

**Economic and Social Council**Distr.: General
23 August 2017

Original: English

Economic Commission for Europe**Inland Transport Committee****Working Party on the Transport of Dangerous Goods****103rd session**

Geneva, 6–10 November 2017

Item 5 (a) of the provisional agenda

**Proposals for amendments to Annexes A and B of ADR:
construction and approval of vehicles****Clarification of the requirements in 9.3.4.2 for EX/II and
EX/III vehicles****Transmitted by the Government of Germany****Summary*

- Executive summary:** Clarification of the requirements in 9.3.4.2 of ADR for EX/II and EX/III vehicles. Subsection 9.3.4.2 describes the protective target of preventing heat input in the body of the vehicles by using heat and flame resistant materials.
- Action to be taken:** Amend the provisions in the third sentence of 9.3.4.2 on the requirements for EX/II and EX/III vehicles.
- Reference document:** Informal document INF.6 from the May 2017 meeting (Germany) and report of the 102nd session of the Working Party (ECE/TRANS/WP.15/237; paragraphs 20-23); informal document INF.5 from the November 2015 meeting (Netherlands) and report of the ninety-ninth session of the Working Party (ECE/TRANS/WP.15/230; paragraphs 12-15); ECE/TRANS/WP.15/2011/14 (France) and report of the ninety-first session of the Working Party (ECE/TRANS/WP.15/212; paragraph 9); Report of the seventy-fourth session of the Working Party (ECE/TRANS/WP.15/174; paragraphs 52-54).

* In accordance with the programme of work of the Inland Transport Committee for 2016-2017, (ECE/TRANS/2016/28/Add.1 (9.1)).

Introduction

1. The current text in 9.3.4.2 has led to different interpretations in Germany concerning the material used for the construction of the body. Therefore, Germany had presented informal document INF.6 at the 102nd session of the Working Party (Geneva, 8 to 11 May 2017), which addresses the interpretation of the requirements in 9.3.4.2 of ADR for EX/II and EX/III vehicles.

2. The starting point of the discussion at the 102nd session of the Working Party was the question raised in informal document INF.6, namely how the requirements in 9.3.4.2 of ADR for EX/III vehicles are to be interpreted if the material used for the construction of the body is not pure metal but a multilayer system, i.e. inseparably combined layers (sandwich panel), and the material consists of a plastics sheet on the outside, an insulating foam layer in the middle and a thin metal sheet with coating on the inside.

3. In informal document INF.6, Germany explained that the safety targets to be achieved are not described sufficiently or are not sufficiently laid down as requirements in 9.3.4.2 and that, for this reason, no unambiguous application is possible.

4. During the discussion, it was pointed out that the Netherlands had already asked for clarification on the requirements in 9.3.4.2 of ADR in informal document INF.5 at the ninety-ninth session of the Working Party in November 2015, also with regard to the material used for the construction of the inside of the body for EX/III vehicles.

5. Extract from the report of the ninety-ninth session of the Working Party (ECE/TRANS/WP.15/230; paragraphs 12-14):

“The delegations that took the floor were of the opinion that the intention of subsection 9.3.4.2 of ADR was indeed to protect the load from sources of heat and external flames.

It was recalled that, at its ninety first session in November 2011 (ECE/TRANS/WP.15/212; paragraph 9), the Working Party had confirmed that ADR did not prohibit the use of aluminium in EX/III vehicle bodies.

There was no consensus on whether metal parts should be allowed inside the body of the vehicle. Most delegations that took the floor were of the opinion that metal parts were permissible if they were fixed to walls that themselves guaranteed adequate insulation from flames and heat.”

6. Thus, it was declared that it would be desirable to clarify the text in 9.3.4.2 with a new proposal taking into account technological progress.

7. The current wording of the provisions suggests that the third sentence of 9.3.4.2 of ADR is to be interpreted to mean that metal may be used as a material for the required inner cover if the requirements described in the second sentence of 9.3.4.2 are fulfilled.

8. During the last session in May 2017, the Working Party endorsed a clarification of the technical requirements for the construction of EX/III vehicles in 9.3.4.2 of ADR taking into account technological progress.

9. Germany then asked the delegations to send their written comments and/or technical data by end of July 2017 to Germany to prepare a relevant proposal. Germany would like to thank the experts from the Netherlands for sending their comments.

10. In subsection 9.3.4.2, the requirements for the material used for the body construction are specified. The body has to be heat and flame resistant with a minimum thickness of 10 mm. The material has to fulfil the requirements set in standard EN 13501-1 for materials classified as Class B-S3-d2. Thus, the existing requirements in 9.3.4.2 of ADR for EX/II and

EX/III vehicles describe the protective target of preventing heat input in the bodies of the vehicles by using heat and flame resistant materials.

11. Germany assumes that for the purpose of clarification the provisions in 9.3.4.2 of ADR could be rephrased to reflect the protective target and the requirements more clearly. This refers to the protective target that is already described in the provisions.

Proposal for amendments

12. If the Working Party shares this view, Germany would like to propose to amend 9.3.4.2 to read as follows. New text is underlined:

Replace the existing third sentence by the following two new sentences: “If the material used for the body is metal, the complete inside of the body shall be of non-metallic material or be covered with a non-metallic material fulfilling the requirements stipulated in the first and second sentence. If the body consists of a double-wall construction with outer and inner walls made of metal or a thermally-insulating double-wall construction with outer and inner walls made of metal with an intermediate insulating layer of solid material (sandwich panel), the provisions of the first and second sentence shall be complied with. In addition, the inner wall shall have a permanent abrasion-resistant coating [(a coating which complies with the requirements of ISO (...) xxx is deemed to fulfil this requirement.)].”

Insert a transitional provision in 1.6.5.x

“1.6.5.x Vehicles constructed in accordance with the requirements of sub-section 9.3.4.2 in the version in force until 31 December 2018 may continue to be used until 31 December 2020.”

Justification

Safety:	Improves safety.
Feasibility:	Avoids any confusion when interpreting the ADR texts. No problems in practice are to be envisaged by this change but it will take away an obstacle for the approval of EX/III vehicles.
Enforceability:	Facilitates the application of the provisions and will remove a possibility of misinterpretations in the process of approving EX/III vehicles.