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Item 6(b) of the provisional agenda

Proposals for amendments to annexes A and B of ADR: miscellaneous proposals

Fire-fighting equipment

Transmitted by the Government of the United Kingdom¹

1. At the eighty-ninth session of the Working Party three initial papers were submitted relating to the issue of fire extinguishers contained in sub-section 8.1.4.1 of ADR (see ECE/TRANS/WP.15/2010/19 (Switzerland) and informal documents INF.10 (Sweden) and INF.15 (United Kingdom)).
2. Following the discussion of these papers the representative of Switzerland withdrew his document and the United Kingdom and Sweden submitted a further informal document INF.15/Rev.1 which intended to revise the text taking into account the comments made during the session.
3. There was no agreement on the adoption of the proposal in informal document INF.15/Rev.1 as it was felt that it involved unforeseen substantive changes to the respective capacities of the various extinguishers (see paragraph 37 of ECE/TRANS/WP.15/208).
4. In order to consider the proposal further some delegations believed that it is necessary for the Working Party to first make a conscious decision on whether the requirement contained in 8.1.4.1 (a) should be made more specific to indicate whether the extinguisher is required to be located inside the cab of a transport unit or not and consequently whether it is necessary to present this as a separate requirement.

¹ The present document is submitted in accordance with paragraph 1(c) of the terms of reference of the Working Party, as contained in document ECE/TRANS/WP.15/190/Add.1, which provides a mandate to “Develop and update the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)”.

5. This document presents three alternative proposals for the text of 8.1.4.1, to be considered separately, which we believe cover the options for fire extinguisher requirements as discussed at the last meeting.
6. Proposal 1 presents text which specifies that the fire extinguisher(s) required in 8.1.4.1 (a) suitable for fighting a fire in the engine or cab of the transport unit shall be located inside the cab of the transport unit. A table format is used.
7. Proposal 2 presents text which removes the reference for specific extinguisher(s) to be used for fighting a fire in the engine or cab. A table format is used (this is an amended version of the proposal made in informal document INF.15/Rev.1 from the last session).
8. Proposal 3 keeps all the existing requirements and specifications but is presented in a table format (this is an amended version of the proposal made in informal document INF.15 from the last session).

Proposal 1

9. Amend 8.1.4.1 to read as follows (new text underlined, deleted text is stricken out):

“8.1.4.1 (a) The following provisions apply to transport units carrying dangerous goods other than those referred to in 8.1.4.2:

Every transport unit shall be equipped with at least one portable fire extinguisher for the inflammability classes¹ A, B and C, with a minimum capacity of 2 kg dry powder (or an equivalent capacity for any other suitable extinguishant agent) ~~suitable for fighting a fire in the engine or cab of the transport unit.~~ This shall be located inside the cab of the transport unit, be visible and easily accessible to the vehicle crew. The extinguisher(s) shall be secured to prevent movement during transport. The extinguishing agents shall be such that they are not liable to release toxic gases into the driver’s cab or under the influence of the heat of the fire.

(b) ~~Additional equipment is required~~ extinguisher(s) requirement for the transport unit as follows:

Transport unit maximum permissible mass	Minimum total capacity per transport unit	Additional extinguisher(s) requirement - at least one shall have a minimum capacity of:
≤ 3.5 tonnes	4 kg	2 kg
> 3.5 tonnes ≤ 7.5 tonnes	8 kg	6 kg
> 7.5 tonnes	12 kg	6 kg
Extinguishers shall be for the inflammability classes A, B and C The capacities are for dry powder devices (or an equivalent capacity for any other suitable extinguishing agent)		

(c) The capacity of the fire extinguisher(s) required under (a) may be deducted from the minimum total capacity of the extinguishers required for the transport unit under (b).”.

¹ For the definition of the inflammability classes, see Standard EN 2:1992 Classification of fires.

10. The text of 8.1.4.1 (b) (i), (ii) and (iii) can then be deleted.

Justification for proposal 1

11. It could be argued that the wording of the existing 8.1.4.1 (a) is not prescriptive enough to ensure that the vehicle crew have immediate access to a fire extinguisher to be used in the event of a cabin or engine fire. By requiring the extinguisher(s) to be located inside the cab of the transport unit, it can be immediately accessible to the vehicle crew and adds to the protection of the extinguisher against theft.

12. By requiring the extinguisher(s) to be secured in the transport unit it ensures that the extinguisher is protected during transport operations and is not accidentally activated.

13. By requiring the extinguishing agent to be non-toxic it ensures that it is safe and fit for use in a confined area. This is existing text from 8.1.4.3 which relates to fire extinguishers which are fixed into the vehicle.

14. It is worth considering whether implementation of this requirement would be possible for all transport units. Some problems could occur if the size of the cab is too small to provide adequate space for a secured extinguisher.

Proposal 2

15. Amend 8.1.4.1 to read as follows:

“8.1.4.1 The following table shows the minimum provisions for portable fire extinguishers for the inflammability classes¹ A, B and C that apply to transport units carrying dangerous goods except for those referred to in 8.1.4.2. The minimum capacity of any extinguisher shall be 2 kg:

Transport Unit Maximum Permissible Mass	Minimum number of fire extinguishers	Minimum total capacity for Transport Unit	Extinguisher(s) requirement - at least one shall have a minimum capacity of:
≤ 3.5 tonnes	2	4 kg	2 kg
> 3.5 tonnes ≤ 7.5 tonnes	2	8 kg	6 kg
> 7.5 tonnes	2	12 kg	6 kg
The capacities are for dry powder devices (or an equivalent capacity for any other suitable extinguishing agent)			

”.

16. The text of 8.1.4.1 (a), (b) and (c) can then be deleted.

¹ For the definition of the inflammability classes, see Standard EN 2:1992 Classification of fires.

Consequential Amendments

17. Alternative 1:

Amend S3 in Chapter 8.5 to read as follows (deleted text is stricken through):

“S3: Special provisions concerning the carriage of infectious substances

For transport units carrying dangerous substances of Class 6.2, the requirements of 8.1.4.1 ~~(b)~~ and 8.3.4 shall not apply. Transport units shall however be equipped with at least one portable fire extinguisher for the inflammability classes A, B and C, with a minimum capacity of 2 kg dry powder (or an equivalent capacity for any other suitable extinguishing agent).”

Alternative 2:

Amend the text in 8.1.4.2 to read as follows:

“8.1.4.2 Transport units carrying dangerous goods in accordance with 1.1.3.6 or S3 in Chapter 8.5 shall be equipped with at least one portable fire extinguisher...”
(the rest of the existing text is retained).

Justification for proposal 2

18. It is not currently a requirement for the fire extinguisher(s) described in 8.1.4.1 (a) to be physically located inside the cab of the transport unit. This extinguisher(s) could therefore be located anywhere on the transport unit. This is also the case for the additional fire extinguishers required in 8.1.4.1 (b). It could be argued that it is not necessary to have two separate requirements.

19. 8.1.4.1 (c) allows for the deduction of the capacity of the fire extinguisher(s) in 8.1.4.1 (a) from the minimum total capacity of the extinguishers required under 8.1.4.1 (b). This means that there is no change to the minimum total capacity required for the transport units if the requirement of 8.1.4.1 (a) is removed.

20. It is already stated in 8.1.4.5 that all fire extinguishers shall be installed on transport units in a way that is easily accessible to the vehicle crew. If they are easily accessible, then arguably they could be used to fight a fire in the engine or the cab of the transport unit.

21. The capacity of the extinguisher(s) in 8.1.4.1 (a) is to be a minimum of 2 kg. This does not prevent larger capacities from fulfilling this requirement. This already assumes that larger capacities wouldn't cause operation problems for the vehicle crew.

22. The proposal specifies that the minimum capacity requirement for any extinguisher is 2 kg which is the same requirement of the existing text. The minimum number of extinguishers per transport unit is stated as two which is also in-line with the current requirements.

Proposal 3

23. Amend 8.1.4.1 to read as follows:

“8.1.4.1 The following table shows the minimum provisions for portable fire extinguishers for the inflammability classes¹ A, B and C that apply to transport units carrying dangerous goods except for those referred to in 8.1.4.2:

¹ For the definition of the inflammability classes, see Standard EN 2:1992 Classification of fires.

(1) Transport unit maximum permissible mass	(2) Minimum number of fire extinguishers	(3) Minimum total capacity per transport unit	(4) Extinguisher suitable for engine or cab fire At least one with a minimum capacity of:	(5) Additional Extinguisher(s) requirement - at least one shall have a minimum capacity of:
≤ 3.5 tonnes	2	4 kg	2 kg	2 kg
> 3.5 tonnes ≤ 7.5 tonnes	2	8 kg	2 kg	6 kg
> 7.5 tonnes	2	12 kg	2 kg	6 kg
The capacities are for dry powder devices (or an equivalent capacity for any other suitable extinguishing agent)				

24. The text of 8.1.4.1 (a), (b) and (c) can then be deleted.

Consequential Amendment to S3 in Chapter 8.5

25. Amend S3 to read (new text underlined, deleted text is stricken out):

“S3: For transport units carrying dangerous substances of Class 6.2, only the requirements in column 4 of the table in 8.1.4.1 ~~(b) and 8.3.4 shall not~~ apply. The requirements in 8.3.4 shall not apply.”

Justification for Proposal 3

26. This proposal presents the same requirements as presented in the existing 8.1.4.1 (a) to (c) but is presented in a table format.

27. The table still identifies that at least one portable fire extinguisher with a minimum capacity of 2 kg is identified for use in fighting a fire in the engine or cab but does not make it a requirement for that extinguisher to be located inside the cab.

28. As it may not be possible in every circumstance to locate an extinguisher inside the cab, the United Kingdom believes that the existing requirement of 8.1.4.1 (a) allows the option of locating a fire extinguisher inside the cab, when this is possible.

29. As 8.1.4.5 already states that fire extinguishers shall be easily accessible to the vehicle crew, we do not believe that it is necessary to repeat this in separate text relating to extinguishers to be used fighting a fire in the engine or the cab.