

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

3 December 2018

**Sub-Committee of Experts on the
Transport of Dangerous Goods**

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Item 6 of the provisional agenda

**New proposals for amendments to the Model
Regulations on the Transport of Dangerous Goods**

**Amendment to 38.3.3 (g) of the Manual of Tests and Criteria
(related to ST/SG/AC.10/C.3/2018/84)**

**Transmitted by the European Association for Advanced Rechargeable
Batteries (RECHARGE) and the Rechargeable Battery Association
(PRBA)**

Introduction

1. Following the discussion of ST/SG/AC.10/C.3/2018/84, number of comments were made. The major concern expressed was the need to clarify how the risk of overcharge would be controlled, in the case of the assembled batteries transported without overcharge protections.
2. It appears that the risk of transporting batteries in an overcharged state is linked to the charging or discharging of the batteries prior to transport. Batteries, which are protected against short circuit and over discharge between the batteries components, cannot be overcharged during transport, unless they are connected to an active charging system. This is not the case when transporting batteries (or they would become “batteries in usage”).
3. In order to clarify the specific risk control of the overcharge, a new sentence is proposed for addition at the end of the paragraph 38.3.3 (g), as a complement of the original text applicable in the paragraph 38.3.3 (d). This is presented in proposal 1.
4. In addition, the proposal 2 is describing an alternative option where the additive text is placed in the new paragraph 2.9.4 (e) (x) of the model regulation.
5. Finally, a proposal 3 with simplified text.
6. The three following proposals are submitted for selection and approval by the Sub Committee.

Proposal 1

7. Add a new paragraph at the end of the existing text of 38.3.3 (g) as follows (new text is underlined):

When batteries that have passed all applicable tests are electrically connected to form a battery in which the aggregate lithium content of all anodes, when fully charged, is more than 500g, or in the case of lithium ion battery, with a Watt-hour rating of more than 6200 Wh, the assembled battery does not need to be tested if the assembled battery is of a type, that has been verified as preventing

- (i) Overcharge;
- (ii) Short circuits, and
- (iii) Over discharge between the batteries.

An assembled battery not equipped with battery overcharge protection that is designed for use only as a component in a larger assembled battery or in equipment, which affords such protection, is not subject to the verification of the overcharge protection, provided overcharge protection has been used during any charge or discharge of the assembled battery.

Proposal 2

8. Add a new paragraph at the end of the existing text of 38.3.3 (g) as follows (new text is underlined):

When batteries that have passed all applicable tests are electrically connected to form a battery in which the aggregate lithium content of all anodes, when fully charged, is more than 500g, or in the case of lithium ion battery, with a Watt-hour rating of more than 6200 Wh, the assembled battery does not need to be tested if the assembled battery is of a type, that has been verified as preventing

- (i) Overcharge;
- (ii) Short circuits, and
- (iii) Over discharge between the batteries.

An assembled battery not equipped with battery overcharge protection that is designed for use only as a component in a larger assembled battery or in equipment, which affords such protection, is not subject to the verification of the overcharge protection.

9. Add a new paragraph after the last paragraph of 2.9.4 (e) (new text is underlined)

Point 2.9.4 (e) (x) : procedures to ensure that cells or batteries which are not equipped with overcharge protection are not overcharged during any charging or discharging operation.

Proposal 3

10. Add a new sentence at the end of the existing text of 38.3.3 (g) (i) as follows (new text is underlined):

When batteries that have passed all applicable tests are electrically connected to form a battery in which the aggregate lithium content of all anodes, when fully charged, is more than 500g, or in the case of lithium ion battery, with a Watt-hour rating of more than 6200 Wh, the assembled battery does not need to be tested if the assembled battery is of a type, that has been verified as preventing

- (i) Overcharge, either by design or by process controls;
- (ii) Short circuits, and
- (iii) Over discharge between the batteries.