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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 27 November 2020** | |
| **Sub-Committee of Experts on the Transport of Dangerous Goods** |  |
| **Fifty-seventh session** |  |
| Geneva, 30 November-8 December 2020  Item 6 (b) of the provisional agenda  **Miscellaneous proposals for amendments to the Model Regulations on the Transport of Dangerous Goods: packagings** |  |

Extending the use of recycled plastics material to all plastic packagings, plastic IBCs and plastic Large Packagings

Submitted by the expert from Belgium

Revision

1. Based on the outcome of the written remarks on ST/SG/AC.10/C.3/2020/44/Rev.1 received on the online platform, improvements on the different proposals are implemented below.

Improvements of proposal 1

2. It was not clear where the “REC” mark for flexible IBCs should be placed. A clarification with a reference to the specific paragraph of the marks for flexible IBCs is added. A rephrasing of the second sentence has been introduced.

Proposal **1**

3. In paragraph 4 of ST/SG/AC.10/C.3/2020/44/Rev.1, amend the provisions for new 6.5.2.1.2 as follows (new text marked in red underlined):

Insert new 6.5.2.1.2 as follows:

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

Renumber current 6.5.2.1.2 and 6.5.2.1.3 as 6.5.2.1.3 and 6.5.2.1.4 respectively."

Improvements of proposal 2

4. A reordering of the proposed sentences seems appropriate to keep the provisions on material adjacent to each other. Additionally an editorial change in the last sentence was agreed.

Proposal 2

5. In paragraph 9 of ST/SG/AC.10/C.3/2020/44/Rev.1, amend the provisions for 6.5.5.2.8 as follows (new text marked in red underlined):

Amend paragraph 6.5.5.2.8 to read:

“6.5.5.2.8 ~~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 used. Recycled plastics material as defined in 1.2.1 may be used. Component parts such as fittings and pallet bases may also be used provided such components have not in any way been damaged in previous use. ~~Recycled plastics material as defined in 1.2.1. may be used.~~ The flexible IBCs produced from recycled plastics material must be marked as specified in 6.5.2.1.2.”

Improvements of proposal 3

6. A reordering of the proposed sentences seems appropriate to keep the provisions on material adjacent to each other. Additionally an editorial change in the last sentence was agreed.

Proposal 3

7. In paragraphs 11 and 12 of ST/SG/AC.10/C.3/2020/44/Rev.1, amend the provisions for 6.5.5.3.2 and 6.5.5.4.6 as follows (new text marked in red underlined):

Amend the accepted proposal on 6.5.5.3.2 based on ST/SG/AC.10/C.3/2019/51 as follows:

“6.5.5.3.2 The body shall be manufactured from suitable plastics material of known specifications and be of adequate strength in relation to its capacity and its intended use. ~~Except for recycled plastics material as defined in 1.2.1, no used material other than~~ Production residues or regrind from the same manufacturing process may be used. Recycled plastics material as defined in 1.2.1 may be used. The material shall be adequately resistant to ageing and to degradation caused by the substance contained or, where relevant, by ultraviolet radiation. Low temperature performance shall be taken into account when appropriate. Any permeation of the substance contained shall not constitute a danger under normal conditions of carriage. ~~Recycled plastics material as defined in 1.2.1 may be used.~~ The IBCs produced from recycled plastics material must be marked as specified in ~~paragraph~~ 6.5.2.1.2.”

Amendthe accepted proposal on 6.5.5.4.6 based on ST/SG/AC.10/C.3/2019/51 as follows:

“6.5.5.4.6 The inner receptacle shall be manufactured from suitable plastics material of known specifications and be of adequate strength in relation to its capacity and its intended use. ~~Except for recycled plastics material as defined in 1.2.1, no used material other than~~ Production residues or regrind from the same manufacturing process may be used. Recycled plastics material as defined in 1.2.1 may be used. The material shall be adequately resistant to ageing and to degradation caused by the substance contained or, where relevant, by ultraviolet radiation. Low temperature performance shall be taken into account when appropriate. Any permeation of the substance contained shall not constitute a danger under normal conditions of carriage. ~~Recycled plastics material as defined in 1.2.1 may be used.~~ The IBCs produced from recycled plastics material must be marked as specified in ~~paragraph~~ 6.5.2.1.2.”

Improvements of proposal 4

8. A reordering of the proposed sentences seems appropriate to keep the provisions on material adjacent to each other. Additionally some editorial changes were done.

9. In paragraphs 16 to 20 of ST/SG/AC.10/C.3/2020/44/Rev.1, amend the provisions of proposal 4 on 6.1.4.8.1 to 6.1.4.17.1 as follows (new text marked in red underlined):

"Proposal 4

16. Modify6.1.4.8.1 (plastic jerricans and drums) to read as follows:

“6.1.4.8.1 The packaging shall be manufactured from suitable plastics material and be of adequate strength in relation to its capacity and intended use. ~~Except for recycled plastics material as defined in 1.2.1, no used material other than~~ Production residues or regrind from the same manufacturing process may be used. Recycled plastics material as defined in 1.2.1 may be used. The packaging shall be adequately resistant to ageing and to degradation caused either by the substance contained or by ultra-violet radiation.”

17. Add at the end of 6.1.4.8.1 (Plastic jerricans and drums) as follows:

“~~Recycled plastics material as defined in 1.2.1 may be used.~~ The packaging produced from recycled plastics material must be marked as specified in ~~paragraph~~ 6.1.3.6.”

18. Modify 6.1.4.13.1 (Plastic boxes) as follows:

“6.1.4.13.1 ~~The~~ B~~b~~oxes shall be manufactured from suitable plastics material and be of adequate strength in relation to its capacity and intended use. Recycled plastics material as defined in 1.2.1 may be used. The boxes shall be adequately resistant to ageing and to degradation caused either by the substance contained or by ultra-violet radiation. ~~Recycled plastics material as defined in 1.2.1 may be used.~~ The ~~packaging~~ boxes produced from recycled plastics material must be marked as specified in ~~paragraph~~ 6.1.3.6.”

19. Modify 6.1.4.16.1 (Woven plastic bags) as follows:

“6.1.4.16.1 Bags shall be made from stretched tapes or monofilaments of a suitable plastics material. Recycled plastics material as defined in 1.2.1 may be used. The strength of the material used and the construction of the bags shall be appropriate to the capacity of the bags and its intended use. ~~Recycled plastics material as defined in 1.2.1 may be used.~~ The ~~packaging~~ bags produced from recycled plastics material must be marked as specified in ~~paragraph~~ 6.1.3.6.”

20. Modify 6.1.4.17.1 (Plastic bags) as follows:

“6.1.4.17.1 Bags shall be made of a suitable plastics material. Recycled plastics material as defined in 1.2.1 may be used. The strength of the material used and the construction of the bags shall be appropriate to the capacity of the bags and its intended use. Joints and closures shall withstand pressures and impacts liable to occur under normal conditions of transport. ~~Recycled plastics material as defined in 1.2.1 may be used.~~ The ~~packaging~~ bags produced from recycled plastics material must be marked as specified in ~~paragraph~~ 6.1.3.6.” "

Improvements of proposal 5

10. A reordering of the proposed sentences seems appropriate to keep the provisions on material adjacent to each other. Additionally an editorial change in the last sentence was agreed.

11. In paragraphs 22 to 26 of ST/SG/AC.10/C.3/2020/44/Rev.1, amend the provisions of proposal 5 on 6.6.3.2 to 6.6.4.3.1 as follows (new text marked in red underlined):

"Proposal 5

22. Insert a new paragraph 6.6.3.2 to read as follows:

“6.6.3.2 Large packagings manufactured with recycled plastics material as defined in 1.2.1 shall be marked "REC". This mark shall be placed near the marks prescribed in 6.6.3.1.”

23. Renumber current 6.6.3.2 and 6.6.3.3 as 6.6.3.3 and 6.6.3.4 respectively.

24. Modify 6.6.4.2.1 to read as follows:

“6.6.4.2.1 ~~The l~~Large packagings shall be manufactured from suitable materials. For the construction of large packagings of types 51H production residues or regrind from the same manufacturing process may be used. Recycled plastics material as defined in 1.2.1 may be used. The strength of the material and the construction of the flexible large packagings shall be appropriate to its capacity and its intended use. The large packagings produced from recycled material must be marked as specified in 6.6.3.2.”

25. ~~Renumber the current 6.6.4.2.2 to 6.6.4.2.7 as 6.6.4.2.3 to 6.6.4.2.8 respectively.~~

26. In line with the amended text for rigid plastic IBCs (proposal 3), amend 6.6.4.3.1 as follows:

“6.6.4.3.1 ~~The l~~Large packagings shall be manufactured from suitable plastics material of known specifications and be of adequate strength in relation to its capacity and its intended use. Production residues or regrind from the same manufacturing process may be used. Recycled plastics material as defined in 1.2.1 may be used. The material shall be adequately resistant to ageing and to degradation caused by the substance contained or, where relevant, by ultraviolet radiation. Low temperature performance shall be taken into account when appropriate. Any permeation of the substance contained shall not constitute a danger under normal conditions of carriage. ~~Recycled plastics material as defined in 1.2.1 may be used.~~ The large packagings produced from recycled plastics material must be marked as specified in 6.6.3.2.” "

Improvements of proposal 6

12. A clarification is added in the note that the guidelines included in the ISO standard might need to be adapted for IBCs and large packagings.

13. In paragraph 28 of ST/SG/AC.10/C.3/2020/44/Rev.1, amend the provisions of proposal 6 on 1.2 as follows (new text marked in red underlined):

Amend in 1.2 the definition of recycled plastic material as follows:

“*Recycled plastics material* means material recovered from used industrial packagings that has been cleaned and prepared for processing into new packagings. The specific properties of the recycled material used for production of new packagings shall be assured and documented regularly as part of a quality assurance programme recognized by the competent authority. The quality assurance programme shall include a record of proper pre-sorting and verification that each batch of recycled plastics material has the proper melt flow rate, density, and tensile strength, consistent with that of the design type manufactured from such recycled material. This necessarily includes knowledge about the origin of the material from which the recycled plastics have been derived, as well as awareness of the prior contents of those packagings if those contents might reduce the capability of new packagings produced using that material. In addition, the packagings, IBCs and large packagings shall be manufactured and tested under a quality assurance programme which satisfies the competent authority as mentioned under 6.1.1.4, 6.3.2.2, 6.5.4.1 and 6.6.1.2. ~~packaging manufacturer's quality assurance programme under 6.1.1.4 shall include performance of the mechanical design type test in 6.1.5 on packagings manufactured from each batch of recycled plastics material. In this testing, stacking performance may be verified by appropriate dynamic compression testing rather than static load testing;~~

***NOTE:*** *ISO 16103:2005 – "Packaging – Transport packaging for dangerous goods - Recycled plastics material" provides additional guidance on* procedures *to be followed in approving the use of recycled plastics material. These guidelines have been developed based on the experience of the manufacturing of drums and jerricans from recycled plastics material and as such may need to be adapted for other types of packagings, IBCs and large packagings made of recycled plastics material.”*

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