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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

#### Sixty-fourth session

Geneva, 24 June - 3 July 2024

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

### Use of recycled plastics material for flexible intermediate bulk containers

Transmitted by the expert from Belgium\*

## I. Introduction

1. During the of the sixty-second session of the United Nations Sub-Committee of Experts on the Transport of Dangerous Goods, Belgium introduced document ST/SG/AC.10/C.3/2023/27 on the use of recycled plastics material for the production of flexible intermediate bulk containers (fIBCs). The document highlighted that although the general principles for the use of recycled plastics material (RPM) for packagings and IBCs had been thoroughly discussed and amended during the previous biennia, little consideration had been given to the use of RPM for fIBCs.

2. Document ST/SG/AC.10/C.3/2023/27 recalled that prototype testing had shown that fIBCs made from recycled plastics material, used for non-dangerous goods, can have the same quality regarding tensile strength, weight, and safety levels as fIBCs made from virgin material (see also ST/SG/AC.10/C.3/2020/44/Rev.1, para. 6). In addition it was recalled that fIBC experts had highlighted that, based on their experience, the design and quality of the stitching are a more important factor determining the strength and quality of fIBCs than the actual material they are made of. Lastly, it was highlighted that fIBCs are only allowed to be used to contain solids, not liquids. Consequentially, effects related to the transport of liquids that may adversely impact the strength and quality of the dangerous goods packagings and IBCs, such as permeation from the transported substance into the packaging, play only a minor role for fIBCs.

3. As such and taking into account that fIBCs still need to pass the performance tests as indicated in 6.5.6 of the *Model Regulations*, it seems reasonable that allowing the use of RPM for the production of fIBCs will have no impact on transport safety. To this end, Belgium proposed in document ST/SG/AC.10/C.3/2023/27 to amend 6.5.5.2.8.

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



4. As written in the report of the of the sixty-second session of the Sub-Committee, most experts supported this proposal in principle, but contributed with several comments and Belgium was invited to bring forward a revised proposal.

5. The comments received were that:

(a) 6.5.5.2.8 is not limited to fIBCs made from plastics material and, as such, the proposals would also impact fIBCs made from paper and textile, which was not the intent of the proposals; and

(b) the reference to 6.5.2.1.2 was not necessary since this would deviate from the similar provisions adopted for rigid and composite IBCs made from RPM.

6. During the discussions with interested experts and industry representatives when preparing this document, it was remarked that RPM could already be used due to the interpretation given of the term “suitable plastics materials” during the fifty-seventh session of the Sub-Committee (see report ST/SG/AC.10/C.3/114, para. 73):

*The Sub-Committee agreed that where the term “suitable plastics material” is used within the Model Regulations, the use of recycled plastics material is not prohibited.*

7. As a consequence, it was thought that introducing a reference to “recycled material” in 6.5.5.2.2 was sufficient to clarify that fIBCs may be produced from recycled (plastics) material. Nevertheless, given that paragraph 6.5.5.2.2 is not solely applicable to plastics material, no reference to the definition in 1.2.1 is included.

8. Also, during the discussions at the of the sixty-third session, it was mentioned that the word “material” in the first sentence of 6.5.5.2.8 does not refer to the source material used for production of fIBCs nor recycled plastics material; it would refer to IBCs that are returned, cut up and from which some parts are reused for manufacturing new IBCs. However, this interpretation seemed not to be clear to all members of the Sub-Committee. Therefore Belgium believes that this wording needs clarification.

9. Taking these comments into account, Belgium proposes to amend 6.5.5.2.2 to clarify that recycled material may be used (proposal 1) and 6.5.5.2.8 so that the intent of this paragraph becomes clearer (proposal 2).

10. On the marking of IBCs made from recycled plastics material, Belgium proposes to include in 6.5.2.1.2 a reference to fIBCs to align this requirement with those for other IBC types produced from recycled plastics material (proposal 3).

## II. Proposals

### A. Proposal 1

11. Amend 6.5.5.2.2 to read as follows (new text is underlined):

“6.5.5.2.2 Bodies shall be manufactured from suitable materials (including recycled materials). The strength of the material and the construction of the flexible IBC shall be appropriate to its capacity and its intended use.”

### B. Proposal 2

12. Amend 6.5.5.2.8 to read as follows (new text is underlined, deleted text stricken through):

“6.5.5.2.8 No material recovered from previously used receptacles or parts thereof shall be used in the manufacture of IBC bodies, unless as recycled material. ~~Production residues or scrap from the same manufacturing process may, however, be used.~~ Component parts such as fittings and pallet bases may also be reused provided such components have not in any way been damaged in previous use.”

### C. Proposal 3

13. Amend 6.5.2.1.2 to read as follows (new text is underlined):

“6.5.2.1.2 IBCs manufactured from recycled plastics material as defined in 1.2.1 shall be marked "REC". For rigid IBCs and flexible IBCs this mark shall be placed near the marks prescribed in 6.5.2.1.1. For the inner receptacle of composite IBCs, this mark shall be placed near the marks prescribed in 6.5.2.2.4.”

### III. Sustainable Development Goals

14. This proposal is linked to Sustainable Development Goal 12 “Ensure sustainable consumption and production patterns” and more specifically its target 12.5 “By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse”.

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