

Economic Commission for Europe

Inland Transport Committee

Working Party on the Transport of Dangerous Goods

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Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods

Geneva, 15–25 September 2015

Item 2 of the provisional agenda

**Harmonization with the United Nations Recommendations
on the Transport of Dangerous Goods**

Carriage of waste electrical and electronic equipment containing Lithium Batteries

Transmitted by RECHARGE

Introduction

During the Joint Meeting¹ of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods on its spring 2015 session held in Bern from 23-27 March 2015, Germany presented the results of an investigation about the implementation of the Packing instructions P909 to the carriage of WEEE containing Lithium Batteries. Germany offered to submit the results of the questionnaire and the texts proposed in informal document INF.13² to an informal working group that would consider the issue of waste electric and electronic equipment known to contain lithium batteries. The informal working group met in Hamburg (Germany) on June 8th and 9th , 2015.

Results of the working group activities.

Before any proposal is made on adapting the current Transport Regulation of WEEE containing Lithium Batteries, a scientific assessment is required of the quantities and weight of lithium batteries in the various WEEE categories (Annex III of the WEEE directive) and their purpose. Possible criteria for the lightening of the legislative conditions are:

- WEEE category (see annex III of the WEEE directive)
- Quality assurance system in place to ensure the compliance with certain thresholds (e.g. total weight per carriage)
- Function of the battery

¹ Refer to § 6 of the Report ECE/TRANS/WP.15/AC.1/2015/138

² ECE/TRANS/WP.15/AC.1/15/BE/INF13e and UNF 13e (1) (Germany)

- Function of the appliance.

As a result of the discussions, Germany prepared a new questionnaire on the presence of batteries in WEEE streams to be answered by Industry.

As a complementary work, RECHARGE prepared an analysis of the European market for Primary Lithium-Metal (UN3090) and Rechargeable Lithium-Ion Batteries (UN3480). This preliminary draft report is brought to the attention of the Working Party Members as Attachment 1 to this INF paper.

The conclusions presented below give a brief description of the main applications where Lithium batteries are used and the quantities by number and by weight. A preliminary indicative value of the ratio between the weight of the battery and the weight of equipment is also reported in order to evaluate the various types of WEEE where Lithium batteries represents a significant weight ratio or not.

Conclusions of RECHARGE's report.

The Transport of WEEE containing Lithium-Ion batteries.

Modern portable EEE appliances, instruments and equipment use extensively Lithium-Ion batteries.

When one excludes the E-mobility market and one considers the consumer market, a majority by weight and by unit of Lithium-Ion batteries are sold in IT equipment (Mobile Phones, Laptops, Tablets,...). Some of these batteries are returned and collected with primary alkaline batteries (not-lithium based) via the Portable Batteries Compliance Collection Schemes, but a significant number is returned with WEEE.

Lithium Ion Rechargeable Batteries are the major source of power for mobile electrical equipment, they may represent by weight a significant ratio of the appliance (typically in the range of 10-20%).

Dedicated attention should be brought for the carriage of these batteries and equipment in accordance with the new Special Provisions SP377 and P909 of the UN Model Regulation for the Transport of Dangerous Goods, in particular when they have been sorted out.

Industrial Li-Ion batteries have to be taken back by producers when reaching an end of life. The conditions of transport are also regulated by the UN Model Regulation for the Transport of Dangerous Goods.

The Transport of WEEE containing Lithium-Metal batteries.

Lithium-Metal Primary Batteries are used mainly for memory back-up applications and, in a limited number of equipment, as a main power source.

When used as **Memory Back-up**, they represent by weight, a small fraction of the EEE (generally less than 0.1 %). Their Lithium content is well below the 1.0 g limit per cell and 2.0 g limit per battery indicated in the SP188 of the UN Model Regulation for the Transport of Dangerous Goods.

They are generally fixed on the printed circuit board of the equipment, difficult to access, and therefore well protected during transport.

As a result, the transport of WEEE containing Memory Back-up batteries should be considered with some relaxation from the Transport Requirements of UN Model Regulation for the Transport of Dangerous Goods.

When **industrial take back schemes** are considered, attention should be paid to the fact that some of these Primary Li-Metal batteries may still have a high residual energy content and therefore should be carried under the current regulation for the Transport of Dangerous Goods.

Follow-up.

Additional information will be supplied to the Joint Meeting as a result of its new consultation with Competent Authorities and Industry.

Attachment 1: Lithium Batteries contained in Electrical and Electronic Equipment. A report prepared by RECHARGE (August 2015).
