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**Committee of Experts on the Transport of Dangerous Goods  
and on the Globally Harmonized System of Classification  
and Labelling of Chemicals****Sub-Committee of Experts on the Transport of Dangerous Goods****Sixtieth session**

Geneva, 27 June-6 July 2022

Item 6 (b) of the provisional agenda

**Miscellaneous proposals for amendments to the  
Model Regulations on the Transport of Dangerous Goods:  
packagings, including the use of recycled plastics material****Amendment to packing instruction IBC03 special packing  
provision B11****Transmitted by the expert from the United Kingdom\*****Introduction**

1. The expert from the United Kingdom recently initiated in the framework of the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) a new ADR multilateral agreement for the carriage of ammonia solution under UN number 2672, occasioned in part to the testing and approval of a new metal Intermediate Bulk Container (IBC). The IBC was to be used for higher concentrations of ammonia solutions and using the calculation in 4.1.1.10 (b) the hydraulic pressure test pressure requirement was determined to be 460 kPa. The IBC passed the test at this pressure and was duly approved. However, when working on the multilateral agreement it became apparent that there is an error in the text of IBC03 special packing provision B11.

**Issue**

2. Special packing provision B11 starts “Notwithstanding the provisions of 4.1.1.10”. This paragraph actually contains two provisions, the first deals with putting liquids into packagings and IBCs with appropriate resistance to the internal pressure (determined by calculation in sub-paragraphs (a) to (c)) and uses the same calculations as are found in 6.5.6.8.4.2(b) (i) to (iii).
3. The second provision is that IBCs shall not be used to carry liquids having a vapour pressure of more than 110 kPa (1.1 bar) at 50 °C or 130 kPa (1.3 bar) at 55 °C.
4. Higher concentrations of ammonia are known to have vapour pressures at the indicated temperatures that exceed the stated limits in this second provision and since the intention of B11 is to allow these IBCs to be used, the overriding of this provision is

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

necessary. However, without any qualification being applied to the dis-application of 4.1.1.10 there is no need for the user of an IBC for higher concentrations of ammonia to use an appropriately pressure tested IBC.

5. There is a second anomaly in B11 in that it ties 4.1.1.10 to certain types of IBC (rigid plastics or composites). However, all the IBCs that are referenced in B11 are permitted in IBC03 along with other types of IBC. Restricting the special packing provision to only some of the types of packaging permitted in the packing instruction, does not meet the principals of UN package testing, in that a packaging can be used if it passes the appropriate tests, or the packing instructions in that it discriminates against packagings of equal capability.

## Proposal

6. In 4.1.4.2 amend special packing provision B11 of packing instruction IBC03 as follows (new text is underlined, deleted text in strikethrough):

“B11 Notwithstanding the provisions of the second paragraph of 4.1.1.10, UN 2672 ammonia solution in concentrations not exceeding 25% may be transported in ~~rigid or composite plastics IBCs (31H1, 31H2 and 31HZ1)~~. IBCs permitted by this packing instruction.

## Justification

7. This proposal removes the potential loophole of having inadequately tested IBCs for higher vapour pressure ammonia solutions and treats all appropriate design types of IBC permitted for this substance equally.

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