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**INLAND TRANSPORT COMMITTEE**

Working Party on the Transport of Dangerous Goods

Joint Meeting of the RID Committee of Experts and the  
Working Party on the Transport of Dangerous Goods

Bern/Geneva, 8-18 September 2009

Item 6 of the provisional agenda

**PROPOSALS FOR AMENDMENTS TO RID/ADR/ADN**

**Harmonization with the UN Model Regulations on the Transport of Dangerous Goods**

**Toxic by inhalation substances and hazard identification numbers**

**Transmitted by the Government of Switzerland<sup>1, 2</sup>**

**SUMMARY**

<b><i>Executive summary:</i></b>	Appropriate choice of hazard identification numbers for toxic by inhalation substances under UN Nos. 1510, 1810, 1834 and 1838.
<b><i>Action to be taken:</i></b>	Create appropriate hazard identification numbers for entries under UN Nos. 1510, 1810, 1834 and 1838, PG I.
<b><i>Related documents:</i></b>	Informal document ECE/TRANS/WP.15/AC.1/HAR/2009/1; Report of the working group on harmonization (ECE/TRANS/WP.15/AC.1/2009/16 and Add.1).

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<sup>1</sup> In accordance with the programme of work of the Inland Transport Committee for 2006-2010 (ECE/TRANS/166/Add.1, programme activity 02.7 (c)).

<sup>2</sup> Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2009/35.

## Introduction

1. Paragraph 26 of the Report of the Ad Hoc Working Group on the Harmonization of RID/ADR/ADN with the UN Recommendations on the Transport of Dangerous Goods (ECE/TRANS/WP.15/AC.1/2009/16) asks the Joint Meeting to consider whether the hazard identification numbers attributed to UN numbers 1510, 1810, 1834 and 1838 are appropriate. Informal document ECE/TRANS/WP.15/AC.1/HAR/2009/1 proposes hazard identification numbers for UN numbers 1510, 1810, 1834 and 1838 that conform to the classification criteria under 2.1.3.5.3. Nevertheless, in the four instances mentioned, this approach does not result in hazard identification numbers which reflect the main hazard of these substances.
2. The substances had been classified in other classes (5.1 and 8) until the risk of toxicity by inhalation as assessed by the United Nations experts during the last biennium was taken into account. Once the risk of toxicity by inhalation was taken into account, these substances were transferred to Class 6.1, PG I. The hazard identification numbers before and after reclassification are indicated in the table below.

UN No.	Class		Current hazard identification number	
	Current	According to the Model Regulations	Current	According to the proposal in report ECE/TRANS/WP.15/AC.1/2009/16
1510	5.1	6.1	559	665
1810	8	6.1	X80	668
1834	8	6.1	X88	668
1838	8	6.1	X80	668

3. The hazard identification numbers have the following meanings:

- 559 strongly oxidizing (fire-intensifying) substance, which can spontaneously lead to violent reaction
- X80 corrosive or slightly corrosive substance, which reacts dangerously with water<sup>1</sup>
- X88 highly corrosive substance, which reacts dangerously with water<sup>1</sup>
- 665 highly toxic substance, oxidizing (fire-intensifying)
- 668 highly toxic substance, corrosive

<sup>1</sup> Water not to be used except by approval of experts.

4. It should be noted that, in the case of UN number 1510, the information given by hazard identification number 559 concerning the risk of spontaneous violent reaction is missing from the new number 665.
5. Similarly, for UN numbers 1810, 1834 and 1838, the information indicating that the substance reacts dangerously with water and that an expert must be consulted if water is to be used is missing from number 668.
6. There is no hazard identification number which covers both the high degree of toxicity and these other characteristics. In order to retain this information, which is of great importance to the emergency services, a new series of hazard identification numbers appropriate to the actual hazards must be established.
7. The report of the working group on harmonization (ECE/TRANS/WP.15/AC.1/2009/16) proposes that the number 6 be repeated (668). The repetition of the number 6 in a hazard identification number is currently used for entries that are highly toxic by either oral ingestion or contact with the skin. We are of the opinion that the risk by inhalation would be better identified for the emergency services by the combination 62: the "6" means toxic and the "2" is used for gas and, as in this case, vapours. This would enable the emergency services to distinguish the risk of toxicity by inhalation from the risk of toxicity by oral ingestion or by contact with the skin.

### **Proposal**

8. Add the following entries to the list of hazard identification numbers in 5.3.2.3.2:
  - 6259 substance highly toxic by inhalation, highly oxidizing (fire-intensifying), which can spontaneously lead to violent reaction
  - 628 substance highly toxic by inhalation, corrosive
  - 623 substance highly toxic by inhalation, flammable (flashpoint at or below 60° C)
  - 62 substance highly toxic by inhalation
  - X628 substance highly toxic by inhalation, corrosive, which reacts dangerously with water<sup>1</sup>
  - X6288 substance highly toxic by inhalation, highly corrosive, which reacts dangerously with water<sup>1</sup>

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<sup>1</sup> *Water not to be used except by approval of experts.*

9. In Column 20 of Table A of Chapter 3.2, replace the hazard identification numbers of the PG I entries of UN numbers 1510, 1810, 1834 and 1838 with the following:

UN No.	Proposed hazard identification number
1510	6259
1810	X628
1834	X6288
1838	X628

10. In document ECE/TRANS/WP.15/AC.1/2009/16/Add.1, identify the toxicity by inhalation for all substances toxic by inhalation with the combination “62” instead of “66”.

### **Justification**

11. For UN number 1510, the risk of an extremely violent reaction is better reflected with the figure 9.

12. The notion of “strongly oxidizing” is lost, but it is more important that the emergency services know that the substance reacts violently than that it is strongly oxidizing. For the other UN numbers, the very important information that the substance reacts dangerously with water is retained.

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