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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, 15-19 March 2021

Item 5 (a) of the provisional agenda

**Proposals for amendments to RID/ADR/ADN:  
pending issues****Harmonization of SP 593 with 5.5.3****Transmitted by the Government of Spain<sup>\*</sup>, <sup>\*\*</sup>, <sup>\*\*\*</sup>***Summary*

<b>Executive summary:</b>	Special provision 593 is not fully in agreement with 5.5.3 and should be modified to be compatible.
<b>Action to be taken:</b>	Amend SP 593.
<b>Related documents:</b>	ECE/TRANS/WP.15/AC.1/2019/33 ECE/TRANS/WP.15/AC.1/2020/40

**Introduction**

1. Spain presented documents ECE/TRANS/WP.15/AC.1/2019/33 and ECE/TRANS/WP.15/AC.1/2020/40 at the previous sessions of the Joint Meeting, drawing the attention on the fact that special provision 593 is not fully in line with 5.5.3, making this special provision difficult to apply.
2. This document updates the proposal taking into account the comments received during the discussions at in the last meetings, and the written comments received by interested delegations.
3. Most of the explanations and information from previous documents are still valid and are summarized below.

<sup>\*</sup> A/75/6 (Sect.20), para 20.51.

<sup>\*\*</sup> Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2021/15.

<sup>\*\*\*</sup> This document was scheduled for publication after the standard publication date owing to circumstances beyond the submitter's control.

## Background

4. SP 593 applies to UN 1913 NEON, REFRIGERATED LIQUID, UN 1951 ARGON, REFRIGERATED LIQUID, UN 1963 HELIUM, REFRIGERATED LIQUID, UN 1970 KRYPTON, REFRIGERATED LIQUID, UN 1977 NITROGEN, REFRIGERATED LIQUID, UN 2591 XENON, REFRIGERATED LIQUID, UN 3136 TRIFLUOROMETHANE, REFRIGERATED LIQUID and UN 3158 GAS, REFRIGERATED LIQUID, N.O.S. and the present text for SP 593 indicates that:

“This gas, intended for the cooling of e.g. medical or biological specimens, if contained in double wall receptacles which comply with the provisions of packing instruction P203, paragraph (6) for open cryogenic receptacles of 4.1.4.1 is not subject to the requirements of RID/ADR except as specified in 5.5.3.”

5. The text of SP 593 was included into RID/ADR in 2001 to carry small amounts of biological products such as veterinary products, specimens and vaccines or other products which must be maintained at low temperatures immersed in a refrigerated liquefied gas for the carriage over short distances, such as distributing small quantities to laboratories or veterinaries clinics. Specifically, its main use seems to have been introduced to allow the transport in the veterinary field, allowing the use of glass receptacles, which had a capacity of up to 5 liters, and specifically related to the transport of non-dangerous goods.

## Transport conditions for gases cooling goods

6. When carrying goods cooled by means of one of the gases to which SP 593 applies, there seems to be two options for the applicable provisions:

- Reading 1.1.3.9, as all the gases mentioned in SP 593 are asphyxiant only (classification code 3A), you are directed to 5.5.3 and apply directly the conditions specified there. The UN numbers to which SP 593 apply are not all explicitly named in 5.5.3; nevertheless, 5.5.3 does not include a complete list, listing only examples. The purpose to which SP 593 should be applied fully falls into the scope of application of 5.5.3.
- Searching in Table A of Chapter 3.2 for the corresponding entry for the gas, and applying the transport conditions as specified, you may apply SP 593, as you are using the gas for cooling a good. In this case, the conditions of SP 593 (conditions on the packaging) shall be fulfilled in addition to 5.5.3, as indicated in the special provision.

## Packaging conditions

7. According the transport conditions through 1.1.3.9, you will find in 5.5.3 the following conditions on packaging, depending on the fact if the good cooled is a dangerous good normally carried cooled, a different dangerous good or a non-dangerous good:

- 5.5.3.3.1 indicates that, if a good that must be cooled is assigned to one of the packing instructions P203, P620, P650, P800, P901 or P904, you have to fulfill those packing instructions. These packing instructions cover the transport of refrigerated liquefied gases (in this case you would carry one refrigerated liquefied gas cooled by another refrigerated liquefied gas), infectious substances, UN 2803 and 2809 (gallium and mercury), UN 3316 (chemical kit or first aid kit) and UN 3245 (genetically modified organisms).
- 5.5.3.3.2 gives general requirements that must be fulfilled in the case a different packing instruction is applicable. This case is not a frequent one, as those dangerous goods that shall be cooled regularly are referenced by their packing instruction in paragraph 5.5.3.3.1.

- 5.5.3.3 does not give specific indications for the packaging of goods that are non-dangerous goods but require a coolant. In this case, it seems reasonable to apply conditions similar to those specified in 5.5.3.3.2, but this is not mandatory.

8. If you search for transport conditions through the table, you will be in all cases directed to P203 for the packaging. P203 gives two options, transport in open or in closed cryogenic receptacle. Transport in open cryogenic receptacles is reserved as a possibility only for those UN numbers to which SP 593 applies.

9. Nevertheless, SP 593 allows you to only fulfill the condition for open cryogenic receptacles mentioned in paragraph (6) of P203 (receptacles of glass double wall construction shall have an outer packaging with suitable cushioning or absorbent materials which withstand the pressures and impacts liable to occur under normal conditions of carriage), and not the rest of P203, if you fulfill in addition 5.5.3.

10. If applying SP 593, you have to use an open cryogenic receptacle formed out of a double glass wall construction with an outer packaging with suitable cushioning or absorbent materials, and inside of it you will have, depending on the kind of good that is transported cooled, to place:

- The packaging described in the packing instruction mentioned in 5.5.3.3.1, containing the dangerous good that has to be cooled; or
- The packaging, not covered by 5.5.3.3.1, but for which general requirements are given in 5.5.3.3.2, containing the dangerous good that has to be cooled; or
- The goods (non-dangerous goods) that have to be cooled.

11. In the first two cases this will lead to serious difficulties when trying to find the adequate packaging. As already mentioned in the introduction, SP 593 seems to be adequate for the transport of non-dangerous goods, which causes less difficulties in this regard.

## Analysis

12. As mentioned before, it is difficult to comply with the conditions of 5.5.3 on packaging requirements also fulfilling the conditions of P203 (6), if the good transported is a dangerous good and therefore has to fulfill 5.5.3.3.1 or 5.5.3.3.2. Other parts of section 5.5.3, not related to packaging, such as those related to marking package, vehicles and container, ventilation and documentation, are easy to comply with (and are reasonable) in addition to SP 593.

13. SP 593 and 5.5.3 are not two sets of conditions from which you may choose which one to apply, because there is a cross reference from SP 593 to 5.5.3, that makes 5.5.3 applicable in addition to SP 593. Both SP 593 and 5.5.3 impose conditions for packaging, which make SP 593 difficult to apply, especially if the good cooled is a dangerous good.

14. For the above-mentioned reasons, and in particular for the conflict in packaging, it is highly improbable that any consignor would apply SP 593 for transporting cooled dangerous goods.

## Way forward

15. To solve this issue, there could be two alternative ways forward:

- Modifying SP 593 by introducing clearly the condition that it will be used only for cooling non-dangerous goods.
- Deleting SP 593 completely.

16. There is no conflict in the packaging provisions as specified in SP 593 and 5.5.3 if the goods that shall be cooled are non-dangerous goods; the limitation of the use for non-dangerous goods could be easily introduced into the text of the special provision.

17. Nevertheless, the use of the recipients authorized in SP 593 is very uncommon nowadays, and it may be appropriate to simply delete SP 593.

18. Therefore, Spain presents the two alternative options indicated in paragraphs 21 and 22. Our preference, supported by the gas industry in Spain, is to delete SP 593 (Alternative B).

## Proposal

19. The two alternative proposals are:

- to modify the wording of the SP 593, limiting SP 593 for the cooling of non-dangerous goods;
- to delete SP 593 from Table A and in Chapter 3.3.

20. In both cases the new text is underlined, and the deleted text shown as ~~stricken through~~.

### Alternative A

21. Amend the wording of the SP 593 as follows:

“SP 593: This gas, when used intended for the cooling goods not fulfilling the criteria of any class, e.g. medical or biological specimens, if contained in double wall receptacles which comply with the provisions of packing instruction P203, paragraph (6) for open cryogenic receptacles of 4.1.4.1, is not subject to the requirements of RID/ADR except as specified in 5.5.3.”

### Alternative B

22. Delete SP 593 from Table A in Chapter 3.2 for all UN numbers mentioned in P203 for open cryogenic receptacles and deleting SP 593 from Chapter 3.3.

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