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**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

Thirty-third session
Geneva, 30 June-9 July (a.m) 2008
Item 7 of the provisional agenda

**MISCELLANEOUS PROPOSALS OF AMENDMENTS TO THE
MODEL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS**

Transport of Lithium Batteries Contained in or Packed with Equipment (UN 3091)

New Special Provision

Transmitted by the European Portable Battery Manufacturers Association (EPBA)
The International Association for portable rechargeable batteries (RECHARGE)
and the Portable Rechargeable Battery Association (PRBA)*

Introduction

1. Until 31 December 2002, lithium batteries with not more than 5 g lithium per cell and not more than 25 g lithium per battery were exempted from the dangerous goods regulations for all transport modes, provided that the batteries had passed the test procedures in subsection 38.3 of the UN Manual of Tests and Criteria.

* In accordance with the programme of work of the Sub-Committee for 2007-2008 approved by the Committee at its third session (refer to ST/SG/AC.10/C.3/60 para. 100 and ST/SG/AC.10/C.3/34, para. 14).

2. Since 1 January 2003, the above exemption limits have been cancelled. Instead, lithium metal and lithium alloy batteries with an aggregate lithium content of more than 2 g have to be declared and transported as dangerous goods UN 3090.
3. As a consequence, equipment containing or packed with such lithium metal and lithium alloy batteries must also be declared and transported as dangerous goods (UN 3091).
4. In 2002, an amendment was issued to subsection 38.3 of the UN Manual of Tests and Criteria, where new tests and criteria were defined for lithium batteries. The aim and effect of these new tests and criteria was an improvement of the safety during transport.
5. The transport of equipment packed with or containing lithium batteries also benefits from this improved safety level. Therefore, in our view, declaration and transport under dangerous goods regulations are no longer necessary, provided that the equipment and lithium batteries are safely packed and that the equipment is protected against inadvertent operation.
6. Therefore it is proposed to re-establish the exemption limit of 5 g lithium per lithium metal or lithium alloy cell and 25 g lithium per lithium metal or lithium alloy battery as it was in effect until 31 December 2002. However, our proposal only pertains to the transport of lithium batteries contained in or packed with equipment (UN 3091). It does not pertain to the transport of lithium batteries (UN 3090).
7. The proposal does not pertain to the transportation of cells because only batteries are normally contained in or packed with equipment. However, it pertains to the component cells of batteries that are transported.

Proposal

It is proposed to add a new Special Provision for UN 3091 with the following content:

“Lithium metal and lithium alloy batteries contained in or packed with equipment are not subject to other provisions of these Regulations if they meet the following:

- (a) For a lithium metal or lithium alloy battery the aggregate lithium content is not more than 25 g;
- (b) For the component cell of a lithium metal or lithium alloy battery the lithium content is not more than 5 g;
- (c) Each battery is of the type proved to meet the requirements of each test in the Manual of Tests and Criteria, Part III, sub-section 38.3;
- (d) Batteries are separated so as to prevent short circuits; and
- (e) When lithium batteries are packed with equipment, the batteries shall be packed in inner fibreboard packagings that meet the requirements for packing group II. The equipment and batteries shall be packed in strong outer packagings containing not more than two batteries necessary to power the intended piece of

equipment. When lithium batteries are contained in equipment, the equipment shall be packed in strong outer packagings in such a manner as to prevent accidental operation during carriage.

Justification : Difference between transport of lithium batteries (UN 3090) and transport of equipment (UN 3091).

Shipments with lithium batteries contained in equipment or packed with equipment comprise consumer products (e.g. photo cameras) and industrial products (e.g. utility meters, programmable controllers, safety devices and medical devices). In addition to the arguments in the introduction, it should be noted that these shipments generally include the following conditions:

- (a) The number of batteries per package is smaller compared to bulk battery shipments;
 - (b) The net weight of lithium or lithium batteries is small compared to the net weight of equipment;
 - (c) The batteries are well protected against shifting. Installation inside the equipment ensures an additional level of safety.
 - (d) The batteries are effectively separated from each other. Thereby, the risk of short circuit as well as the effect of mechanical damage are reduced.
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