

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 (c) of the provisional agenda

Electric storage systems:

Transport provisions

Issues regarding the interpretation of the scope of application of special provision 188

Transmitted by the expert from Germany

I. Introduction

1. Special provision 188 allows for a far-reaching exemption from the provisions for the transport of dangerous goods under certain conditions. In Germany, there have been discussions on the interpretation and the scope of application of some conditions, but no conclusive outcome could be reached. Therefore, Germany asks the Sub-Committee to address this matter and help answer the questions set out in the present document.

II. Discussion

2. The conditions for the applicability of special provision 188 include, in accordance with (b) of the special provision, that the aggregate lithium content of a lithium metal or lithium alloy battery is no more than 2 g and that the watt-hour rating of a lithium ion battery is no more than 100 Wh. Moreover, lithium ion batteries subject to this provision must be marked with the Watt-hour rating on the outside case, except those manufactured before 1 January 2009.

3. In Germany, a number of variants have become known with whose help it is attempted to meet the above-mentioned conditions.

4. For instance, a battery with a watt-hour rating of more than 100 Wh in one casing is separated and divided into two or more smaller batteries. The battery is separated by means of plugs that are either removed or attached in a “transport position”. “Separations” by means of the battery management system (BMS) are also conceivable. It is argued that, for transport purposes, the battery in this case is no longer a battery with a watt-hour rating of more than 100 Wh but that there are several smaller batteries, each with a watt-hour rating of less than 100 Wh.

5. Another variant is to switch the battery management system to a “transport mode”. In this mode, the battery is, for instance, only charged to a maximum of 85 Wh and transported in this state of charge. After transport, the battery management system is switched to an “operation mode”, which allows for charging to more than 100 Wh.

III. Questions

6. In the discussion on this issue, the following, partly fundamental, questions have arisen:

- (a) Are the limits for the aggregate lithium content of no more than 2 g and for the watt-hour rating of no more than 100 Wh set out in special provision 188 battery design requirements or conditions of transport?
- (b) Are two or more batteries that are connected to plugs, switches or a battery management system electrically connected together within the meaning of the definition in 38.3.2.3 of the UN *Manual of Tests and Criteria* or not?
- (c) In cases where cable connections lead out of a battery, is this battery then still considered to be completely enclosed by an inner packaging within the meaning of special provision 188 (d) or not?

7. Germany would appreciate it if the Sub-Committee could comment on the above questions, and it would be willing to propose amendments to more clearly reflect the intentions underlying special provision 188, if necessary.
