

**NEMA Battery Section White Paper**  
**U.S. Regulation of Primary Lithium Batteries in Transportation**  
**December 2007**

On August 9, 2007, the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) issued a final rule banning or restricting the transport of non-rechargeable lithium batteries and devices shipped with these batteries aboard **passenger aircraft**.

These new rules become effective on **January 1, 2008** and can be found in their entirety in the August 9, 2007 edition of the *Federal Register*, which is accessible via the internet through <http://www.gpoaccess.gov/fr/index.html>. These new rules supplant emergency interim rules issued in December 2004.

This summary applies to non-rechargeable lithium batteries shipped from, into or within the United States.

**NON-RECHARGEABLE LITHIUM BATTERIES**

The transport of any amount of non-rechargeable lithium batteries is prohibited aboard passenger aircraft except for personal use as noted below. In addition, the outer shipping container of all packages containing non-rechargeable lithium batteries must be marked as stated below.

**PRIMARY LITHIUM BATTERIES – FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT**

This statement must be on a background of contrasting color with the letters:

- At least 12 mm (0.5 inch) in height on packages having a gross mass of more than 30 kg (66 lbs); or
- At least 6 mm (0.25 inch) on packages having a gross mass of 30 kg (66 lbs) or less.

The new marking requirement applies to all non-rechargeable battery shipments that are exempted from Class 9 according to CFR49.172.102 Special Provision 188. Class 9 battery shipments, packaging, and labeling requirements are unchanged by this rule.

Battery shipments may continue to be transported by all other modes of transportation including cargo aircraft provided they meet the other requirements of 49 CFR Parts 171, 172, 173 and 175.

## **DEVICES SHIPPED WITH NON-RECHARGEABLE LITHIUM BATTERIES**

In order to qualify for shipment aboard passenger aircraft, the batteries must be packaged in strong packaging and only as many lithium batteries as are needed to power the device may be included. The total allowable weight of the batteries packaged with or within the device may not exceed 5 kg.

There are no new labeling requirements for devices shipped with lithium batteries that comply with the above restrictions.

### **EXEMPTIONS**

Airline passengers may continue to have non-rechargeable lithium batteries for their equipment and a reasonable amount of spare non-rechargeable lithium batteries for their equipment in their carry-on luggage – not in their checked baggage.

In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in “strong outer packaging” that prevents spillage of contents.

For more information about these requirements, contact:

U.S. Department of Transportation  
Pipeline and Hazardous Materials Safety Administration (PHMSA)  
Hazardous Materials Info-Line: 1-800-467-4922  
Email Address: [training@dot.gov](mailto:training@dot.gov)  
Fax Number: 202-366-7342

Craig Updyke  
Manager, Trade and Commercial Affairs  
National Electrical Manufacturers Association  
Email Address: [cra\\_updyke@nema.org](mailto:cra_updyke@nema.org)  
Telephone Number: 703-841-3294  
Fax Number: 703-841-3394