



# Economic and Social Council

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## Economic Commission for Europe

### Inland Transport Committee

### World Forum for Harmonization of Vehicle Regulations

#### Working Party on General Safety Provisions

##### 123rd session

Geneva, 28 March–1 April 2022

Item 2 (b) of the provisional agenda

#### **Amendments to Regulations on Buses and Coaches:**

#### **UN Regulation No. 118 (Burning behaviour of materials)**

## **Proposal for Supplement 1 to the 04 Series of amendments of UN Regulation No. 118 (Burning behaviour of materials)**

### **Submitted by the expert from the International Organization of Motor Vehicle Manufacturers \***

The text reproduced below was prepared by the expert from the International Organization of Motor Vehicle Manufacturers (OICA) to amend UN Regulation No. 118 to extend the scope of the regulation to vehicles of category M<sub>3</sub>, Class III at the request of the manufacturer. It is based on informal document GRSG-122-40 distributed at the 122nd session of the Working party on General Safety Provisions (GRSG). The modifications to the current text of the UN Regulation are marked in bold for new and strikethrough for deleted characters.

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\* In accordance with the programme of work of the Inland Transport Committee for 2022 as outlined in proposed programme budget for 2022 (A/76/6 (part V, sect. 20) para. 20.76), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.



## I. Proposal

*Insert a new paragraph 1.1.1., to read:*

**"1.1.1. At the request of the manufacturer, this UN Regulation may also apply to vehicles of Categories M<sub>3</sub>, Class I."**

*Part II, insert a new paragraph 6.1.9., to read:*

**"6.1.9. "Plastic glazing" is a glazing material that contains as an essential ingredient, one or more organic polymeric substances of large molecular weight, is solid in its finished state and, at some stage in its manufacture of processing into finished articles, can be shaped by flow."**

*Part II, paragraph 6.2.7.1., amend to read:*

**"6.2.7.1. Parts made of metal or glass; Parts made of plastic glazing are not included in this exemption."**

## II. Justification

1. The justifications below are copy/pasted from documents GRSG-121-04 and ECE/TRANS/WP.29/GRSG/2021/3, adopted by GRSG at its 121st session in April 2021. The latter amended the 02 and 03 series of amendments to UN Regulation No. 118, but GRSG omitted to align the 04 Series since this one had not yet been adopted by the World Forum.

2. Scope: According to ECE/TRANS/WP.29/1044/Rev.3 - General Guidelines for United Nations regulatory procedures and transitional provisions in UN Regulations, the scope of a Regulation indicates the categories of vehicles to which UN type approvals to that UN Regulation can be issued;

3. To allow the possibility of granting type-approvals to M<sub>3</sub> Class I vehicle category (which are not yet part of the scope of UN Regulation No. 118). The proposal is aiming at introducing M<sub>3</sub> Class I vehicles into the current scope of the UN Regulation on a voluntary basis.

4. This proposal will measurably improve the fire safety for Class I bus category (used in suburban traffic). Such approach has been developed in other UN Regulations concerning M<sub>3</sub> vehicle category. As an example, the 07 series of amendments to UN Regulation No. 107, introduced Fire Suppression System for Class I (the same as for Classes II and III). The process of Conformity of Production will significantly improve fire safety at both vehicle and component level.

5. This principle of allowing a manufacturer to get an approval, on their request, already exists in other UN Regulations on buses, e.g. UN Regulation No. 66.

6. It has been noticed that the type approval certificate of UN Regulation No. 118 for Class I is frequently being considered as a criterion in city bus tender process, which may prove that there are already approvals issued for this vehicle class. This proposal will ensure that there are no different interpretations among type approval authorities, and therefore providing the same level playing field for vehicle manufacturer's requests, especially in case of tenders.

7. The proposed modification will not imply any technical change for the manufacturers not interested in the certification of class I busses.

8. Part II: The reason for the exemption to the parts made of metallic and glass elements is that these materials are not affected by the tests according to the Annexes 6 to 8 of UN Regulation No. 118.

- (a) Annex 6: Test to determine the horizontal burning rate of materials;
- (b) Annex 7: Test to determine the melting behaviour of materials;
- (c) Annex 8: Test to determine the vertical burning rate of materials.

9. This behaviour (fire resistance) is not present in the plastic materials used in many parts installed inside the vehicles. Accordingly, parts made of plastic glazing should not be affected by the exemption of paragraph 6.2.8., and therefore, these materials should be tested.

10. The clarification is proposed to be included in UN Regulation No. 118 to avoid misinterpretations that could lead to exemptions, and therefore constitute a risk of safety.

11. It is also proposed that Part II of UN Regulation No. 118 include the definition of plastic glazing in UN Regulation No. 43 in order to precisely define the materials not covered by paragraph 6.2.8.

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