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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

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Item 4 (a) of the provisional agenda
Electric storage systems: testing of lithium batterie

Lithium Battery Test Summary

Transmitted by the Medical Device Battery Transport Council (MDBTC), Dangerous Goods Advisory Council (DGAC), PRBA – The Rechargeable Battery Association, Council on the Safe Transport of Hazardous Articles (COSTHA), European Association for Advanced Rechargeable Batteries (RECHARGE), Sporting Arms and Ammunition Manufacturers' Institute (SAAMI), and Dangerous Goods Trainer Association (DGTA)*

Introduction

1. This new document addresses comments received in response to ST/SG/AC.10/C.3/2020/47 that included changes to the new test summary (TS) requirement which took effect on 1 January 2020. ST/SG/AC.10/C.3/2020/47 addressed the following TS issues that require immediate attention by the Sub-Committee:

- Should a TS be applicable to old battery designs dating back to 2003?
- Clarify how manufacturers and distributors can "make available" the TS and confirm that TS is not a mandatory shipping document;
- Simplify the signature and certification requirements;
- Provide an exception from the TS for button cells installed in equipment;
- Clarify how the TS applies to repaired batteries;
- Simplify the reference to the applicable Edition of the UN Manual of Tests and Criteria.

2. The TS provides dangerous goods regulatory authorities an excellent tool for enforcing the UN38.3 lithium battery testing requirements and identifying the original battery and product manufacturers who first place lithium batteries on the market and the test labs conducting the UN38.3 tests. Based on our recent experiences with the TS, it's clear the document is a valuable tool but only if dangerous goods authorities work together to enforce

* 2020 (A/74/6 (Sect.20) and Supplementary, Subprogramme 2)

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the regulations (*i.e.*, authorities from countries where the batteries are manufactured work with authorities in countries where incidents occur or violations of the dangerous goods regulations have been identified).

3. And as was noted in ST/SG/AC.10/C.3/2020/47, the TS also provides greater granularity in terms of understanding the Watt-hour rating of lithium ion batteries, the grams of lithium metal contained in lithium metal batteries, and the physical description of the batteries or products containing the batteries. This is important dangerous goods compliance information for new products entering the market.

4. The issue raised on how the TS should apply to used lithium batteries that may have been "refurbished" generated significant comments and some concerns. Therefore, we amended our proposed "Note" to simply clarify that the regulations should not require a battery manufacturer to provide a TS if they have reason to believe their battery differs from the UN38.3 tested type (*e.g.*, has been repaired) and no longer reflects the battery design covered by the original TS.

5. We recognize the concerns expressed on our proposal to change the manufacturing date from 2003 to 2019. Based on the comments received, we realize that change could have unanticipated implications for a number of entities in the lithium battery logistics supply chain. We still believe, however, requiring a TS for a battery that was manufactured seventeen years ago seems unreasonable and even impossible to comply with for most manufacturers. We are therefore proposing a date change from 2003 to 2011, which provides a more reasonable time frame for manufacturers to comply with this part of the TS.

6. We remain concerned that certain entities in the lithium battery supply chain believe the TS is a required transport document. As we previously noted, DB Schenker International includes a statement on their website that the TS is a mandatory transport document: *See* https://www.dbschenker.com/fi-en/about/press/corporate-news/test-summary-for-transporting-lithium-cells-and-batteries-619192. We are, however, pleased there is general consensus within the Sub-Committee that it is not a required transport document that must accompany consignments of lithium batteries. We have included a sentence in our proposed note that was also in ST/SG/AC.10/C.3/2020/47 stating the regulations do not require consignors to provide a TS with each consignment.

7. The Sub-Committee previously agreed that due to the large volume of lithium batteries and lithium battery powered products regularly offered for transport, manufacturers and distributors should not be expected to immediately "make available" a TS for every product they ship. Manufacturers and distributors should be provided a reasonable amount of time to provide the required TS. To facilitate a consistent interpretation of the meaning of "*make available*", we propose to add a sentence in a new "Note" defining the term in 2.9.4 (g).

8. We proposed in ST/SG/AC.10/C.3/2020/47 to except button cell batteries contained in equipment from the TS requirement and there appeared to be support from members of the Sub-Committee for this change. Special Provision 188 excepts lithium button cell batteries installed in equipment from the lithium battery marking requirement and, provided the equipment offers adequate protection, the requirement to use a strong, rigid outer package. Excepting button cells installed in equipment from the TS does not compromise safety and is a logical extension of the relief provided in Special Provision 188.

9. We believe our proposal to simplify the requirement in paragraph (i) of the TS in Section 38.3.5 of the UN Manual of Tests and Criteria to indicate what "revised edition of the Manual of Tests and Criteria" was used, will not compromise the effectiveness of the TS. The current requirement is very cumbersome when the TS is intended to cover multiple devices because the cell or battery that they contain may have been tested at different times to differing Editions and Amendments of the Manual of Tests and Criteria. It should therefore be sufficient to only indicate on the TS that the cell or battery was tested according to the Manual of Tests and Criteria, Revision 3, Amendment 1 "or a subsequent revision". In the cases where a competent authority needs to know the exact revision and amendment, they can request the test report since this authority already exists in 2.9.4(e)(iv) where it is stated that "Test data shall be kept and made available to the competent authority upon request."

10. In a further effort to simplify paragraph (j) of the TS in section 38.3.5, we are proposing to eliminate the need for a "signature". Providing the name of an authorized individual who can validate the information in the TS is sufficient for the competent authority or those in the supply chain with a legitimate need to contact the cell, battery or product manufacturer. Providing a signature is redundant and unnecessary.

Proposal

11. Amend 2.9.4 (g) as follows (new text underlined, deleted text stroke through):

(a) Add an exception for button cell batteries installed in equipment and change the date for the applicable test summary date from after 1 January 2011 so that it reads:

"Except for button cell batteries installed in equipment (including circuit boards), manufacturers and subsequent distributors of cells or batteries manufactured after 30 June ~~2003~~ 2011 shall make available the test summary as specified in the Manual of Tests and Criteria Part III, sub-section 38.3, paragraph 38.3.5."

(b) Add the following note to explain the meaning of "make available":

"Note: These regulations do not require consignors to provide a test summary with each consignment, or if the manufacturer has reason to believe the battery differs from the UN38.3 tested type and no longer reflects the battery design covered by the original test summary. The term "make available" means providing access to the test summary to dangerous goods enforcement authorities or a person in the manufacturer's or subsequent distributor's supply chain to ensure compliance with the UN38.3 test requirements and applicable transport regulations. The options for making the test summary available include, but are not limited to, publishing it to a public website, or providing it upon request."

12. In 38.3.5 of the UN Manual of Tests and Criteria:

(a) Amend paragraph (i) in the test summary to read:

"~~Reference to the revised edition of~~ An indication that the cells or batteries were tested to the Manual of Tests and Criteria ~~used and to amendments thereto, is any,~~ Revision 3, Amendment 1 or a subsequent revision;" and

(b) Amend paragraph (j) in the test summary as follows:

"~~Signature with~~ Name and title of ~~signatory~~ authorized person as an indication of the validity of information provided."