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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-second session

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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 previous biennia of this Sub-Committee there has been plenty of discussion on the use of recycled plastics material for the production of packagings and intermediate bulk containers (IBCs) intended for the transport of dangerous goods.

2. As such, several amendments concerning the use of recycled plastics material have already been adopted. During the 2019-2020 biennium, amendments were adopted that allowed the use of recycled plastics material according to the definition in 1.2.1 for the production of rigid plastics IBCs and composite IBCs with a plastics inner receptacle. During the 2021-2022 biennium, amendments to the definition of recycled plastics material in 1.2.1 were adopted. These amendments clarified the definition and expanded the scope of this definition to recycled plastics material originating from sources other than industrial packagings, such as household waste. As such, this material may now also be used as source material for the production of packagings and IBCs from recycled plastics material.

3. During these recent discussions, no or very little thought was given to the use of recycled plastics material for the production of flexible IBCs (fIBCs). For fIBCs, the use of recycled or used plastics material is currently not allowed by 6.5.5.2.8 of the *Model Regulations*.

*6.5.5.2.8 No material recovered from used receptacles shall be used in the manufacture of IBC bodies. Production residues or scrap from the same manufacturing process may, however, be used. Component parts such as fittings and*

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\* A/77/6 (Sect. 20), table 20.6

\*\* This document was scheduled for publication after the standard publication date owing to circumstances beyond the submitter's control.



*pallet bases may also be used provided such components have not in any way been damaged in previous use.*

4. Nevertheless, in document ST/SG/AC.10/C.3/2020/44/Rev.1 discussed in 2020 during the fifty-seventh session of the Sub-Committee, Belgium had already brought to the attention of the Sub-Committee the possibility of recycling four-loop fIBCs (paras. 5-8 of the document). It had also been highlighted in this document that prototype testing has shown that the fIBCs made from recycled plastics material, used for non-dangerous goods, can have the same quality regarding tensile strength, weight, and safety levels as the fIBCs made from virgin material.

5. In addition, during later discussions on this topic, the Belgian fIBC experts have highlighted that based on their experience, the design and quality of the stitching are a more determinative factor for the strength and quality of fIBCs than the actual material they are made of.

6. Also, according to the principles set forth in the *Guiding principles for the development of the Model Regulations on the transport of dangerous goods*, fIBCs are not to be used for transport of liquids. As such, 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 a lesser role for fIBCs.

7. Taking the above arguments into account, Belgium believes it is appropriate to allow the use of recycled plastics material according to 1.2.1 for the production of fIBCs for the transport of dangerous goods. The proposal underneath intends to allow this while also requiring the already used REC-mark that allows proper traceability of packagings and IBCs made from recycled plastics material.

8. In addition, and as explained in document ST/SG/AC.10/C.3/2020/44/Rev.1, paragraph 8, we also propose to change the word “scrap” by the word “regrind” in the second sentence of 6.5.5.2.8 to harmonize with other parts of the *Model Regulations* and given that it is a more appropriate term since “scrap” will also be reground before being reused.

## II. Proposal

9. Amend the current paragraph 6.5.5.2.8 to read as follows (new text is underlined, deleted text is ~~stricken through~~)

~~“No material recovered from used receptacles shall be used in the manufacture of IBC bodies. Production residues or scrap~~ regrind ~~from the same manufacturing process may, however, be reused. 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. Recycled plastics material as defined in 1.2.1 may also be used for the production of flexible IBCs. Flexible IBCs produced from recycled plastics material as defined in 1.2.1 shall be marked as specified in 6.5.2.1.2.”~~

10. Amend the current paragraph 6.5.2.1.2 to read as follows:

“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

11. 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.’