

Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

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Item 6 (e) of the provisional agenda

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

Comments in relation to ST/SG/AC.10/C.3/2019/16 on the Definition of Large Packaging

Transmitted by the expert from the United Kingdom

1. The expert from the United Kingdom has studied the proposal from the expert of Canada and can agree that there is an issue which needs addressing. The expert from the United Kingdom offers the following information as background in support of the resolution of the issue, comments for consideration by the Sub-Committee in relation to the proposal contained in ST/SG/AC.10/C.3/2019/16 and makes proposals as an alternative solution to the issue.

Background

2. Much of the original packaging text and latterly the large packaging text was derived from work undertaken in the United Kingdom. In document ST/SG/AC.10/C.3/2019/16 paragraphs 2 to 6 the Canadian experts have correctly identified the current text and the generally accepted interpretation of the text quoted.

3. Although in paragraph 7 there is a comprehensive list of the more recent past papers in relation to the text of paragraph 6.1.1.1 regarding amendments and clarifications, the overall impression is that the main thrust of this text has not altered. Unfortunately, this is not the case. The original text from as far back as 1983 listed separately both the 450 litres capacity limit and the 400kg net mass limit. Since these were the upper limits for package testing, content of the packaging was not relevant. This prime text remained unaltered from 1983 until 2013 when it was changed as a result of the German paper 2011/34.

4. The large packaging text first appeared in the eleventh edition of the Model Regulations (1999). To ensure that there was clear demarcation between packages and large packages the definition deliberately used both the existing package test maximums as the minimums for a large package and written so that either of the parameters applied. Packaging and large packagings were thus completely interlocked with no overlaps or room for doubt. In addition, the test requirements for large packagings were based on those for IBCs, not for packages. This was also a conscious decision at the time as large packagings have the volume equivalents of IBCs.

5. The German document ST/SG/AC.10/C.3/2011/34 was attempting to solve a large packaging problem e.g. a 2.3m long package that only weighed 30kg but had a volume of

552 litres. The identified problem was that the box was not designed for mechanical handling. However, the solution was an amendment to the packaging text pinning the capacity limit to single packagings for liquids. The package could now be tested as a box on the understanding that as it wasn't designed for mechanical handling, it was not a large packaging.

Comments

6. In paragraph 9 of ST/SG/AC.10/C.3/2019/16 the Canadian expert has correctly identified the unforeseen consequences of the amendment based on ST/SG/AC.10/C.3/2011/34. The clear distinction between what is tested and marked as a package and what is tested and marked as a large packaging have gone. As the Canadian expert has pointed out it is now possible to test and mark the same packaging as both a 4 (a box) and a 50 (rigid large packaging). Experts will recall the German paper ST/SG/AC.10/C.3/2018/74 regarding the possibility of dual marking of packages and the concerns expressed of this possibility and being unable to tell which mark was being employed in transport. This confusion is a direct unforeseen consequence of the amendment made in 2013.

7. Whilst the desire to end the confusion is entirely laudable and is fully supported by the expert from the United Kingdom the proposed solution, whilst apparently neat and tidy, introduces further unintended and expensive consequences that need to be fully considered before any such amendment is made.

8. To illustrate these unintended consequences expert from the United Kingdom presents the following information obtained from the UK packaging database. There are presently 48 live approvals for large packagings issued by the UK. The earliest still live approvals date back to 1999 when the large packagings were first introduced. If the Canadian proposal is accepted and the defining criteria for large packagings is limited to having >400 kg of content rather than continuing to allow the alternative of exceeding 450 Litres in capacity, then over 70% of these approvals would have to be cancelled. This would include the oldest still live approval. Something that has been safely used for the transport of dangerous goods for 20 years would have to be cancelled and re-tested as a package.

9. Re-testing would not be straight forward since designs of large packagings such as wheeled bins for clinical waste incorporate design features relevant to mechanical handling that would result in failures under package test requirements. In short many large packaging designs would fail package tests because they haven't had to consider testing that includes side and top impacts if they are box shaped and diagonal chime drops if the packaging is cylindrical.

10. A further consideration in this respect is that package testing requires five or six samples (depending on shape) whilst large packaging tests can all be done on one package. Sample numbers are not such an issue when substantial numbers of packagings are to be manufactured but many existing large packaging approvals in the UK are specialised containers with limited production.

Counter proposals justification

11. The expert from the United Kingdom agrees that there is clear room for confusion with the current text and therefore makes the following proposals as an alternative to the proposals in ST/SG/AC.10/C.3/2019/16. Firstly, to return the text in 6.1.1.1 in relation to packaging capacity to its pre 2013 form. This completely restores the interface between packaging and large packaging so that there is no overlap. The expert from the United Kingdom recognises that in making this amendment this will re-open the issues raised by

Austria and Germany back in 2011. Therefore, we propose a slight amending of the definition of Large Packaging, changing the emphasis from being designed for mechanical handling to being capable of mechanical handling and backing this up with an additional ‘capability’ test specifically for large packaging which is not fitted with bottom or top lift equipment. Finally, mindful that the original example of large packaging content given by Germany in 2011/34 were air bags and that these articles can be classified as class 1 or class 9 but that only the class 9 entry has a LP assigned to it, to assign a large packing instruction to the Class 1 entry.

Proposal

1. The proposals below are to be considered together and are not alternatives. Deleted text is ~~struckthrough~~ new text in **bold**.

Proposal 1

Amend 6.1.1.1 (d) as follows: “(d) Packagings ~~for liquids, other than combination packagings,~~ with a capacity exceeding 450 litres.”

Proposal 2

Amend the definition in 1.2.1 of large packaging as follows:

“1.2.1 (a) is ~~designed for~~ **capable of being mechanically handled**; and”- (rest of text unaltered)

Proposal 3

Insert the following new test for large packagings into Chapter 6.6 as follows:

“6.6.5.3.5 *Capability test*

6.6.5.3.5.1 *Applicability*

For all types of large packaging which are not fitted with either a means of lifting from the base or the top as a design type test.

6.6.5.3.5.2 Preparation of large packaging for testing

The large packaging shall be loaded to 1.25 times its maximum permissible gross mass, the load being evenly distributed

6.6.5.3.5.3 Method of testing

The large packaging shall be lifted from the floor by either a fork lift or by slings and held or suspended at the required height of 150mm for a period of at least five minutes. The positioning of the fork lift tines or slings shall be determined from the long side of the large packaging. The slings or fork lift tines shall be positioned either side of the centre of the packaging face such that the outside edges of the slings or fork lift tines are either one third of the face width or 750mm apart whichever is the lesser.

6.6.5.3.5.4 Criteria for passing the test

No part of the packaging makes contact with the floor during the test, the package remains within 100mm of its centred position on the slings or fork lift tines, no damage to the large packaging that renders it unsafe for transport.”

Proposal 4

In the dangerous goods list of chapter 3.2 in column 8 for the entry 0503 SAFETY DEVICES PYROTECHNIC under P135 add “LP102”.
