

**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 batteries

**UN 38.3 Lithium battery testing and amendments to the T.5
external short circuit test**

**Transmitted by The Rechargeable Battery Association (PRBA) – The
Rechargeable Battery Association (RECHARGE)**

Introduction

1. Based on discussions after reviewing document ST/SG/AC.10/C.3/2024/54 with the Sub-Committee of Experts, a proposal was made to add additional text to Section 38.3.4.5.3 to complement the changes in Section 38.3.4.5.2.

I. Proposal

2. The Sub-Committee is invited to amend 38.3.4.5.2 and 38.3.4.5.3 of the *Manual of Tests and Criteria* as follows (new text is underlined, deleted text in ~~strike through~~):

38.3.4.5.2 Test procedure

“The cell or battery to be tested shall be heated for a period of time necessary to reach a homogeneous stabilized temperature of $57 \pm 4^\circ\text{C}$, measured on external case or an internal cell. This period of time depends on the size and design of the cell or battery and should be assessed and documented. If this assessment is not feasible, the exposure time shall be at least 6 hours for small cells and small batteries, and 12 hours for large cells and large batteries. Then the cell or battery at $57 \pm 4^\circ\text{C}$ shall be subjected to one short circuit condition with a total external resistance of less than 0.1 ohm.

3. This short circuit condition is continued for at least one hour after the cell or battery external case temperature has returned to $57 \pm 4^\circ\text{C}$, or in the case of the large batteries, has decreased by half of the maximum temperature increase observed during the test and remains below that value.”

38.3.4.5.3 Requirement

“Cells and batteries meet this requirement if their measured external temperature does not exceed 170°C and there is no disassembly, no rupture and no fire during the test and within six hours after the test.”