



**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****Forty-first session**

Geneva, 25 June – 4 July 2012

Item 4 (c) of the provisional agenda

Electric storage systems: Waste or damaged/defective lithium batteries**Special Provision and Packing Instructions for Waste
Lithium Batteries****Transmitted by the Rechargeable Battery Association (PRBA) and the
International Association for the Promotion and Management of
Portable Rechargeable Batteries(RECHARGE)¹****Introduction**

1. At the fortieth session of the Sub-Committee, several lunchtime working groups were organized to address the issue of transporting waste lithium batteries. In addition, PRBA and RECHARGE filed the working paper ST/SG/AC.10/C.3/2011/39 to provide Sub-Committee members information on how the transport of waste lithium batteries in a mix with other non-lithium batteries are regulated in accordance with the ADR.
2. There was agreement during the lunchtime working groups that the Model Regulations should have provisions to address the transport of waste batteries. There also was recognition that any new regulations on waste batteries for the Model Regulations should generally be consistent with the existing ADR but that certain provisions need to be modified to take into consideration changes in international battery collection and recycling activities, changes in lithium ion technologies for consumer applications and uncertainty over how some provisions of the ADR are being implemented.
3. PRBA and RECHARGE have prepared this proposal based on comments from the lunchtime working groups and correspondence received from several Sub-Committee members since the thirty-ninth and fortieth sessions. The proposal includes a new Special Provision XXX and Packing Instructions P903a and P903b.

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).

4. Proposed Special Provision XXX and Packing Instruction P903a and P903b provide for the following:

- (a) The transport of waste lithium cells and batteries with or without other waste non-lithium cells and batteries;
- (b) The transport from retail collection points to the first intermediate processing facilities;
- (c) Shipments packaged in accordance with Packing Instruction 903a and P903b; and
- (d) For waste lithium batteries in a mix with other non-lithium batteries that have been collected from consumer collection facilities and transported to the first consolidation facility, an exemption from certain packaging requirements is proposed for limited quantities per vehicle load when transported further to other processing facilities under full ADR requirements and when a quality control system is in place to assure that no more than 333 kg of exempt waste lithium batteries are on board the transport vehicle

Proposal

5. In consideration of the foregoing, PRBA and RECHARGE invite the Sub-Committee to consider the following proposal for a new Special Provision and Packing Instructions for waste lithium batteries transported for disposal or recycling.

SP XXX Lithium ion cells and batteries and lithium metal cells and batteries or equipment containing cells and batteries not transported according to other provisions of these regulations (e.g., Special Provision 188 or Packing Instruction 903) and being collected and transported for disposal or recycling, shall be transported in accordance with the following provisions:

- (1) For cells and batteries collected as part of a mixed battery collection program,
 - (a) When mixed batteries are transported from the first collection point to the first intermediate-consolidation and/or sorting facility, lithium ion cells and batteries and lithium metal cells and batteries with a gross mass of not more than 2 kg, whether or not contained in equipment, transported with other non-lithium cells or batteries, are not subject to other provisions of these Regulations if the following requirements are met:
 - (i) The provisions of packing instruction P903b;
 - (ii) The total net mass limit of mixed batteries shall not exceed [10] tonnes per transport unit, and, *the total mass of lithium batteries shall not exceed 333 kg in accordance with a quality control system in place; and*
 - (iii) Packages containing cells and batteries shall be marked
“LITHIUM BATTERIES FOR DISPOSAL”, or
“LITHIUM BATTERIES FOR RECYCLING”.
 - (b) Lithium ion cells and batteries and lithium metal cells and batteries transported with other non-lithium cells and batteries, whether or not contained in equipment, collected under conditions in paragraph (a) above and transported on vehicles with no more than [10] tonnes of mixed batteries and 333 kg of lithium batteries may be packaged in accordance with P903b provided all relevant provisions of these Regulations are met, except the requirements of section 2.9.4.
Packages containing cells and batteries shall be marked
“LITHIUM BATTERIES FOR DISPOSAL”, or
“LITHIUM BATTERIES FOR RECYCLING”.
 - (c) Lithium ion cells and batteries and lithium metal cells and batteries transported with other non-lithium cells and batteries, whether or not contained in equipment and not transported in accordance with paragraph (a) or (b) above shall comply with all relevant provisions of these Regulations, except the requirements of section 2.9.4.
Packages shall comply with P903a and be marked
“LITHIUM BATTERIES FOR DISPOSAL”, or
“LITHIUM BATTERIES FOR RECYCLING”.
- (2) Lithium ion cells and batteries and lithium metal cells and batteries not collected as part of a mixed battery collection program under (1) and that are not damaged or defective, shall comply with all relevant provisions of these Regulations, except the requirements of section 2.9.4. Packages shall comply with P903a and be marked -
“LITHIUM BATTERIES FOR DISPOSAL” or
“LITHIUM BATTERIES FOR RECYCLING”.

P903a	Packing Instruction	P903a
<p>This instruction applies to lithium ion cells and batteries and lithium metal cells and batteries of UN Nos. UN3480, UN3481, UN3090 and UN3091 transported for disposal or recycling together with non-lithium batteries.</p>		
<p>The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3, are met:</p>		
<p>(1) Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G); Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); and Jerricans (3A2, 3B2, 3H2).</p>		
<p>Packagings shall conform to the packing group II performance level.</p>		
<p>Metal packagings 1A2, 1B2, 1N2, 4A, 4B, 4N, 3A2, 3B2 shall be entirely fitted with a suitable lining material of adequate strength for the intended use.</p>		
<p>(2) Strong outer packagings constructed of suitable non conductive material and of adequate strength and design in relation to the packagings capacity and its intended use. Packagings need not meet the requirements of 4.1.1.3. Except when batteries are contained in or packed with equipment, packages shall not exceed 30 kg gross mass.</p>		
<p>(3) In addition, for undamaged cells or batteries with a gross mass of 12 kg or more employing a strong, impact resistant outer casing, and assemblies of such cells or batteries, in strong outer packagings constructed of suitable material and of adequate strength and design in relation to the packagings capacity and its intended use. Packagings need not meet the requirements of 4.1.1.3.</p>		
<p>Additional requirements:</p>		
<p>Cells or batteries shall be designed or packaged to prevent short circuits and/or the dangerous evolution of heat. This includes, but is not limited to, individual protection of the battery terminals or use of non combustible and non-conductive cushioning material in order to fill the volume of the container.</p>		

P903b	Packing Instruction	P903b
<p>This instruction applies to lithium ion cells and batteries and lithium metal cells and batteries of UN Nos. UN3480, UN3481, UN3090 and UN3091, transported for disposal or recycling together with non-lithium batteries.</p> <p>The following packagings are authorized provided that the general provisions of 4.1.1 and 4.1.3, are met:</p> <ol style="list-style-type: none">(1) 1H2 drums or 4H2 boxes conforming to the packing group II performance level for solids;(2) 1A2 drums or 4A boxes fitted with a polyethylene bag of adequate strength for the intended use and conforming to the packing group II performance level for solids.(3) Drums or boxes that do not meet the packing group II performance level provided they do not exceed a gross mass of 30 kg and are made of non-conducting material that meet the general conditions of 4.1.1.1., 4.1.1.2, 4.1.1.5. to 4.1.1.8.		
<p>Additional requirements:</p> <p>In absence of individual protection against short-circuit, the empty space in the packaging shall be filled with cushioning material. The cushioning is not required when the packaging is entirely fitted with a plastic bag and the bag is closed.</p> <p>Packagings shall be equipped with a suitable venting system for the intended use.</p>		