





Meeting with OMB on PHMSA Lithium Battery Rulemaking January 15, 2013

1. Industry representatives
 - George Kerchner, PRBA-The Rechargeable Battery Association
 - Yvette Rose, Cargo Airline Association
 - Craig Updyke, National Electrical Manufacturers Association
2. Status of PHMSA lithium battery rulemaking: How did we get here?
 - January 2010 rulemaking and economic impact on industry
 - Shippers and carriers working together with PHMSA to enhance safety
 - ICAO process and new lithium battery regulations
3. Comparison of ICAO v. current US HMR lithium battery regulations
 - Training
 - Hazard communication
 - Safety
4. Economic impact of new ICAO regulations
 - E-commerce and treatment of lithium batteries and equipment
 - Ground transport in the U.S.
5. Safety and economic implications of not harmonizing with ICAO
6. Industry requests for harmonization

ICAO TI PI 965, Section II

Exceptions for Lithium ion Cells/Batteries


Effective Jan. 1, 2013

	Lithium ion cells ≤ 20 Wh	Lithium ion batteries ≤ 100 Wh
Maximum number per package	8	2
Classification	Excepted	Excepted
Maximum net quantity (mass) per package	No weight limit	No weight limit
Labeling		
Employee training	Adequate instructions	Adequate instructions

ICAO TI PI 965, Section IB



Fully Regulated Lithium ion Cells/Batteries

Effective Jan. 1, 2013

Lithium ion cell ≤ 20 Wh Lithium ion battery ≤ 100 Wh > 2 batteries <u>or</u> > 8 cells per package	
Classification	Fully regulated Class 9 DG
Package Limits	10 kg gross weight of package (Passenger and cargo aircraft)
Packaging	Strong outer packaging 1.2 M drop test
Labels	
Markings	UN3480, Lithium ion batteries
Shipping papers	Shipper's declaration for DG or alternative document
Training	Full dangerous goods training

U.S. Hazardous Materials Regulations

Exceptions for Lithium ion Cells/Batteries

	Lithium ion cells 1.5 g ELC (≤ 20 Wh)	Lithium ion batteries 8 g ELC (≤ 100 Wh)
Maximum number per package	N/A	N/A
Classification	Excepted	Excepted
Maximum net quantity (mass) per package	30 kg (66 pounds)	30 kg (66 pounds)
Labeling*	 (or similar)	 (or similar)
Employee training	None	None



* Only required for packages with more than 12 batteries or 24 cells

ICAO TI PI 965, Section IA

Fully Regulated Lithium ion Cells/Batteries

Effective Jan. 1, 2013



* **Cargo Aircraft Only** label required on outer packaging and over pack (if used) if net weight of lithium ion cells or batteries in outer packaging exceeds 5 kg.

Lithium ion cell > 20 Wh Lithium ion battery > 100 Wh	
Classification	Fully-regulated Class 9 DG
Package Limits	5 kg net weight (Pass.) 35 kg net weight (Cargo)
Packaging	UN performance packaging
Labels*	 
Markings	UN3480, Lithium ion batteries
Shipping paper	Shipper's Declaration for DG
Training	DG training

ICAO TI PI 968, Section II

Exceptions for Lithium Metal Cells/Batteries



Effective Jan. 1, 2013

	Lithium metal cells ≤ 1 g Li metal	Lithium metal batteries ≤ 2 g Li metal
Maximum number per package	8	2
Classification	Excepted	Excepted
Maximum net quantity (mass) per package	No weight limit	No weight limit
Labeling		
Employee training	Adequate instructions	Adequate instructions

ICAO TI PI 968, Section IB

Fully Regulated Lithium Metal Cells/Batteries



Effective Jan. 1, 2013

Lithium metal cell \leq 1 g Li metal Lithium metal battery \leq 2 g Li metal > 2 batteries <u>or</u> > 8 cells per package	
Classification	Fully regulated Class 9 DG
Package Limits	2.5 kg gross weight of package (Passenger and cargo aircraft)
Packaging	Strong outer packaging 1.2 M drop test
Labels	 
Markings	UN3090, Lithium metal batteries
Shipping papers	Shipper's declaration for DG or alternative document
Training	Full dangerous goods training

* If shipping to, from or within the United States, the **Cargo Aircraft Only** label must be placed on outer packaging and over pack (if used). See State Variation US 2 in ICAO TI.

U.S. Hazardous Materials Regulations

Exceptions for Lithium Metal Cells/Batteries



	Lithium metal cells ≤ 1 g Li metal	Lithium metal batteries ≤ 2 g Li metal
Maximum number per package	N/A	N/A
Classification	Excepted	Excepted
Maximum net quantity (mass) per package	30 kg (66 pounds)	30 kg (66 pounds)
Labeling*	 (or similar)	 (or similar)
Employee training	None	None

* Only required for packages with more than 12 batteries or 24 cells

ICAO TI PI 968, Section IA

Fully Regulated Lithium Metal Cells/Batteries

Effective Jan. 1, 2013

Lithium metal cell > 1.0 g Li metal Lithium metal battery > 2.0 g Li metal	
Classification	Fully regulated Class 9 DG
Package Limits	2.5 kg net weight (Pass.) 35 kg net weight (Cargo)
Packaging	UN performance packaging
Labels* (** Additional restrictions apply to shipments to, from or within the United States.)	 
Markings	UN3090, Lithium metal batteries
Shipping paper	Shipper's Declaration for DG
Training	DG training

* ICAO TI requires **Cargo Aircraft Only** label for outer packaging and over pack (if used) if outer packaging contains more than 2.5 kg net weight of lithium metal cells or batteries

** If shipping to, from or within the United States, the **Cargo Aircraft Only** must be placed on outer packaging and over pack (if used). See State Variation US 2 in ICAO Technical Instructions.