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Economic Commission for Europe**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, 18–22 March 2019

Item 5 (a) of the provisional agenda

**Proposals for amendments to RID/ADR/ADN:
pending issues****UN No. 1010 Butadienes, stabilized****Transmitted by the Government of the Spain^{*,**}***Summary*

- Executive summary:** Harmonization of the name and description of UN No. 1010 in RID/ADR with the one contained in the UN Model Regulations.
- Action to be taken:** Amend the description of UN No. 1010 in table A in chapter 3.2 for RID and ADR.
- Related documents:** ECE/TRANS/WP.15/AC.1/2018/19
Report TDG Subcommittee 2003 ST/SG/AC.10/C.3/46, paragraphs 13-14 (Report of the Sub-Committee of Experts on the Transport of Dangerous Goods, twenty-third session) ST/SG/AC.10/C.3/2003/12 (EIGA)
Informal document INF.37 of the twenty-third session of the Sub-Committee of Experts (Working group on gases) TRANS/WP.15/AC.1/94, paragraphs 10-13
Informal document INF.4 of the Joint Meeting Autumn 2003 Session (UIC)

* In accordance with the programme of work of the Inland Transport Committee for 2018-2019, (ECE/TRANS/WP.15/237, annexe V, (9.2)).

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Background

1. In the September 2018 meeting the Spanish delegate draw the attention of the Joint Meeting, through ECE/TRANS/WP.15/AC.1/2018/19, on the difference existing between the name and description of UN 1010 in the Model Regulations and in RID/ADR for all languages.

2. In the Model Regulations the entry for UN 1010 is:

“UN 1010 BUTADIENES, STABILIZED or BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, containing more than 40% butadienes”.

3. Meanwhile, in RID/ADR, the corresponding entry is:

“UN 1010 BUTADIENES, STABILIZED or BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, having a vapour pressure at 70 °C not exceeding 1.1 MPa (11 bar) and a density at 50 °C not lower than 0,525 kg/l”

4. Both definitions are not equivalent, and clearly different substances can be carried under UN 1010 if the description of the Model Regulations is followed rather than the one contained in RID/ADR.

5. The Joint Meeting in its discussion, indicated that (ECE/TRANS/WP.15/AC.1/152 , paragraphs 25-27):

“25. The Joint Meeting noted the differences between the name and description of UN No. 1010 in RID/ADR and in the Model Regulations. It was pointed out in particular that the description currently in RID/ADR could cover butadienes and butadiene mixtures with less than 40% butadiene, while the description in the Model Regulations covered only those with more than 40% butadiene.

26. The representative of Spain indicated that to her knowledge, all butadienes and butadiene mixtures currently used and carried contained more than 40% butadiene and consequently, the description used in RID/ADR should be aligned with that of the Model Regulations. There was some support for this proposal in principle. However, some reservations were expressed regarding how to address stabilization of butadiene mixtures with less than 40% butadiene, if needed, in accordance with 2.2.2.2.1, if these butadienes were to be carried under generic n.o.s entries.

27. The Joint Meeting invited the representative of Spain to come back with a proposal identifying the n.o.s entries that could be used and to check whether they are suitable for carriage of these substances by all modes.”

Alternative entries for butadienes not to be carried under UN 1010

6. As asked for by the Joint Meeting, alternative UN numbers and their transport conditions for those butadienes that would not be carried under UN 1010, because their butadiene content is lower than 40% of the mixture, have been analyzed.

7. For carriage of these mixtures there may be different options, as the classification also depends on the other components of the mixture. The most probable options, according to industry, would be “UN 1965 HYDROCARBON MIXTURE, LIQUEFIED, N.O.S. such as mixtures A, A01, A02, A0, B1, B2, B or C” and “UN 3161 LIQUEFIED GAS, FLAMMABLE, N.O.S”. It has to be noted that this kind of mixture could also be carried under other entries, N.O.S. or not, depending on the specific mixture that has to be carried.

8. The transport conditions for UN numbers 1965 and 3165 are the same in the Model Regulations as for UN 1010, with the exception of the applicable special provisions (SP):

- UN 1010: SP 386
- UN 1965 : SP 274+392
- UN 3161: SP 274

9. Only SP 386, applicable to UN 1010, and the name of UN 1010 itself, details on stabilization.

10. In RID/ADR for UN 1010, UN 1965 and UN 3161 the transport conditions are the same, with the following differences:

- Different SP (column 6) and hazard identification number (column 20) both for RID and ADR
- Different SP for tanks (column 13), SP for carriage for packages (column 16) and SP for carriage for operation (column 19) for ADR

UN	Name and description	Special provisions (6)	SP for tank (13) (only different in ADR)	SP carriage packages (16) (only different in ADR)	SP carriage operation (19) (only different in ADR)	Hazard identification number (20)
1010	BUTADIENES, STABILIZED or BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, having a vapour pressure at 70° not exceeding 1.1 MPa (11bar) and a density at 50° not lower than 0,525 kg/l	386 618 662	TA4 TT9	V8	S2 S4 S20	239
1965	HYDROCARBON MIXTURE, LIQUEFIED, N.O.S. such as mixtures A, A01, A02, A0, B1, B2, B or C	274 583 652 660 662	TA4 TT9 TT11	-	S2 S20	23
3161	LIQUEFIED GAS, FLAMMABLE, N.O.S.	274 662	TA4 TT9	-	S2 S20	23

11. Even with these differences, the basic transport conditions can be considered to be the same for all modes. The main differences are in the SP applying. As before in the Model Regulations, only SP 386, applicable to UN 1010, details on stabilization.

Analysis

12. When analyzing other UN numbers that could be used for transport of butadienes with less than 40% of butadienes, transport conditions for the most usual alternative UN numbers have similar transport conditions. Nevertheless, in regards to the stabilization, both the name of UN 1010 and SP386 clearly indicate the need for stabilization, which is not the case for the alternative UN numbers.

13. The decision to introduce a different definition for UN 1010 into RID/ADR than into the Model Regulations was taken several years ago. Since then:

- No accident, incident nor known problem has arisen in the United States when transporting UN 1010 according to the Model Regulation name and description.
- In Spain, and in other countries that have been consulted, transport of butadienes or butadiene mixtures with less than 40% of butadienes does not take place.
- 2.2.2.2.1 has been introduced into RID/ADR, indicating in a general way for all gases that chemically unstable gases shall not be accepted for carriage unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization.

14. According to 2.2.2.2.1 of RID/ADR, even if butadiene with less than 40% of butadienes would be transported under other UN numbers, the necessary precautions (stabilization) would have to be taken, independently of under which UN number the mixture would be transported.

15. Transport of butadienes is carried out for a very limited number of companies. These companies have the means to carry out a classification, deciding on a case to case basis on which is the most appropriate classification. Additionally, they are well aware of when their product needs stabilization.

16. All previous facts together imply that modifying the name and description of UN 1010 to follow the name and description in the Model Regulations would have no great impact, also from the safety point of view, while permitting a harmonization with the Model Regulations and other transport modes and easing administrative burdens.

17. Additionally, if it is thought necessary to maintain a direct reference to stabilization, a Special Provision on UN 1010 could be introduced that would indicate the need to evaluate if stabilization is necessary in each case, even if the content of butadienes in the mixture is below 40%. This proposal has been included as proposal 2, which may be adopted in addition to proposal 1.

Proposals

Proposal 1

18. Spain would suggest harmonizing the name and description for UN 1010 in RID/ADR with the one from the Model Regulations, such as follows:

“UN 1010 BUTADIENES, STABILIZED or BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, containing more than 40% butadienes”

This name and description also has to be modified in the list of collective entries under 2.2.2.3 and into table A and B in chapter 3.2 of RID/ADR.

Proposal 2

19. Additionally to proposal 1, the following special provision may be introduced for UN 1010:

“SP XXX For butadienes or butadienes and hydrocarbon mixtures not fulfilling the minimal content of butadiene to be assigned to this entry, the need of stabilization during transport has to be analyzed [according to 2.2.2.2.1].”