



---

**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, 16–20 March 2020

Item 5 (a) of the provisional agenda

**Proposals for amendments to RID/ADR/ADN  
pending issues****Name and description for UN numbers in Model Regulations  
and RID/ADR: UN 2426 Ammonium nitrate****Transmitted by the Government of Spain<sup>\*, \*\*</sup>***Summary*

<b>Executive summary:</b>	Eliminate the differences in the name and description for UN 2426 AMMONIUM NITRATE.
<b>Action to be taken:</b>	Harmonise with the name and description of the Model Regulations for this UN number.

**Introduction**

1. There are different cases where the name and description of the UN numbers is not the same in the Model Regulations and RID/ADR. In September 2019 Spain presented ECE/TRANS/WP.15/AC.1/2019/32 as a discussion document in which the differences for different UN numbers were shown and analysed.
2. The different delegations gave their comments on the background of the existing differences, and Spain was asked to develop the proposals to ensure harmonization and bring them to the Joint Meeting or to the Subcommittee, as appropriate for each case.
3. Having the same name and description for one UN number in all the modes by harmonizing with the Model Regulations and other transport modes, would enable a more rational approach and ease administrative burdens during transport.

---

\* 2020 (A/74/6 (Sect.20) and Supplementary, Subprogramme 2).

\*\* Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2020/41.

## Background

4. Name and description of UN 2426, AMMONIUM NITRATE, in the Model Regulations and RID/ADR are the following:

UN Number	Model Regulations	RID/ADR
2426	AMMONIUM NITRATE, LIQUID (hot concentrated solution)	AMMONIUM NITRATE, LIQUID- <del>(hot concentrated solution)</del> , <a href="#">in a concentration of more than 80% but not more than 93%</a>

5. In the name included into RID/ADR, restrictions on the contents of ammonium nitrate are included, while these limits are not included into the Model Regulations.

6. SP 252 is assigned to UN 2426 both in the Model Regulations and in RID/ADR, with the following text:

“Provided the ammonium nitrate remains in solution under all conditions of carriage, aqueous solutions of ammonium nitrate, with not more than 0.2% combustible material, in a concentration not exceeding 80%, are not subject to the requirements of ADR.”

7. Additionally, in RID/ADR, SP 644 is assigned to UN 2426 (and only to UN 2426) and indicates:

“This substance is admitted for carriage, provided that:

1. The pH is between 5 and 7 measured in aqueous solution of 10% of the substance carried;
2. The solution does not contain more than 0.2% combustible material or chlorine compounds in quantities such that the chlorine level exceeds 0.02%.”

8. As was pointed out during the discussion of ECE/TRANS/WP.15/AC.1/2019/32, special provision SP 252 explains the lower threshold included into the description of UN 2426.

9. The explanation for the upper threshold is related to the transport conditions of UN 2426 according to the IMDG Code.

## Transport of AMMONIUM NITRATE, LIQUID (hot concentrated solution) according to other modal regulations

### Transport of UN 2426 according to the IMDG Code

10. Transport of UN 2426 in the IMDG code is subject to the following conditions, as explained in column (17) of properties and observations:

“Hot aqueous solution of not more than 93% ammonium nitrate with not more than 0.2% combustible material (including organic material calculated as carbon) and free from any other added matter, containing at least 7% water, while the maximum content of chloride ions should not exceed 0.02%. May cause fire and explosion in contact with combustible material (e.g. wood, straw, cotton, oil, sugar, etc.), strong acids, and other class 5.1 substances and burn fiercely. Maximum allowable transport temperature of the solution 140°C. This temperature should be indicated on the transport unit. The acidity (pH) of the cargo when diluted with ten parts of water to one part of cargo, by mass, should be between 5.0 and 7.0. The concentration and temperature of the solution at the time of loading, its percentage of combustible materials and of chlorides, and the contents of free acid should be certified.”

11. Additionally to SP 252 (see text in paragraph 6), SP 942 (sea mode only) applies:

“SP 942: The concentration and temperature of the solution at the time of loading, its percentage of combustible material and of chlorides as well as the contents of free acid shall be certified.”

### Transport of UN 2426 according to the TTII

12. Transport of UN 2426 in the TTII is forbidden, both for passenger and cargo planes, with the addition of Special Provision A129 to this number, which is equivalent to SP 252 of the Model Regulations and RID/ADR.

### Analysis

13. The upper limit for the concentration of ammonium nitrate seems to be directly related to the properties and observations included in column (17) in the IMDG Code for this product.

14. Nevertheless, the indications in the IMDG Code are not limited to only set a maximum value for the concentration of ammonium nitrate, but additionally:

- (a) gives indications on other substances, that in the case of RID/ADR are contained in a similar way in SP 644;
- (b) limits the temperature in transport to 140 °C;
- (c) asks for a certification on temperature at the moment of loading, and the contents of chlorides and free acid;
- (d) gives indication on possible dangers;
- (e) asks for the temperature to be indicated on the transport unit.

15. The last two points seem to be not so relevant for RID/ADR as for IMDG, but the rest of the indications given in IMDG Code seem also relevant for RID/ADR.

16. There seem to be several possible ways forward:

- (a) Maintaining the present situation, including into the description of UN 2426 an upper and lower limit on the concentration of ammonia.

This would imply that the name and description is not harmonized with the other modes, but in fact, the substances transported under this UN number would be almost the same, even if some indications of IMDG Code will not be included into RID/ADR.

- (b) Harmonizing completely with IMDG Code, eliminating the description from UN 2426 and including a special provision equivalent to the text included into the IMDG Code.

This harmonization could be done by modifying SP 644 to paraphrase the conditions stated in (17) of the IMDG Code; the conditions included into SP 942 are redundant to this text.

- (c) Searching for a harmonization at UN level, asking to modify SP 252 to include the upper and lower limits of concentration and other provisions included into IMDG Code there.

### Proposals

17. Spain suggests to follow the approach presented in paragraph 16.(b) above.

18. The necessary amendments would be to modify name and description of UN 2426 and to modify SP 644 for this UN number with the text coming from the IMDG Code. SP 252 would remain unchanged.

19. Deleted text appears as ~~stricken through~~, new text underlined.

20. In tables A and B, modify UN 2426:

UN 2426 AMMONIUM NITRATE, LIQUID, hot concentrated solution, ~~in a concentration of more than 80% but not more than 93%~~

21. Modify SP 644:

SP 644:

“This substance is admitted for carriage, provided that:

1. The pH is between 5 and 7 measured in aqueous solution of 10% of the substance carried.
2. The solution does not contain more than 93% ammonium nitrate.
3. The solution does not contain more than 0.2% combustible material or chlorine compounds in quantities such that the chlorine level exceeds 0.02%.
4. The maximum allowable transport temperature of the solution shall be 140°C.

The concentration and temperature of the solution at the time of loading, its percentage of combustible materials and of chlorides, and the contents of free acid shall be certified.”