....		24

## I. Organizational matters and attendance

1. The Working Party on the Transport of Dangerous Goods held its 109th session from 4 to 7 May 2021, with Ms. A. Roumier (France) as Chair and Mr. A. Simoni (Italy) as Vice-Chair.

### A. Organizational matters

2. Owing to a combination of COVID-19 response measures, financial constraints triggered by the United Nations liquidity crisis, ongoing renovation work at the Palais des Nations under the strategic heritage plan and technical constraints related to the number of meeting rooms available for hybrid meetings, the share of meetings with interpretation allocated to the Economic Commission for Europe was reduced from three meetings per day to just one per day for the first half of 2021. Taking into account those factors and the quarantine and travel restrictions in force, and after consultation with the secretariat and conference services of the United Nations Office at Geneva, the officers of the Working Party agreed to adapt the format of the 109th session.

3. Accordingly and taking into account that some documents could not be discussed in informal meetings, the session initially scheduled from 3 to 7 May 2021 was held from 4 to 7 May 2021, in a hybrid format, with the possibility of participation online or in person. The Working Party met in informal meetings without interpretation and in formal hybrid meetings according to the schedule presented in informal document INF.14. During hybrid formal meetings, the Working Party was able to take decisions on the proposals and adopt the draft report of the meeting.

4. Several non-English-speaking delegations expressed their regret that only a limited number of formal meetings with interpretation were available. The Working Party agreed that this situation had an impact on the effectiveness of its work. The Working Party wished to recall that the autumn session of the Joint Meeting and the 110th session of the Working Party would be the last sessions of the biennium during which the complete list of amendments to enter into force on 1 January 2023 would be finalized and adopted. It will be necessary to have available for these meetings all the official meetings with interpretation, as planned in the draft programme of work of the Transport subprogramme for 2021 (ECE/TRANS/2021/8) adopted by the Inland Transport Committee and approved by the Executive Committee at its 115th session (see EXCOM/CONCLU/115).

### B. Attendance

5. Representatives of the following countries took part in the session: Austria, Belarus, Belgium, Denmark, Finland, France, Germany, Italy, Latvia, Netherlands, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

6. The European Union was represented.

7. The following intergovernmental organization was represented: Intergovernmental Organisation for International Carriage by Rail (OTIF).

8. The following non-governmental organizations were represented: European Chemical Industry Council (Cefic); European Conference of Fuel Distributors (ECFD); European Industrial Gases Association (EIGA); FuelsEurope; International Organization of Motor Vehicle Manufacturers (OICA); International Road Union (IRU) and Liquid Gas Europe.

## II. Opening of the session

9. Mr. Dmitry Mariyasin, Deputy Executive Secretary of ECE, opened the session and welcomed all participants. He stressed the importance of ADR, particularly at a time of the coronavirus disease (COVID-19) pandemic when transport of dangerous goods for medical

use must continue to be ensured under the best possible conditions. He welcomed the measures taken by the competent authorities in this regard, including the signing of multilateral agreements with a view to ensuring continuity of service within a legal and institutional framework and with sufficient security guarantees. He also emphasized the importance of the work on the use of battery electric vehicles and hydrogen fuel cell vehicles for the transport of dangerous goods within the framework of energy transition.

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

*Documents:* ECE/TRANS/WP.15/252 and ECE/TRANS/WP.15/252/Add.1 (Secretariat)

*Informal documents:* INF.1, INF.2, INF.14 and INF.15 (Secretariat)

10. The Working Party adopted the provisional agenda prepared by the secretariat, as amended by informal document INF.2 to take account of informal documents INF.1 to INF.20. The Working Party noted that informal document INF.3 had been withdrawn, as it had been published in error.

### **IV. Eighty-third session of the Inland Transport Committee (agenda item 2)**

*Document:* ECE/TRANS/2021/3 (Implementation of the ITC Strategy until 2030)

*Informal documents:* Informal document No. 8/Rev.5 of the eighty-third session of the Inland Transport Committee

Informal document INF.20

11. The Working Party took note of the ITC decisions on its eighty-third session (Geneva, 23–26 February 2021), in particular decisions 50–55 concerning activities relating to the transport of dangerous goods and the work of the Working Party.

12. The Working Party noted with interest the work on the implementation of the Committee's strategy until 2030 and the required actions listed in document ECE/TRANS/2021/3.

13. The Chair of the Working Party stated that she would transmit a progress report to the ITC secretariat on the status of implementation of the strategy in the Working Party and on any necessary additions and amendments to the "Status and next steps" table contained in document ECE/TRANS/2021/3. Delegations wishing to do so may send their comments and proposals for additions and amendments to the Chair of the Working Party before 1 July 2021 so that they can be reported to the Bureau of ITC at its November 2021 session.

### **V. Status of the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) and related issues (agenda item 3)**

14. The Working Party noted that 13 countries (Azerbaijan, Belarus, Bosnia and Herzegovina, Croatia, Georgia, Iceland, Kazakhstan, Montenegro, Morocco, Nigeria, North Macedonia, San Marino and Tajikistan) had not yet deposited the required instruments for the Protocol of 1993 amending article 1 (a), article 14 (1) and article 14 (3) (b) of ADR to enter into force and encouraged them to take the necessary measures to ratify or accede to it so that it could do so.

## VI. Work of the RID/ADR/ADN Joint Meeting (agenda item 4)

*Document:* ECE/TRANS/WP.15/AC.1/158 (Report of the Joint Meeting on its autumn 2020 session)

*Informal document:* INF.11 (Secretariat)

15. At the previous session, several delegations wished to have more time to study the European Union's multimodal guidelines (Inland TDG Risk Management Framework) before adopting the addition of a non-binding reference to those guidelines in 1.9.4. Some delegations reiterated that they considered it premature to add this reference in ADR, as these guidelines were still being developed and would need to be updated with new data. It was recalled that the use of these guidelines would be non-binding. The Working Party adopted the amendment to 1.9.4 contained in annex II to document ECE/TRANS/WP.15/AC.1/158 (see annex I) and invited delegations wishing to reconsider this amendment to transmit their comments to the Joint Meeting.

16. The Working Party endorsed the amendments adopted by the Joint Meeting at its spring 2021 session, as contained in informal document INF.11 in English, French and Russian with some editorial changes (see annex I). The amendments in square brackets will be confirmed at the 110th session after further discussion at the next session of the Joint Meeting.

17. The Working Party noted that the terms "consignor for the ADR carriage" still needed to be clarified in new 1.1.4.7 and that the OTIF secretariat would prepare a document on this point for consideration by the Joint Meeting at its next session.

18. The Working Party also recommended that some acronyms corresponding to French terms, included in the English version of the new section 1.2.3, could be accompanied with a reference to the corresponding French term as is done in the French version, for example for the acronym CSI. This would include the terms ADN, UIC and RID. The Working Party asked the secretariat to study the acronyms that might be involved in cooperation with the OTIF secretariat.

## VII. Proposed amendments to annexes A and B of ADR (agenda item 5)

### A. Construction and approval of vehicles

#### 1. Rear protection of vehicles

*Document:* ECE/TRANS/WP.15/2021/7 (France)

*Informal document:* INF.5 (Netherlands)

19. The proposal contained in ECE/TRANS/WP.15/2021/7 aimed to ensure a uniform interpretation of how to measure the required 100 mm clearance between the rear wall of the tank and the rear bumper.

20. The majority of the delegations that expressed their views came down in favour of the proposal. There were some proposals to modify the figure. It was also proposed to extend the envisaged transitional measure to tank-vehicles registered before 1 January 2025 in order to allow sufficient time for manufacturers in countries with a different interpretation to make the adjustment.

21. The representative of France will present a revised proposal at a next session.

22. The Working Party welcomed the comments from the Netherlands and agreed that it might be necessary to define specific requirements for the different types of tank construction and additional equipment and protections in future work.

## 2. Tyre pressure monitoring system

*Informal documents:* INF.6 (Netherlands), INF.18 (OICA)

23. The Working Party noted that the World Forum for Harmonization of Vehicle Regulations (WP.29) had adopted, at its 183rd session (9–11 March 2021), amendments to the Uniform provisions concerning the approval of vehicles with regard to their Tyre Pressure Monitoring Systems (UN Regulation No. 141) with the aim of extending the application of these provisions to heavy-duty vehicles.

24. Several delegations considered that a reference to these Regulations in ADR could improve the safety of the transport of dangerous goods, in particular by preventing bursts.

25. The representative of the Netherlands took note of the comments of OICA in informal document INF.18 and the comments made at the session. He also invited delegations wishing to do so to send him their comments in writing and stated that he could present a formal document at the next session.

## 3. Engine fire suppression systems and tyre fire protection systems to reduce the likelihood of a BLEVE

*Informal documents:* INF.7 (Spain), INF.19 (OICA)

26. The representative of Spain presented to the Working Party the proposals of the BLEVE working group of the Joint Meeting to equip vehicles with engine fire suppression and tyre fire protection systems.

27. The representative of Spain took note of the comments made during the session and the preferences regarding the different options proposed. There were mixed views on the best option.

28. The representative of Spain invited those delegations that wished to do so to study the various options and to send her their comments, if possible before the next meeting of the informal group scheduled for 27 May 2021. She also invited delegations interested in participating in this informal group to contact her.

29. The Working Party noted that the BLEVE working group would submit an official document concerning the fitting of vehicles with engine fire suppression and tyre fire protection systems at the next session. The Working Party also noted that proposals on safety valves would be presented separately to the Joint Meeting, as they were applicable to all land transport modes.

## 4. Stability of tank-vehicles

*Informal document:* INF.12 (Cefic)

30. The Working Party noted the results of the informal working group on vehicle stability and the next steps of work planned with a view to preparing amendments to 9.7.5.1 for consideration at a future session.

## 5. Use of battery electric vehicles and hydrogen fuel cell vehicles for the transport of dangerous goods

*Informal documents:* INF.16 (OICA), INF.17 (Netherlands)

31. The representative of the Netherlands informed the Working Party about the results of the work of the task force on the use of battery electric vehicles and hydrogen fuel cell vehicles for the transport of dangerous goods, which met on two occasions since the last session of the Working Party at the initiative of the Netherlands.

32. The Working Party welcomed the work carried out under the auspices of the delegation of the Netherlands.

33. The Working Party wished to continue the work in an informal group led by the Netherlands, with OICA as its secretariat. On the basis of the proposal contained in informal document INF.16, the Working Party adopted the following terms of reference for this informal working group:

(a) The informal working group will develop appropriate ADR provisions for the construction of the battery electric vehicles (BEV) and hydrogen fuel cell vehicles (HFCV) and their trailers with a view to ensuring the safe transport of dangerous goods in these vehicles. The provisions will concern in particular:

The electrical equipment of these vehicles;

The prevention of fire risks; and

The prevention of other risks caused by fuels.

(b) The informal working group will take full account of the developments and will work in full cooperation with other working parties (e.g. WP.29).

(c) In developing its proposals, the informal working group should take into account existing UN Regulations (in particular UN Regulations No. 13, No. 100, No. 122 and No. 134), data, research and voluntary standards available to the contracting parties.

## **B. Miscellaneous proposals**

### **1. Addition of a reference to MEMUs in the Model for report on occurrences during the carriage of dangerous goods**

*Document:* ECE/TRANS/WP.15/2021/1 (Sweden)

34. The Working Party adopted the proposal (see annex I).

### **2. Supervision requirements for detonators**

*Document:* ECE/TRANS/WP.15/2021/3 (Secretariat)

35. The Working Party adopted the proposal (see annex I).

### **3. References to competent authorities in Parts 8 and 9**

*Document:* ECE/TRANS/WP.15/2021/5 (Secretariat)

36. The Working Party confirmed the interpretations proposed in paragraphs 8, 9, 12 and 14 of document ECE/TRANS/WP.15/2021/5. These interpretations will be published on the ECE website.

37. With regard to 9.1.2.1 (ECE/TRANS/WP.15/2021/5, para. 13), the delegations that expressed their views considered that the term “competent authority” in this subsection referred to the competent authority of the country of registration. The Working Party confirmed this interpretation.

38. The Working Party agreed that the reference to “the competent authority(ies)” should be retained in 8.6.3.1, as different competent authorities could be involved and not just the competent authority for Class 7. Proposal 1 was withdrawn.

39. Several delegations considered that the term “local authority” was not appropriate for provisions S8 and S9 of Chapter 8.5 because, according to the definition of competent authority in 1.2.1, the implementation of these provisions could fall under different levels of authority depending on what was specified in national law. Proposal 2 was withdrawn.

### **4. Temperature controlled transport**

*Informal document:* INF.4/Rev.1 (Netherlands and Cefic)

40. The representatives of the Netherlands and Cefic invited delegations wishing to make comments on their draft amendment proposal to submit them by mid-July 2021 with a view to preparing an official document for the next session.

## 5. Editorial amendments

*Informal document:* INF.10 (United Kingdom)

41. The Working Party confirmed that the wording of special provision S3 and the numbering of the second figure at 5.2.1.10.1.2 should be corrected in the English version. A member of the secretariat confirmed that these points were correct in the French and Russian versions of ADR and that these corrections would be reflected in a forthcoming corrigendum to the published English version of ADR (see annex II).

## 6. Tunnel restriction code for exempted packages (UN Nos. 2908 to 2911)

*Documents:* ECE/TRANS/WP.15/2020/4 (Germany),  
ECE/TRANS/WP.15/2021/4 (Secretariat)

42. The representative of Germany wished to continue the discussion on that document in the light of the information on the methodology and system for assigning tunnel codes to the goods concerned, as compiled by the secretariat.

43. The proposal by Germany in document ECE/TRANS/WP.15/2020/4 was adopted (see annex I).

# VIII. Interpretation of ADR (agenda item 6)

## A. Application of the requirements concerning the electrical equipment of vehicles in accordance with 9.2.1.1

*Document:* ECE/TRANS/WP.15/2021/6 (Netherlands and Germany)

44. At the previous session, the Netherlands had provided replies to questions raised by Germany. The two countries have jointly prepared an official position paper on the subject.

45. With regard to the first question, the Working Party endorsed the replies of the representative of the Netherlands and requested the secretariat to make reference to them on the page concerning the interpretation of ADR on the ECE website.

46. With regard to the second question, the Working Party wished to have a revised proposal differentiating between the various possible cases according to the dates of registration and any approval for the carriage of dangerous goods. The representative of Germany indicated that she would present a revised proposal at the next session.

## B. Application of multilateral agreements

*Informal document:* INF.9 (Sweden)

47. There were differing views on the interpretation of multilateral agreements M333 and M334.

48. Some delegations considered that it was not possible for a driver holding an ADR certificate issued in a country that had not signed the M333 agreement to continue to carry dangerous goods in countries that had signed that agreement after the expiry of the validity date of that certificate. Similarly, they considered that a safety adviser holding a training certificate issued in a country that had not signed the M334 agreement could not continue to work for companies located in countries that had signed that agreement after the expiry of the validity date of that certificate.

49. On the contrary, other countries pointed out that the M333 and M334 agreements did not mention the country of issue of the certificates and therefore considered that a driver holding an ADR certificate issued in a country that had not signed M333 could continue to carry dangerous goods in the countries that had signed that agreement after the expiry of the validity date of that certificate. Similarly, they considered that a safety adviser holding a training certificate issued in a country that had not signed the M334 agreement could continue



to work for companies located in countries that had signed that agreement after the expiry of the validity date of that certificate.

50. The Working Party noted those differences in interpretation and added that, if training sessions and examinations remained difficult to organize after 30 September 2021 and new agreements had to be put in place, their drafting should take account of those differences. However, the Working Party very much hoped that that exceptional situation caused by the outbreak of COVID-19 would not continue.

### **C. Clarification of 5.3.2.2.1**

*Informal document:* INF.13 (United Kingdom)

51. The representative of the United Kingdom noted the comments of the delegations that expressed their views.

52. It was recalled that the orange-coloured plate marking requirements had been harmonized between RID, ADR and ADN and that common specifications had been adopted by the Joint Meeting at its autumn 2005 session (see TRANS/WP.15/AC.1/100). The Working Party wished to bring up that issue up for discussion at the Joint Meeting if there turned out to be problems with implementation.

## **IX. Programme of work (agenda item 7)**

53. The agenda items for the next session (tentatively scheduled for 8–12 November 2021) would be:

- Adoption of the agenda;
- Eighty-third session of the Inland Transport Committee;
- Status of the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) and related issues;
- Work of the RID/ADR/ADN Joint Meeting;
- Proposals for amendments to annexes A and B of ADR;
- Interpretation of ADR;
- Programme of work;
- Any other business:
- Election of officers for 2022;
- Adoption of the report.

54. The deadline for submission of formal documents for that session was 16 August 2021.

55. The Working Party noted that that would be the last session of the period for amendments. At that session, the Working Party would mainly consider the text of all amendments adopted at previous sessions of the Working Party and the Joint Meeting.

## **X. Any other business (agenda item 8)**

### **A. Discrepancies between high consequence dangerous goods, table 1.10.3.1.2, in relation to Chapter 8.5, special provision S1 (6), and subsection 1.1.3.6**

*Informal document:* INF.8 and Add.1-2 (Sweden and Norway)

56. The Working Party confirmed the need to clarify inconsistencies between Chapter 8.5 and 1.1.3.6 in the case of goods covered by Chapter 1.10. The Working Party invited the participants to examine the inconsistencies presented in addenda 1 and 2 to informal document INF.8 and to transmit their comments to the representatives of Sweden and Norway with a view to preparing proposals for amendments for consideration at the next session.

57. The Working Party also confirmed that table 1.10.3.1.2, list of high consequence dangerous goods, is the result of harmonization of ADR with the Model Regulations. The list of goods concerned may be modified according to the regional situation or the perceived level of threat at a given moment for a given mode of transport. However, the Working Party invited delegations wishing to propose amendments to this list to do so first to the Subcommittee of Experts on the Transport of Dangerous Goods. As a possible option, the representative from Norway suggested to consider replacement of the list in Chapter 8.5 S1 (6) with the list of high consequence dangerous goods under Class 1 in Table 1.10.3.1.2.

## **B. Rules of Procedure of the Working Party**

*Document:* ECE/TRANS/WP.15/2021/2 (Secretariat)

58. After discussion on the basis of the comparison prepared by the secretariat, the Working Party agreed that there was no need to amend its Rules of Procedure immediately. It may be useful to review the quorum and voting rules in the future. Delegations wishing to do so may present proposals for modification on the basis of the Rules of Procedure of the ITC.

## **C. Methodology and systems used for the assignment of tunnel codes for Class 7 goods and for the assignment of code “(-)”**

*Document:* ECE/TRANS/WP.15/2021/4 (Secretariat)

59. See paragraphs 42 and 43 under agenda item 5 (b).

## **XI. Adoption of the report (agenda item 10)**

60. The Working Party adopted the report on its 109th session and its annexes on the basis of a draft prepared by the secretariat.

61. In accordance with the special procedures on decision-making for formal meetings with remote participation adopted by the Executive Committee (ECE/EX/2020/L.12), the decisions contained in annex III were published and notified to all the permanent missions in Geneva. After publication, no objections were received. The decisions are deemed adopted.

## Annex I

### Draft amendments to annexes A and B of ADR for entry into force on 1 January 2023

#### Chapter 1.1

1.1.3.6.2 In the first indent, after “0500,” add “0511,”.

(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)

1.1.4 Insert the following new 1.1.4.6:

“1.1.4.6 (Reserved)”

(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)

1.1.4 Insert the following new 1.1.4.7:

**“1.1.4.7 Refillable pressure receptacles authorized by the United States of America Department of Transportation**

1.1.4.7.1 *Import of gases*

Refillable pressure receptacles authorised by the United States of America Department of Transportation and constructed and tested in accordance with standards listed in Part 178, Specifications for Packagings of Title 49, Transportation, of the Code of Federal Regulations accepted for carriage in a transport chain in accordance with 1.1.4.2 may be carried from the location of the temporary storage at the end point of the transport chain to the end user.

[The consignor for the ADR carriage] shall include the following entry in the transport document:

“Carriage in accordance with 1.1.4.7.1”.

1.1.4.7.2 *Export of gases and empty uncleaned pressure receptacles*

Refillable pressure receptacles authorised by the United States of America Department of Transportation and constructed in accordance with standards listed in Part 178, Specifications for Packagings of Title 49, Transportation, of the Code of Federal Regulations may be filled and carried only for the purpose of exporting to countries which are not Contracting Parties to ADR provided the following provisions are met:

- (a) The filling of the pressure receptacle is in accordance with the relevant requirements of the Code of Federal Regulations of the United States of America.
- (b) The pressure receptacles shall be marked and labelled in accordance with Chapter 5.2.
- (c) The provisions of 4.1.6.12 and 4.1.6.13 shall apply to pressure receptacles. Pressure receptacles shall not be filled after they become due for periodic inspection but may be carried after the expiry of the time-limit for purposes of performing inspection, including the intermediate carriage operations.
- (d) [The consignor for the ADR carriage] shall include the following entry in the transport document:

“Carriage in accordance with 1.1.4.7.2”

(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11, as amended)

1.1.5 Add the following Note:

**“NOTE:** A standard provides details on how to meet the provisions of ADR and may include requirements in addition to those set out in ADR.”

(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)

## Chapter 1.2

1.2 Amend the title to read **“DEFINITIONS, UNITS OF MEASUREMENT AND ABBREVIATIONS”**.

(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)

1.2.1 Delete the following definitions:

“ADN”, “ASTM”, “CGA”, “CIM”, “CMR”, “CSC”, “CTU”, “EN (standard)”, “IAEA”, “IBC”, “ICAO”, “IMDG”, “IMO”, “ISO (standard)”, “MEGC”, “MEMU”, “RID”, “SADT”, “SAPT”, “UIC”, “UNECE”.

In the definition of “Compressed Natural Gas”, delete “(CNG)”.

In the definition of “Criticality safety index”, delete “(CSI)”.

Amend the definition of “GHS” to read:

“*“Globally Harmonized System of Classification and Labelling of Chemicals”* means the ninth revised edition of United Nations publication bearing this title (ST/SG/AC.10/30/Rev.9);”

In the definition of “Liquefied Natural Gas”, delete “(LNG)”.

In the definition of “Liquefied Petroleum Gas”, delete “(LPG)”.

In the definition of “Multiple-element gas container”, delete “(MEGC)”.

In the definition of “Mobile explosives manufacturing unit”, delete “(MEMU)”.

In the definition of “Net explosive mass”, delete “(NEM)”.

In the definition of “Self-accelerating decomposition temperature”, delete “(SADT)”.

In the definition of “Self-accelerating polymerization temperature”, delete “(SAPT)”.

In the definition of “Transport index”, delete “TI”.

(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)

Add a new section 1.2.3 to read as follows:

### **“1.2.3 List of abbreviations**

In ADR, abbreviations, acronyms and abbreviated designations of regulatory texts are used, with the following meaning:

#### **A**

“ADN” means the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways;

"*ASTM*" means the American Society for Testing and Materials (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959, United States of America), [www.astm.org](http://www.astm.org);

## C

"*CGA*" means the Compressed Gas Association, 14501 George Carter Way, Suite 103, Chantilly, VA 20151, United States of America, [www.cganet.com](http://www.cganet.com);

"*CIM*" means the Uniform Rules Concerning the Contract of International Carriage of Goods by Rail (Appendix B to the Convention concerning International Carriage by Rail (COTIF)), as amended;

"*CMR*" means the Convention on the Contract for the International Carriage of Goods by Road (Geneva, 19 May 1956), as amended;

"*CNG*" means compressed natural gas (see 1.2.1);

"*CSC*" means the International Convention for Safe Containers (Geneva, 1972) as amended and published by the International Maritime Organization (IMO), London;

"*CSI*" means criticality safety index (see 1.2.1);

## E

"*EIGA*" means European Industrial Gas Association, 30 Avenue de l'Astronomie, 1210 Brussels (Belgium), [www.eiga.eu](http://www.eiga.eu);

"*EN*" (standard) means a European standard published by the European Committee for Standardization (CEN) (CEN, Avenue Marnix 17, B-1000 Brussels, Belgium), [www.cen.eu](http://www.cen.eu);

## G

"*GHS*" means Globally Harmonized System of Classification and Labelling of Chemicals (see 1.2.1);

## I

"*IAEA*" means the International Atomic Energy Agency, P.O. Box 100, 1400 Vienna, Austria, [www.iaea.org](http://www.iaea.org);

"*IBC*" means intermediate bulk container (see 1.2.1);

"*ICAO*" means the International Civil Aviation Organization, 999 University Street, Montreal, Quebec H3C 5H7, Canada, [www.icao.org](http://www.icao.org);

"*IMDG*" means IMDG Code (see 1.2.1);

"*IMO*" means the International Maritime Organization, 4 Albert Embankment, London SE1 7SR, United Kingdom, [www.imo.org](http://www.imo.org);

"*ISO*" (standard) means an international standard published by the International Organization for Standardization, 1, rue de Varembe, 1204 Geneva 20, Switzerland, [www.iso.org](http://www.iso.org);

## L

"*LNG*" means liquefied natural gas (see 1.2.1);

"*LPG*" means liquefied petroleum gas (see 1.2.1);

"*LSA*" (material) means low specific activity material (see 2.2.7.1.3);

## M

"*MEGC*" means multiple-element gas container (see 1.2.1);

"*MEMU*" means mobile explosives manufacturing unit (see 1.2.1);

## N

"N.O.S." means not otherwise specified entry (see 1.2.1);

## **R**

"RID" means Regulations concerning the International Carriage of Dangerous Goods by Rail (Appendix C of COTIF (Convention concerning international carriage by rail));

## **S**

"SADT" means self-accelerating decomposition temperature (see 1.2.1);

"SAPT" means self-accelerating polymerization temperature (see 1.2.1);

"SCO" means surface contaminated object (see 2.2.7.1.3);

## **T**

"TI" means transport index (see 1.2.1);

## **U**

"UIC" means the International Union of Railways, 16 rue Jean Rey, 75015 Paris, France, [www.uic.org](http://www.uic.org);

"UNECE" means the United Nations Economic Commission for Europe, Palais des Nations, 8-14 avenue de la Paix, 1211 Geneva 10, Switzerland, [www.unece.org](http://www.unece.org);

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

## **Chapter 1.6**

[1.6.4 Insert the following new transitional provision:

"1.6.4.56 Tank-containers constructed before 1 July 2023 in accordance with the requirements in force up to 31 December 2022, but which do not conform to the requirements of 6.8.2.2.4 second paragraph applicable from 1 January 2023 may still be used."]

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11, as amended)*

## **Chapter 1.8**

1.8.5.4 In the third page of the "Model for report on occurrences during the carriage of dangerous goods", in the cell for note (3), add a new entry at the end to read "17 MEMU".

*(Reference document: ECE/TRANS/WP.15/2021/1)*

## **Chapter 1.9**

1.9.4 After the reference to footnote 1, add a reference to a new footnote 2 to read as follows:

"<sup>2</sup> Multimodal guidelines (Inland TDG Risk Management Framework) may be consulted on the website of the Directorate General for Mobility and Transport of the European Commission ([https://ec.europa.eu/transport/themes/dangerous\\_good/risk\\_management\\_framework\\_en](https://ec.europa.eu/transport/themes/dangerous_good/risk_management_framework_en))."

*(Reference document: ECE/TRANS/WP.15/AC.1/158, Annex II)*

## Chapter 1.10

1.10.4 In the first sentence, after “0500,” add “0511,”.

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

## Chapter 3.2, Table A

For UN No. 2426, amend the name and description in column (2) to read “AMMONIUM NITRATE, LIQUID (hot concentrated solution)”.

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

For UN Nos. 2908 to 2911, in Column (15), replace the entry for the tunnel restriction code by the mention “(–)”.

*(Reference document: ECE/TRANS/WP.15/2020/4)*

For all UN numbers to which special provision 386 is assigned in column (6), insert in column (6) “676”. Applies to UN Nos. 1010, 1051, 1060, 1081, 1082, 1085, 1086, 1087, 1092, 1093, 1143, 1167, 1185, 1218, 1246, 1247, 1251, 1301, 1302, 1303, 1304, 1545, 1589, 1614, 1724, 1829, 1860, 1917, 1919, 1921, 1991, 2055, 2200, 2218, 2227, 2251, 2277, 2283, 2348, 2352, 2396, 2452, 2521, 2522, 2527, 2531, 2607, 2618, 2838, 3022, 3073, 3079, 3302, 3531, 3532, 3533 and 3534.

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

## Chapter 3.2, Table B

In the entry for “AMMONIUM NITRATE, LIQUID, hot concentrated solution, in a concentration of more than 80% but not more than 93%”, amend column “Name and description” to read: “AMMONIUM NITRATE, LIQUID (hot concentrated solution)”.

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

## Chapter 3.3

Special provision (SP) 327 In the first sentence, replace “5.4.1.1.3” by “5.4.1.1.3.1”.

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

SP 363 At the end of paragraph (j), insert the following Note:

**“NOTE:** On engines and machinery with a capacity of more than 450 l but containing 60 l of liquid fuel or less, labelling and placarding compliant with the above requirements are permitted.”

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11, as amended)*

SP 593 Amend to read as follows:

“593 This gas, when used for cooling goods not fulfilling the criteria of any class, e.g. medical or biological specimens, if contained in double wall receptacles which comply with the provisions of packing instruction P203, paragraph (6) for open cryogenic receptacles of 4.1.4.1, is not subject to the requirements of ADR except as specified in 5.5.3.”

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

SP 644 Insert the following new second indent:

“– The solution does not contain more than 93% ammonium nitrate;”

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

SP 650 In paragraph (e), replace “5.4.1.1.3” by “5.4.1.1.3.1”.

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

SP 654 In the first sentence, replace “5.4.1.1.3” by “5.4.1.1.3.1”.

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

Add the following new special provision:

“676 For the carriage of packages containing polymerizing substances the provisions of special provision 386, in conjunction with 7.1.7.3, 7.1.7.4, 5.4.1.1.15 and 5.4.1.2.3.1, need not be applied, when carried for disposal or recycling provided the following conditions are met:

- (a) Before loading an examination has shown that there is no significant deviation between the outside temperature of the package and the ambient temperature;
- (b) The carriage is effected within a period of not more than 24 hours from that examination;
- (c) The packages are protected from direct sunlight and from the impact of other sources of heat (e.g. additional loads that are being carried above ambient temperature) during carriage;
- (d) The ambient temperatures during the carriage are below 45 °C;
- (e) Vehicles and containers are adequately ventilated;
- (f) The substances are packed in packages with a maximum capacity of 1000 litres.

In assessing the substances for carriage under the conditions of this special provision, additional measures to prevent dangerous polymerization may be considered, for example the addition of inhibitors.”

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

## Chapter 4.1

4.1.6.8 Amend sub-paragraphs (b) and (c) to read as follows:

“(b) Valves are protected by caps or guards. Caps shall possess vent-holes of sufficient cross-sectional area to evacuate the gas if leakage occurs at the valves;

(c) Valves are protected by shrouds or permanent protection attachments;”

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

4.1.6.15 In ECE/TRANS/WP.15/251, Annex I, replace Table 1 to read as follows:

“Table 1: Standards for UN and non-UN pressure receptacles



Applicable paragraphs	Reference	Title of document
4.1.6.2	EN ISO 11114-1:2020	Gas cylinders – Compatibility of cylinder and valve materials with gas contents – Part 1: Metallic materials
	EN ISO 11114-2:2013	Gas cylinders – Compatibility of cylinder and valve materials with gas contents – Part 2: Non-metallic materials
4.1.6.4	ISO 11621:1997 or EN ISO 11621:2005	Gas cylinders – Procedures for change of gas service
4.1.6.8 Valves with inherent protection	Clause 4.6.2 of EN ISO 10297:2006 or clause 5.5.2 of EN ISO 10297:2014 or clause 5.5.2 of EN ISO 10297:2014 + A1:2017	Gas cylinders – Cylinder valves – Specification and type testing
	Clause 5.3.8 of EN 13152:2001 + A1:2003	Testing and specifications of LPG cylinder valves – Self-closing
	Clause 5.3.7 of EN 13153:2001 + A1:2003	Specifications and testing of LPG cylinder valves – Manually operated
	Clause 5.9 of EN ISO 14245:2010 or clause 5.9 of EN ISO 14245:2019	Gas cylinders – Specifications and testing of LPG cylinder valves – Self-closing
	Clause 5.10 of EN ISO 15995:2010 or clause 5.10 of EN ISO 15995:2019	Gas cylinders – Specifications and testing of LPG cylinder valves – Manually operated
	Clause 5.4.2 of EN ISO 17879:2017	Gas cylinders – Self-closing cylinder valves – Specification and type testing
	Clause 7.4 of EN 12205:2001 or clause 9.2.5 of EN ISO 11118:2015 or clause 9.2.5 of EN ISO 11118:2015 + A1:2020	Gas cylinders – Non-refillable metallic gas cylinders – Specification and test methods
4.1.6.8 (b)	ISO 11117:1998 or EN ISO 11117:2008 + Cor 1:2009 or EN ISO 11117:2019	Gas cylinders – Valve protection caps and guards – Design, construction and tests
	EN 962:1996 + A2:2000	Transportable gas cylinders – Valve protection caps and valve guards for industrial and medical gas cylinders – Design, construction and tests
4.1.6.8 (c)	Requirements for shrouds and permanent protection attachments used as valve protection under 4.1.6.8 (c) are given in the relevant pressure receptacle shell design standards (see 6.2.2.3 for UN pressure receptacles and 6.2.4.1 for non-UN pressure receptacles).	
4.1.6.8 (b) and (c)	ISO 16111:2008 or ISO 16111:2018	Transportable gas storage devices – Hydrogen absorbed in reversible metal hydride

”

(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)

(Replaces Table 1 of 4.1.6.15 in ECE/TRANS/WP.15/251, Annex I)

### Chapter 4.3

- 4.3.4.1.3 In the Table, under class 5.1, amend the name and description for UN number 2426 to read as follows: “AMMONIUM NITRATE, LIQUID (hot concentrated solution)”.

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

### Chapter 5.4

- 5.4.1.1.3 Becomes 5.4.1.1.3.1.

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

Insert a new 5.4.1.1.3.2 to read as follows:

“5.4.1.1.3.2 If there is no possibility to measure the exact quantity of the waste at the place of loading, the quantity according to 5.4.1.1.1 (f) may be estimated for the following cases under the following conditions:

- (a) For packagings, a list of packagings including the type and the nominal volume will be added to the transport document;
- (b) For containers, the estimation will be based on their nominal volume and other available information (e.g. type of waste, average density, degree of filling);
- (c) For vacuum operated waste tanks, the estimation shall be justified (e.g. by means of an estimation provided by the consigner or by vehicle equipment).

Such estimation of the quantity is not allowed for:

- Exemptions for which the exact quantity is essential (e.g. 1.1.3.6);
- Waste containing substances mentioned in 2.1.3.5.3 or substances of Class 4.3;
- Tanks other than vacuum operated waste tanks.

[A statement shall be included in the transport document, as follows:

“QUANTITY ESTIMATED IN ACCORDANCE WITH  
5.4.1.1.3.2”.]”

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

- 5.4.2 In the first sub-paragraph, replace “with the transport document” by “to the maritime carrier by those responsible for packing the container”.

In the second sub-paragraph, in the first sentence, replace “; if not, these documents shall be attached” by “(see for example 5.4.5)”.

The third amendment to the French version does not apply to the English version.

Delete the Note after the second sub-paragraph.

In the third sub-paragraph, after “may”, insert “also”.

(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)

## Chapter 6.2

6.2.3.1.5 Amend to read as follows:

“6.2.3.1.5 Acetylene cylinders shall not be fitted with fusible plugs or any other pressure relief devices.”

(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)

6.2.4.1 Amend the Table, under “for design and construction” as follows:

For “EN ISO 7866:2012 + AC:2014”, in column (4), replace “Until further notice” by “Between 1 January 2015 and 31 December 2024”.

After the row for “EN ISO 7866:2012 + AC:2014”, insert the following new row:

(1)	(2)	(3)	(4)	(5)
EN ISO 7866:2012 + A1:2020	Gas cylinders – Refillable seamless aluminium alloy gas cylinders – Design, construction and testing	6.2.3.1 and 6.2.3.4	Until further notice	

[For “EN 12245:2002”, in column (2), insert the following Note:

“**NOTE:** This standard shall not be used for gases classified as LPG.”]

[For “EN 12245:2002”, in column (5), insert “31 December 2023, for cylinders for LPG”.]

[For “EN 12245:2009 + A1:2011”, in column (2), number the existing Note to be “NOTE 1” and insert a new Note as follows:

“**NOTE 2:** This standard shall not be used for gases classified as LPG.”]

[For “EN 12245:2009 + A1:2011”, in column (5), insert “31 December 2023, for cylinders for LPG”.]

For “EN ISO 11118:2015”, in column (4), replace “Until further notice” by “Between 1 January 2017 and 31 December 2024”

After the row for “EN ISO 11118:2015”, insert the following new row:

(1)	(2)	(3)	(4)	(5)
EN ISO 11118:2015 + A1:2020	Gas cylinders – Non-refillable metallic gas cylinders – Specification and test methods	6.2.3.1, 6.2.3.3 and 6.2.3.4	Until further notice	

For “EN 14427:2004 + A1:2005”, in column (5), insert “31 December 2023, for cylinders without a liner, manufactured from two parts joined together”.

For “EN 14427:2014”, in column (2), add a new Note as follows:

“**NOTE:** This standard shall not be used for cylinders without a liner, manufactured from two parts joined together.”

For “EN 14427:2014”, in column (5), insert “31 December 2023, for cylinders without a liner, manufactured from two parts joined together”.

(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)

6.2.5.4.2 At the end of the sentence, replace “(see also EN 1975:1999 + A1:2003)” by “(see also EN ISO 7866:2012 + A1:2020)”.

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

*(Replaces the amendment in ECE/TRANS/WP.15/251, Annex I)*

## Chapter 6.8

- 6.8.2.1.23 Move the last sentence of the first paragraph to the end of the second paragraph, replacing the colon at the end of the second paragraph with a full stop.

Insert the following new paragraph immediately before the last paragraph:

“Welds made during repairs or alterations shall be assessed as above and in accordance with the non-destructive tests specified in the relevant standard(s) referenced in 6.8.2.6.2.”

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

- 6.8.2.2.2 At the end of the seventh paragraph, after “clearly apparent” insert a reference 9 to the following footnote:

“<sup>9</sup> The mode of operation of dry break couplings is self-closing. Consequently, an open/closed indicator is not necessary. This type of closure shall only be used as a second or third closure.”

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

- 6.8.2.2.4 After the first sentence, insert in the right-hand column:

[“These openings for tank-containers with [a capacity of more than 40 000 litres / a gross weight of more than 36 000 kg] intended for the carriage of [liquids] / [substances in the liquid state] which are not divided by partitions or surge plates into sections of not more than 7 500 litres capacity shall be provided with closures designed for a test pressure of at least 0.4 MPa (4 bar). Hinged dome covers for these tank-containers with a test pressure of more than 0.6 MPa (6 bar) shall not be permitted.”]

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

- 6.8.2.4.3 In the first sub-paragraph, in the first sentence, replace “at least every” by “no later than”.

In the third sub-paragraph, replace “the due date” by “the specified date”. Replace “at the latest every” by “no later than”. Replace “after this date” by “after this earlier date”.

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

- [6.8.2.6.2 In the table, for “EN 12972:2018”, in column (3) before “6.8.2.4” insert “6.8.2.1.23”.]

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

- 6.8.3.4.6 Amend to read as follows:

“6.8.3.4.6 For tanks intended for the carriage of refrigerated liquefied gases:



*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

## **Chapter 6.12**

6.12.3.2.6 Replace “at least” by “no later than”.

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

## **Chapter 7.4**

7.4.1 Amend the first sentence to read as follows: “Dangerous goods may only be carried in tanks when a portable tank instruction is shown in column (10) or when a tank code is shown in column (12) of Table A of Chapter 3.2, or when a competent authority has issued an authorisation in accordance with the conditions specified in 6.7.1.3.”

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

## **Chapter 8.1**

8.1.2.1 In paragraph (a), delete “and, when appropriate, the container/vehicle packing certificate prescribed in 5.4.2”.

*(Reference documents: ECE/TRANS/WP.15/AC.1/160, Annex II and informal document INF.11)*

## **Chapter 8.5**

S1 (6) In the list in the first paragraph, replace “and 0500” by “, 0500, 0512 and 0513”.

*(Reference document: ECE/TRANS/WP.15/2021/3)*

## **Annex II**

### **Corrections to the English version of ADR 2021**

#### **Chapter 5.2, figure 5.2.1.0.1.2, figure numbering**

*For 5.2.1.0.1.2 read 5.2.1.10.1.2*

*(Reference document: informal document INF.10, proposal 2)*

#### **Chapter 8.5, special provision S3, sentence under the heading**

*For and 8.3.4 read and the requirements in 8.3.4*

*(Reference document: informal document INF.10, proposal 1, as amended)*

## **Annex III**

### **List of decisions**

Decision 1: The Working Party endorsed the amendment to 1.9.4 adopted by the Joint Meeting at its autumn 2020 session (ECE/TRANS/WP.15/AC.1/158, annex II).

Decision 2: The Working Party endorsed the draft amendment adopted by the Joint Meeting at its spring session in 2021, as contained in informal document INF.11 available in English, French and Russian.

Decision 3: The Working Party adopted the proposal contained in document ECE/TRANS/WP.15/2021/1.

Decision 4: The Working Party adopted the proposal contained in document ECE/TRANS/WP.15/2021/3.

Decision 5: The Working Party confirmed the interpretations proposed in paragraphs 8, 9, 12 and 14 of document ECE/TRANS/WP.15/2021/5.

Decision 6: The Working Party confirmed that the term “competent authority” in subsection 9.1.2.1 referred to the competent authority of the country of registration.

Decision 7: The Working Party adopted the proposal contained in document ECE/TRANS/WP.15/2020/4.

Decision 8: The Working Party endorsed the interpretation given by the representative of the Netherlands in paragraphs 3-5 of document ECE/TRANS/WP.15/2021/6 and requested the secretariat to make reference to these paragraphs on the page concerning the interpretation of ADR on the ECE website.

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