



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

Sixty-fourth session

Geneva, 24 June - 3 July 2024

Item 6 (d) of the provisional agenda

Miscellaneous proposals for amendments to the Model Regulations on the Transport of Dangerous Goods:

Other miscellaneous proposals

Amendment to 7.1.1.9 of the Model Regulations – packages designed for stacking

Transmitted by the expert from the Republic of Korea*

I. Introduction

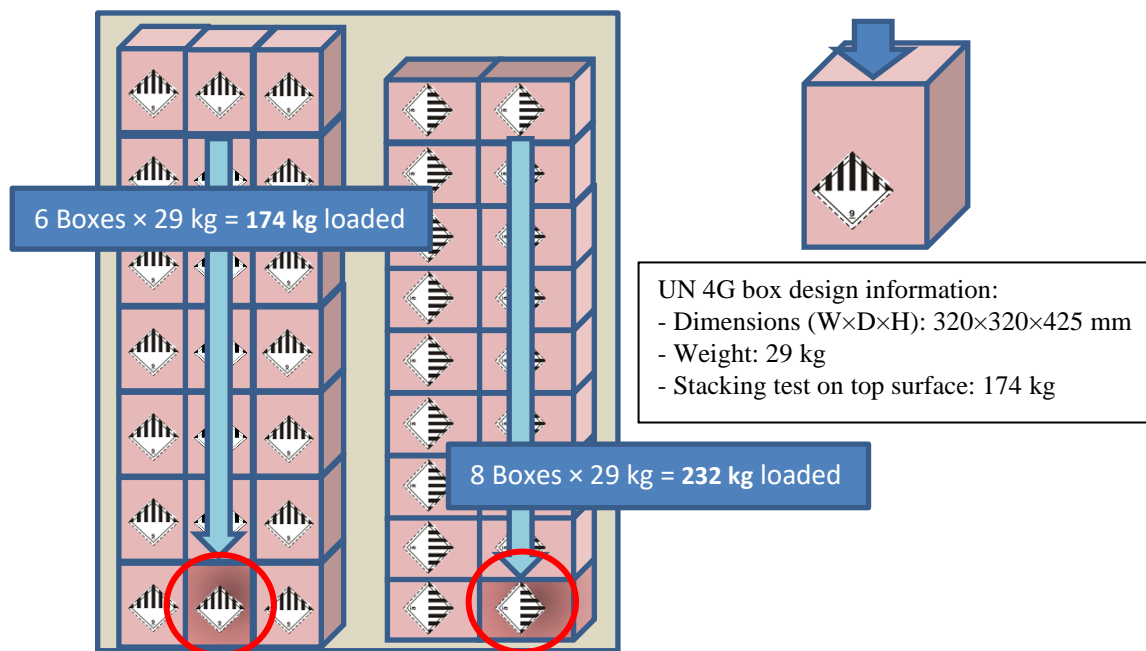
1. At the last sixty-third session of the Sub-Committee, the Republic of Korea submitted an informal document (INF.29) proposing an amendment to 7.1.1.9 of the *Model Regulations*. The proposal aimed to clarify the regulations on the stacking direction of packages, taking into consideration the stacking test direction when they are stacked in a container.
2. The Sub-Committee welcomed the purpose of the document and agreed on the need to clarify the stacking direction of packages. It was noted that dangerous goods safety training and capacity building could also be possible solutions. The Sub-Committee agreed to continue discussing this subject at its next session, based on an official document submitted by the Republic of Korea reflecting the feedback of interested experts.
3. This document and the proposal below take into account the feedback received during the discussion of informal document INF.29 at the last session, as well as comments received from members interested in this matter after that session. The proposal below includes an amendment to 7.1.1.9 of the *Model Regulations* to clarify the stacking direction of packages.

II. Explanation

4. As shown in the picture below, if package stacking is carried out without considering the stacking test direction, the load applied to the lowest package may increase, leading to packaging damage and accidents. Additionally, the packaging may be loaded without confirming that it has sufficient strength to withstand the load. However, the *Model Regulations* currently lack requirements for loading in consideration of the stacking direction of packagings.

* A/78/6 (Sect. 20), table 20.5.





5. Experts considered adding a new mark to identify the stacking direction outside the packaging as a solution to this issue. However, it was deemed not to be the optimal solution because it would increase the burden on the industry with the introduction of a new mark. Additionally, even with the addition of a new mark and increased requirements for labelling, packaging users might still neglect the stacking direction when loading packages.

6. In addition, there may be concerns about the necessity of amending the *Model Regulations* due to the absence of accident reports caused by stacking direction issues. However, it should be noted that the absence of reported accident cases cannot be considered as evidence of the current state being safe. Considering the risk of accidents due to packaging damage, it is appropriate to amend the *Model Regulations* to ensure compliance in the field.

7. Furthermore, as mentioned in paragraph 2 above, improvement measures through training and capacity building can enhance the effectiveness of regulatory compliance, strengthening the safety of handling hazardous materials. However, it is appropriate to proceed with relevant education after the amendment to 7.1.1.9 of the *Model Regulations* for regulatory clarity.

8. Considering these points, the proposal below suggests adding text to 7.1.1.9 of the *Model Regulations* to clarify the stacking direction and inserting a note to explain that handlers of packages can stack them on the top surface of packages in the typical stacking direction specified in the stacking test.

III. Proposal

9. Amend 7.1.1.9 of the *Model Regulations* for stacking packages, as follows (new text is underlined):

“7.1.1.9 Packages shall not be stacked unless designed for that purpose. Unless otherwise indicated, packagings that have had a stacking test shall be loaded in the same orientation as the samples were tested. Where different design types of packages that have been designed for stacking are to be loaded together, consideration shall be given to their compatibility for stacking with each other. Where necessary, stacked packages shall be prevented from damaging the package below by the use of load-bearing devices.

NOTE: The stacking test is generally carried out on the top surface of the packaging. Packages, other than bags, should therefore be stacked on the top surface of the packages unless indicated otherwise.”