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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, 16–20 March 2020

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>

#### *Summary*

<b>Executive summary:</b>	SP 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.

### Introduction

1. In the September meeting, Spain presented document ECE/TRANS/WP.15/AC.1/2019/33, in which the attention was drawn on the fact that SP 593 seems not to be fully in agreement with 5.5.3, as it asks for additional conditions not mentioned in 5.5.3 to be able to apply 5.5.3.

2. SP 593 applies to UN 1913 NEON, REFRIGERATED LIQUID, UN1951 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

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\* 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/2020/40.

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.”

3. SP 593 does not seem to be fully compatible with 5.5.3, as it asks for additional requirements than those included in 5.5.3.
4. The text of SP 593 was included into RID/ADR in 2001, while 5.5.3 was introduced in 2013. SP 593 seems to have not been modified to accommodate to the amendments made to 5.5.3, and it appears to be necessary to update that text.

## **Transport conditions for gases cooling goods**

5. When carrying goods cooled by means of one of the gases to which SP 593 applies, there seem to be two options to search for the applicable provisions:
  - OPTION 1: 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 directly apply 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.
  - OPTION 2: Entering table A of Chapter 3.2 and searching for the corresponding entry for the gas, and applying the transport conditions as specified there. You may choose to 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) have to be fulfilled in addition to 5.5.3, as indicated in the special provision.

## **Packaging conditions**

6. If you search for transport conditions through 1.1.3.9 (OPTION 1), in 5.5.3 you will find the following conditions on packaging.
7. 5.5.3.3.1 indicates that, if a good that has to 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).
8. 5.5.3.3.2 gives general requirements that have to be fulfilled in the case a different packing instruction is applicable. This case is not a frequent one, as those dangerous goods that have to be cooled regularly are referenced by their packing instruction in paragraph 5.5.3.3.1.
9. 5.5.3.3 does not give specific indications for the packaging of goods that are not dangerous goods, but require a coolant. In this case, it would seem reasonable to apply conditions similar to those specified in 5.5.3.3.2, but this is not required.
10. If you search for transport conditions through the table (OPTION 2), 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.
11. 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) if in addition you fulfill 5.5.3.
12. If you choose to apply SP 593, you will 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 to place:

- The packaging described in the PI 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 (not dangerous goods) that have to be cooled.

13. In all three cases, this will lead to serious difficulties trying to search for the adequate packaging.

## Scope

14. OPTION 1 is only applicable if you transport the good that has to be cooled in a package, vehicle or container (see heading of 5.5.3). Nevertheless, also SP 593 only applies to packages, and not to transport in tanks or portable tanks, as SP 593 makes reference to packing instruction P203. So in fact, the scope of applicability of SP 593 is the same scope than the one for 5.5.3.

## Analysis

15. When reading SP 593, there are therefore two conflict points with 5.5.3:

- It should be possible, if the gas is intended for cooling, to apply the conditions as specified in 5.5.3 in all the cases, both in closed and in open cryogenic receptacles.
- It is difficult to fulfill the conditions of 5.5.3 after already fulfilling the conditions of P203.

16. SP 593 and 5.5.3 are not two sets of conditions from which you can 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. This makes SP 593 difficult to apply.

## Conclusions

17. For the above mentioned reasons, and specifically for the conflict in packaging mentioned in paragraph 13 above, it is highly improbable that any consignor should choose the possibility described in OPTION 2 (applying SP 593) above the one described in OPTION 1 (applying directly 5.5.3); transport nowadays will be done with the packaging according to 5.5.3 anyway.

18. SP 593 indicates additional conditions to those stated in 5.5.3; and these seems very difficult to be fulfilled together with 5.5.3. As mentioned before, SP 593 and 5.5.3 are not two independent sets of conditions from which you can 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.

19. SP 593 was introduced before 5.5.3 into RID/ADR. With the present text of SP 593, SP 593 cannot be applied.

20. Therefore, SP 593 should be modified to include only a direct reference to 5.5.3. Additionally, Spain suggests to modify the initial wording of SP 593 to align the text with the wording used in 5.5.3.

## Proposals

21. Spain would suggest to modify SP 593 by deleting part of the existing text and modifying the wording to accommodate the language to the one used in 5.5.3 and other parts of the text when referring to cooling (new text underlined, deleted text shown as ~~stricken through~~):

“SP 593: This gas, when used for intended for the cooling or conditioning purposes 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.”

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