



**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****Fourtieth session**

Geneva, 28 November – 7 December 2011

Item 3 (d) of the provisional agenda

Electric storage systems: packagings for large batteries**Large packagings for lithium batteries****Transmitted by the Portable Rechargeable Battery Association (PRBA)
and the International Association for the Promotion and Management
of Portable Rechargeable Batteries RECHARGE¹****Introduction**

1. During discussions on lithium batteries at the thirty-ninth session, it was noted that a Large Packing Instruction was needed for lithium ion and lithium metal batteries to accommodate batteries whose net mass exceeds 400 kg or for lithium battery packaging with a capacity exceeding 450 litres as stated in 6.1.1.1(c) and (d) of the Model Regulations.
2. Large format lithium ion batteries are becoming more common in the marketplace and the limitations placed on Packing Instruction 903 as stated in 6.1.1.1(c) and (d) of the Model Regulations do not provide for these larger lithium ion batteries. Therefore, PRBA and RECHARGE have proposed on the following page a Large Packing Instruction LP903 for lithium batteries.
3. One point that requires clarification pertains to the existing provision in P903 for lithium batteries that exceed 12 kg and are manufactured with impact-resistant outer casings. These larger batteries are authorized in non-specification packaging. PRBA and RECHARGE believe it is not necessary to include the same provision in the proposed LP903 because the 400 kg / 450 litres limitations in 6.1.1.1(c) and (d) do not apply to the

¹ In accordance with the programme of work of the Sub-Committee for 2011-2012 approved by the Committee at its fifth session (refer to ST/SG/AC.10/C.3/76, para. 116 and ST/SG/AC.10/38, para. 16).

non-specification packaging used for these large lithium batteries over 12 kg. Therefore, the existing provision in P903 is adequate to address the packaging requirements for any lithium battery that exceeds 12 kg and is manufactured with an impact-resistant outer casing.

LP903	PACKING INSTRUCTION	LP903
This instruction applies to UN Nos. 3090, 3091, 3480 and 3481		
<p>The following large packagings are authorized provided that the general provisions of 4.1.1 and 4.1.3 are met:</p> <p>(1) For cells and batteries:</p> <ul style="list-style-type: none"> steel (50A) aluminium (50B) metal other than steel or aluminium (50N) rigid plastics (50H) natural wood (50C) plywood (50D) reconstituted wood (50F) rigid fibreboard (50G) <p>Cells or batteries shall be packed in packagings so that the cells or batteries are protected against damage that may be caused by the movement or placement of the cells or batteries within the packaging.</p> <p>Packagings shall conform to the packing group II performance level</p> <p>(2) For cells or batteries packed with equipment:</p> <p>Packagings conforming to the requirements in paragraph (1) of this packing instruction, then placed with the equipment in an outer packaging; or</p> <p>Packagings that completely enclose the cells or batteries, then placed with equipment in a packaging conforming to the requirements in paragraph (1) of this packing instruction.</p> <p>The equipment shall be secured against movement within the outer packaging.</p> <p>For the purpose of this packing instruction, "equipment" means apparatus requiring the lithium metal or lithium ion cells or batteries with which it is packed for its operation.</p> <p>(3) For cells or batteries contained in equipment:</p> <p>Strong outer packagings constructed of suitable material of adequate strength and design, in relation to the packaging capacity and its intended use. They shall be constructed in such a manner as to prevent accidental operation during transport. Packagings need not meet the requirements of 4.1.1.3.</p> <p>Large equipment can be offered for transport unpackaged or on pallets when the cells or batteries are afforded equivalent protection by the equipment in which they are contained.</p>		
<p>Additional requirement:</p> <p>Cells or batteries shall be protected against short circuit.</p>		