

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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LISTING, CLASSIFICATION, AND PACKING

Comments on ST/SG/AC.10/C.3/2005/45 New entries for lithium ion batteries

Transmitted by the expert from the United States of America

1. ST/SG/AC.10/C.3/2005/45, submitted by PRBA, contains four proposals: (1) to add two new entries in the Dangerous Goods List for lithium ion batteries, (2) to amend SP 188 editorially, (3) to amend SP 310 editorially, and (4) to amend P903 editorially. The following comments are offered with respect to these proposals:
2. Concerning the adoption of new entries for lithium ion batteries in the Dangerous Goods List, the expert from the United States of America is concerned that this may create the misperception that one type of battery is safer than the other. Lithium ion batteries may be less reactive from a chemical hazard point of view in terms of the way lithium metal is intercalated in the carbon matrix; however their electrical hazard (i.e. ability to short circuit and initiate a fire) is as great as that of lithium metal batteries (see our comments to ST/SG/AC.10/C.3/2005/43). It is for this reason that lithium ion batteries are required to be tested in the same manner as other types of lithium batteries.
3. Creation of new entries for lithium ion batteries does not provide much benefit for distinguishing between the two types. If the Sub-Committee believes such a distinction is important, a marking on the battery or cell should be required. A marking requirement currently exists for all types of lithium batteries in Special Provision 188 of the Model Regulations. However, the requirement is vague and non-specific. It is our understanding that the industry voluntarily applies a package marking as shown in the PRBA paper (ST/SG/AC.10/C.3/2005/43). It is suggested that the Sub-Committee expand the current marking requirement prescribed in SP 188. The package marking currently used by the industry should be adopted as a mandatory requirement in SP 188 of the UN Model Regulations. Such a marking would allow consignors to properly identify and offer batteries for transport. The marking would also provide transport personnel, such as airline acceptance personnel, the information necessary to make correct decisions concerning the relevant requirements of the regulations to ensure the appropriate level of safety.

4. It is understood that most lithium ion batteries are rechargeable and that the two terms, “lithium ion battery” and “rechargeable battery”, are loosely equated. However the Sub-Committee should be cautious in formally equating these two terms if it is decided that the creation of separate entries for lithium ion batteries is warranted. The expert from the United States has information to indicate that there are lithium metal batteries that are “rechargeable” (for example, a sulfur-lithium technology from Sion Power, and a lithium metal-polymer from Avestor).

 5. In summary, the expert from the United States of America does not support this paper because the proposal may confuse, rather than simplify, the overall regulatory scheme for lithium batteries. We do support requiring clear and concise marking on lithium batteries and their packages to enhance compliance and safety.
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