



**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 (c) of the provisional agenda

Electric storage systems: waste or damaged/defective lithium batteries**Proposal on transporting waste lithium cells and 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. At the thirty-ninth 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 informal document INF.13 to provide Sub-Committee members information on how waste lithium batteries are regulated in accordance with the ADR. INF. 13 also contained an initial proposal on waste batteries for the Sub-Committee's consideration.
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 would 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

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).

members since the thirty-ninth session. The proposal includes a new Special Provision XXX and Packing Instructions P903a and P903b.

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

- (i) The transport of waste lithium cells and batteries with or without other waste non-lithium cells and batteries;
- (ii) Shipments from retail collection points to intermediate processing facilities; and
- (iii) Shipments packaged in accordance with the existing SP 188 and Packing Instruction 903.

Proposal

SP XXX Waste lithium ion cells and batteries and waste lithium metal cells and batteries being transported for disposal or recycling may be packed in accordance with any of the following provisions:

- (1) In accordance with requirements of special provision 188;
- (2) Up to the intermediate processing facility, waste lithium cells and batteries with a gross mass of not more than 2 kg, whether or not contained in equipment, transported together or without other waste non-lithium cells or batteries, are not subject to the other provisions of these Regulations if the following requirements are met:
 - (a) The provisions of packing instruction P903a (1), P903a (2) or P903b;
 - (b) A quality assurance system is in place to ensure that the total amount of lithium cells or batteries per transport unit does not exceed 333 kg; and
 - (c) Packages containing cells and batteries shall be marked "WASTE LITHIUM BATTERIES";
- (3) Waste lithium cells and batteries, together or without other waste non-lithium cells or batteries, are not subject to the other provisions of these Regulations if the following requirements are met:
 - (a) Packing Instruction P903a; and
 - (b) Packages containing cells and batteries shall be marked "WASTE LITHIUM BATTERIES"; or
- (4) Waste lithium cells and batteries, together or without other waste non-lithium cells and batteries, shall comply with all relevant provisions except the requirements of section 2.9.4.

P903a	PACKING INSTRUCTION	P903a
<p>This instruction applies to waste lithium ion cells and batteries and waste lithium metal cells and batteries of UN Nos. UN3480, UN3481, UN3090 and UN3091.</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>(2) 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. 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 packaging capacity and its intended use. Packagings need not meet the requirements of 4.1.1.3.</p>		
<p>Additional requirement: Cells or batteries shall be packaged or designed so as to prevent short circuits that could lead to a dangerous evolution of heat or fire.</p>		

P903b	PACKING INSTRUCTION	P903b
<p>This instruction applies to waste lithium ion cells and batteries and waste lithium metal cells and batteries of UN Nos. UN3480, UN3481, UN3090 and UN3091.</p>		
<p>The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3, are met:</p> <p>The packagings listed below are authorized for cells and batteries collected for disposal or recycling together or without other waste non-lithium ion and lithium metal cells or batteries, or alone, and may be transported without being individually protected from short circuits, under the following conditions:</p> <ol style="list-style-type: none"> <li>(1) In 1H2 drums 4H2 boxes conforming to the Packing Group II performance level. <li>(2) In 1A2 drums 4A boxes fitted with a polyethylene bag and conforming to the Packing Group II performance level. The polyethylene bag shall <ul style="list-style-type: none"> <li>- Have an impact resistance of at least 480 grams in both parallel and perpendicular planes with respect to the length of the bag; <li>- Have a minimum of 500 microns of thickness with electrical resistivity of more than 10 M ohms and a water absorption rate over 24 hours at 25°C lower than 0.01 %; and <li>- Be closed and shall be used only once. <li>(3) In 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>Hermetically sealed packaging shall be fitted with a venting device according to 4.1.1.8. The venting device shall be so designed that where pressure may develop in a package the provisions of 4.4.1.8 shall be met.</p>		