Summary of a meeting of representatives of PTB, CEFIC, and BAM on 5–6 October 2017, in Brunswick, concerning possible ambiguities in Table C

Transmitted by the Government of Germany*., **

Introduction

1. The Government of Belgium submitted document ECE/TRANS/WP.15/AC.2/2017/41, concerning possible ambiguities in Table C, to the ADN Safety Committee at its thirty-first session. After discussing the document, the Committee invited the informal working group on substances to consider the issues raised.

2. In view of the limited time available, it was not possible to convene an ordinary meeting of the informal working group on substances. It was therefore decided to convene a small subgroup composed of representatives of the German National Metrology Institute (PTB), the European Chemical Industry Council (CEFIC) and the Bundesanstalt für Materialforschung und –prüfung (Federal Institute for Materials Research and Testing, BAM). The meeting was held on 5–6 October 2017, in Brunswick.

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** In accordance with the programme of work of the Inland Transport Committee for 2017-2018 (ECE/TRANS/ WP.15/237, annex V (9.3.)).
I. Results

3. On the basis of the Belgian document, the subgroup came to the following conclusions.

A. Reference to the EN standard for UN No. 1202

4. The subgroup found that the remark regarding references to superseded standards was relevant. Furthermore, it transpired that there was an even more recent version of the standard, from 2017. The subgroup thus proposes amending the references to standards in Tables A and C for UN No. 1202.

5. The subgroup also noted that the standard applies only to diesel fuel. This is clearly indicated for other substances by the phrase “with flash-point as specified in EN …”.

6. According to the ADN requirements for shipping names, other names appear in brackets. As the word “light” in “light heating oil” is supplementary information, the subgroup is of the opinion that the correct shipping name should be: “HEATING OIL, LIGHT”.

Proposals:


8. In Table C in the French and English versions of ADN, replace “HEATING OIL (LIGHT)” with “HEATING OIL, LIGHT”.

9. The subgroup also recommends bringing the shipping names of UN No. 1202 in Table C in the English and Russian versions of ADN into line with those in the French and German versions.

B. Definition of UN No. 1203

10. The subgroup is of the opinion that the conjunction “or” in the shipping name clearly indicates that “GASOLINE or PETROL” and “MOTOR SPIRIT” are different substances. This is corroborated by the fact that the definitions of petrol in the French and English versions of the standard, are not the same as those used in ADN. According to the European standard, “MOTOR SPIRIT” is fuel partially made up of petrol. The subgroup is therefore of the opinion that it is not necessary to amend the requirements. Moreover, the standard cited in the Belgian document, which was the 2014 version applicable at the time, has since been replaced with the August 2017 version.

C. Boiling point or initial boiling point

11. The ADN Safety Committee has already considered this issue, in 2013. At the time, a proposal was made to replace all references to the notion of “boiling point” in ADN with the now more usual notion of “initial boiling point”. As ADR texts and UN model regulations would also be affected by such changes, the issue was referred to the joint meeting and then to the United Nations Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee). The TDG Sub-Committee decided that both terms should be used: “boiling point” for pure substances and “initial boiling point” for mixtures. The proposed amendment to ADN was therefore dropped.

12. The subgroup agrees with the Belgian proposal in document ECE/TRANS/WP.15/AC.2/2017/41 whereby, in Table C and Scheme A in 3.2.3.3, “boiling point” should be replaced with “initial boiling point”. However, this amendment should also be applied to UN No. 1268.
13. When discussing this issue, the subgroup noted that the examples mentioned in 3.1.2.8.1.4 are no longer relevant in their current form and should therefore be updated.

Proposal:

14. Replace the examples at the end of 3.1.2.8.1.4

{"UN"} 1268 PETROLEUM DISTILLATES, N.O.S. 110 kPa < \(p_{\text{v50}}\) ≤ 150 kPa;

UN 1993 FLAMMABLE LIQUID, N.O.S. (ACETONE with more than 10% BENZENE)

\(p_{\text{v50}}\) ≤ 110 kPa, 85 °C bp ≤ 115 °C"

with

{"UN"} 1268 PETROLEUM DISTILLATES, N.O.S (NAPHTHA). 110 kPa < \(p_{\text{v50}}\) ≤ 150 kPa;

UN 1993 FLAMMABLE LIQUID, N.O.S. with more than 10% BENZENE, 60 °C < INITIAL BOILING POINT ≤ 85 °C (ACETONE)."

D. UN No. 1010

15. According to data from the chemicals industry, 1,2-butadiene is produced in large quantities. It also has its own entry in REACH. The 0.1% limit on 1,3-butadiene content in butadiene mixtures corresponds to the criterion for the attribution of CMR properties. The subgroup considers that no amendment to the requirements of ADN is necessary.

E. UN No. 3295 CMR

16. The subgroup agrees with the proposal in the Belgian document (ECE/TRANS/WP.15/AC.2/2017/41) whereby, in all language versions of ADN, “EP” and “TOX” should be added to column (18) of Table C for UN No. 3295 “HYDROCARBONS, LIQUID, N.O.S. CONTAINING ISOPRENE AND PENTADIENE, STABILIZED” and deleted from UN No. 3295 “HYDROCARBONS, LIQUID, N.O.S. (1-OCTEN)”

F. (F) Floater

17. The subgroup agrees with the proposal in the Belgian document (ECE/TRANS/WP.15/AC.2/2017/41) that “F” should be added to the parentheses of 12 entries for UN No. 3295 in Table C, column (5), but believes that, for the mixtures assigned to those entries with an initial boiling point of ≤ 60 °C, the vapour pressure is too high to meet the criterion for classification as floaters. However, as the addition appears in brackets only, as an option, in the subgroup’s view the adoption of the amendment does not pose any practical or safety risks.

G. UN No. 9003, Shipping Name

18. The regulations for Tables A and C diverge somewhat. In the Belgian document, it is rightly stated that the requirements for Table C have not been systematically applied and that, in some cases, the regulations for Table A have been applied.

19. As the expected amendments go beyond simple drafting changes, the subgroup proposes that the ADN Safety Committee should put the proposals in the Belgian document on hold and request the informal working group on substances to consider whether the regulations of Tables A and C should be standardized. Based on the outcome of that consideration, the informal working group on substances should submit proposals for the necessary amendments to Tables A and C and Part 3 of ADN, including any necessary consequential amendments.

20. Regardless of the above, the subgroup proposes adding the abbreviation “Fp” to the definition of flash-point in 1.2.1. The abbreviation could then be used in official shipping names and in any supplementary information to the shipping name.
Proposal:

21. In 1.2.1, amend the definition of “flash-point” to read as follows:

“Flash-point (Fp) means the lowest temperature of a liquid at which its vapours form a flammable mixture with air.”

H. Remark 27

22. Remark 27 figures in the general entry for UN No. 3082 in Table C. The other entries for UN Nos. 3077 and 3082 in Table C concern specific transport cases and relate to specific transport conditions that in some ways diverge. The subgroup believes that the differentiation of entries by means of supplementary information that becomes a mandatory component of the official shipping name due to the way in which it is presented should be retained. No amendment to the requirements is needed.

23. In view of the fact that, in some cases, for a single entry in Table A there are several partially divergent entries in Table C, a reference linking special provision 274 of Table A exclusively to remark 27 of Table C would not be appropriate.

24. However, the subgroup believes that the narrow wording of the criteria for the application of remark 27 in 3.2.3.3 and 3.2.4.3 makes it difficult to address the concerns laid out above. The subgroup therefore proposes that the ADN Safety Committee should request the informal working group on substances to consider the issue. The informal working group should examine the issues raised in the Belgian document in respect of UN Nos. 3295, 9003, 1993 and 1268. Furthermore, the subgroup noted that similar problems exist for UN 9005 and 9006.

I. Remark 29

25. The subgroup agrees with Belgium that the safety objective of remark 29 in its current form is not clear, and that it is impossible to work out the logic behind its assignment. The subgroup therefore seconds the Belgian proposal that this issue should be put before the informal working group on substances.

J. Column (16): Specification of explosion groups

26. The Belgian delegation’s comments are relevant. This problem has already been identified and was discussed, without objections, at the twenty-ninth session of the ADN Safety Committee on the basis of that session’s informal document INF.9. However, as that was an INF document that was only available in German, no final decision was made on the matter.

27. In line with the proposals made in INF.9 of the twenty-ninth session, which largely address the Belgian delegation’s concerns, the subgroup proposes amending 1.2.1 “Definitions”, 3.2.3.3 “Flowchart” and 3.2.4.3 “Criteria for assignment of substances”. As this concerns the assignment of maximum experimental safe gaps for subgroups of explosion group II B, the subgroup proposes, unlike the Belgian proposal, scaling the intervals between the safe gaps. Furthermore, in line with a drafting amendment proposed in INF.9 of the twenty-ninth session, the order of the columns in the table has been changed.

Proposals:

28. In 1.2.1 “Definitions”, amend the definition of “Explosion group” to read as follows (deletions in strikeout, insertions underlined):

“Explosion group/subgroup means a grouping of flammable gases and vapours according to their maximum experimental safe gaps (standard gap width, determined in accordance with specified conditions) and minimum ignition currents, and of installations, equipment and self-contained protection systems electrical apparatus intended to be used in a potentially
explosive atmosphere (see EN IEC 60070-0.2012). For self-contained protection systems, the explosion group II B is divided into subgroups.

29. Replace the table in 3.2.3.3 “Flowchart, schemes and criteria for determining applicable special requirements (columns (6) to (20) of Table C),” “Column (16): Determination of explosion group” and the table in 3.2.4.3 “Criteria for assignment of substances”, “H. Column (16): Determination of explosion group” with the following table:

<table>
<thead>
<tr>
<th>Maximum experimental safe gap in mm</th>
<th>Explosion group</th>
<th>Maximum experimental safe gap in mm</th>
<th>Subgroup of II B</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 0.9</td>
<td>II A</td>
<td>&gt; 0.85 to ≤ 0.9</td>
<td>II B1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 0.75 to ≤ 0.85</td>
<td>II B2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 0.65 to ≤ 0.75</td>
<td>II B3</td>
</tr>
<tr>
<td>≥ 0.5 to ≤ 0.9</td>
<td>II B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 0.5</td>
<td>II C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The texts of both subsections remain unchanged.