United Nations ST/SG/AC.10/C.3/2022/37

Secretariat

Distr.: General
12 April 2022

Original: English

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

Sixtieth session
Geneva, 27 June-6 July 2022
Item 4 (c) of the provisional agenda
Electric storage systems: transport provisions

Proposed amendments to packing instruction LP903

Submitted by PRBA – The Rechargeable Battery Association and RECHARGE – the Advanced Rechargeable and Lithium Batteries Association[*]

Introduction

1. At both of its previous two sessions, the Sub-Committee considered amendments to packing instruction LP903 proposed by PRBA and RECHARGE, most recently at the fifty-ninth session on the basis of document ST/SG/AC.10/C.3/2021/54. The amendments proposed would permit more than one battery in the large packaging (currently, only one battery is permitted), and would also allow cells to be transported under packing instruction LP903. As explained in that document, the amendments proposed are intended to take account of rapid growth and advancements in the lithium battery industry - including "giga-factories" constructed in or planned for many parts of the world, each of which will have the capability of producing billions of lithium ion cells annually for portable, industrial, and electric vehicle applications.

2. While there was considerable support in principle for the proposals in ST/SG/AC.10/C.3/2021/54, Sub-Committee members offered a number of comments on possible improvements. After the session, PRBA and RECHARGE communicated with interested delegations in an effort to address these comments. Apart from drafting points, two substantive issues were considered, as outlined in the following paragraphs. The revised proposals in this document are intended to address the comments offered.

3. The first issue was the concern that a large packaging be used for many, perhaps thousands, of small cells or batteries, and that this could increase the potential for damage to the contents resulting in an unsafe condition. To address this concern by imposing a practical limit on the number of cells or batteries in a large packaging, it is proposed in this document that only large cells and batteries, as defined in 38.3.2.3 of the Manual of Tests and Criteria could be transported in the large packaging. In this respect, the mass of each battery must exceed 12 kg and the mass of each cell must exceed 500 g.

[*] A/75/6 (Sect.20), para. 20.51

4. The second issue stemmed from the recognition that the criteria for passing the large packaging performance tests in 6.6.5 of the Model Regulations did not ensure that the contents of the large packaging could not be displaced during transport so as to contact other cells or batteries and result in a dangerous condition. Related to that a concern was raised that the use of plastics bags as inner packagings may not be sufficient to prevent damage to cells or batteries, especially from superimposed loads within the large packaging. To address these concerns, it is proposed in this document that cells, batteries and equipment be placed in inner packagings or otherwise separated by suitable means (such as trays or dividers) to prevent damage under normal conditions of transport from movement, contact with other cells or batteries, or from superimposed loads within the large packaging. Except for a single battery or item of equipment, plastics bags would not be permitted to satisfy these requirements.

Proposal

5. PRBA and RECHARGE invite the Sub-Committee to consider the following amendments in 4.1.4.3 to packing instruction LP903 for large packagings (new text is underlined, deleted text in strikethrough):

LP903	**PACKING INSTRUCTION**	**LP903**

This instruction applies to UN Nos. 3090, 3091, 3480 and 3481

The following large packagings are authorized for cells, ~~a single~~ batter~~y~~ies and for ~~a single item of~~ equipment containing batteries, provided that the general provisions of **4.1.1** and **4.1.3** are met:

Rigid large packagings conforming to the packing group II performance level, made of:

steel (50A);

aluminium (50B);

metal other than steel or aluminium (50N);

rigid plastics (50H);

natural wood (50C);

plywood (50D);

reconstituted wood (50F);

rigid fibreboard (50G).

~~The~~ Cells, batter~~y~~ies or ~~the~~ equipment shall be placed in inner packagings or separated by other suitable means, such as placement in trays or by dividers, to ensure ~~packed so that the battery or the equipment is~~ protect~~ed~~ion against damage that may be caused under normal conditions of transport by:

(1) ~~its~~ movement or placement within the large packaging;

(2) contact with other cells, batteries or equipment within the large packaging; or

(3) from any loads arising from the superimposed weight of cells, batteries, equipment and packaging components above the cell, battery or equipment within the large packaging.

When cells, or multiple batteries or items of equipment, are packed in the large packaging, plastics bags alone shall not be used to satisfy these requirements.

Additional requirements:

Cells and batteries shall be protected against short circuit.

Only large cells and batteries, as defined in 38.3.2.3 of the *Manual of Tests and Criteria* shall be transported under this packing instruction.