

# 2021 LITHIUM BATTERY SHIPPING GUIDE



January 14, 2021

The following guide provides a summary of marking, labeling and paperwork requirements for shipping lithium batteries via domestic US ground (49 CFR 171-180 in effect 1-Jan-2021), international air (2021 IATA DGR, 62<sup>ND</sup> Edition) and international vessel (IMDG, 39-18). Refer to the regulatory citations provided, country specific regulations and/or operator variations for complete requirements. Employees who perform any pre-transportation functions must have current training certificates. Also see: <u>DISCLAIMER</u>

This guide will be updated as lithium battery regulations change. Please check <u>www.hazmateam.com</u> for the most current version of this document.

TO GET STARTED, CLICK ON THE HOME ICON:





**IS MY LITHIUM CELL OR BATTERY UN TESTED?** 

WHAT SIZE IS MY LITHIUM ION (RECHARGEABLE)

**<u>CELL/BATTERY?</u>** 

SMALL LITHIUM ION CELL/BATTERY

**REQUIREMENTS** 

MEDIUM LITHIUM ION

**CELL/BATTERY** 

REQUIREMENTS

FULLY REGULATED LITHIUM ION CELL/BATTERY REQUIREMENTS

DAMAGED OR DEFECTIVE LITHIUM ION CELL/BATTERY

REQUIREMENTS

WHAT SIZE IS MY LITHIUM METAL (NON-RECHARGEABLE) CELL/BATTERY?

SMALL LITHIUM METAL CELL/BATTERY REQUIREMENTS

MEDIUM LITHIUM METAL CELL/BATTERY REQUIREMENTS

FULLY REGULATED LITHIUM METAL CELL/BATTERY REQUIREMENTS

DAMAGED OR DEFECTIVE LITHIUM METAL CELL/BATTERY REQUIREMENTS

**BATTERY-POWERED VEHICLES** 

## **IS MY LITHIUM CELL OR BATTERY UN TESTED?**

### **IMPORTANT CLASSIFICATION REQUIREMENT**

Except for prototype batteries, each lithium cell or battery (small, medium or fully regulated) must be of the type proven to meet the criteria in part III, sub-section 38.3 of the UN Manual of Tests and Criteria. Lithium cells and batteries are subject to these tests regardless of whether the cells used to construct the battery are of a tested type. <u>Refer</u> to 49 CFR 173.185 (a)

Lithium battery test summary – effective 1 January 2020, manufacturers and subsequent distributors of cells or batteries and equipment powered by cells and batteries manufactured after 30 June 2003 must make available the test summary as specified in the UN Manual of Tests and Criteria, Revision 6 and amend. 1, Part III, sub-section 38.3, paragraph 38.3.5.

For prototypes see <u>49 CFR 173.185 (e)</u>. Prototype batteries must be shipped fully regulated.

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### LITHIUM ION CELL & BATTERY SIZE DEFINITIONS

(Lithium Ion Cells and Batteries are Rechargeable; Also called "secondary" batteries)

SIZE & TYPE		VESSEL TRANSPORT	DOMESTIC USA GROUND TRANSPORT
	MAXIMUM WATT HOUR RATING	MAXIMUM WATT HOUR RATING	MAXIMUM WATT HOUR RATING
SMALL CELL	20 WH	20 WH	20 WH
SMALL BATTERY	100 WH	100 WH	100 WH
MEDIUM CELL	Not applicable to air transport	Not applicable to vessel transport	60 WH
MEDIUM BATTERY	Not applicable to air transport	Not applicable to vessel transport	300 WH
FULLY REGULATED CELL	> 20 WH	> 20 WH	> 60 WH
FULLY REGULATED BATTERY	> 100 WH	> 100 WH	> 300 WH

**"Hybrid" Batteries:** containing both lithium ion cells and lithium metal cells must be shipped as UN 3090 or UN 3091, as appropriate. See Lithium Metal Cell & Battery Size Definitions.

**Prototype Cells and Batteries (not UN tested):** must be shipped Fully Regulated regardless of watt hour rating of battery/cell.

These size definitions do not apply to UN 3171, Battery-Powered Vehicles

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## LITHIUM METAL CELL & BATTERY SIZE DEFINITIONS

(Lithium Metal Cells and Batteries are Non-Rechargeable; Also called "primary" batteries)

SIZE & TYPE	AIR TRANSPORT	VESSEL TRANSPORT	DOMESTIC USA GROUND TRANSPORT
	HAZMATEAN	Пахматеам	HAZMATEAM
	MAXIMUM AGGREGATE LITHIUM CONTENT <sup>2</sup>	MAXIMUM AGGREGATE LITHIUM CONTENT <sup>2</sup>	MAXIMUM AGGREGATE LITHIUM CONTENT <sup>2</sup>
SMALL CELL	1 GRAM	1 GRAM	1 GRAM
SMALL BATTERY	2 GRAMS <sup>1</sup>	2 GRAMS <sup>1</sup>	2 GRAMS <sup>1</sup>
MEDIUM CELL	Not applicable to air transport	Not applicable to vessel transport	5 GRAMS
MEDIUM BATTERY	Not applicable to air transport	Not applicable to vessel transport	25 GRAMS
FULLY REGULATED CELL	> 1 GRAM	>1 GRAM	> 5 GRAMS
FULLY REGULATED BATTERY	> 2 GRAMS	> 2 GRAMS	> 25 GRAMS

**"Hybrid" Batteries:** containing both lithium ion cells and lithium metal cells must be shipped as UN 3090 or UN 3091, as appropriate. Note 1 - A small "hybrid" battery may not contain more than 1.5 g of lithium metal contained within all lithium metal cells and the total capacity of all lithium ion cells contained in the battery shall not exceed 10 Wh. "Hybrid" batteries are not externally charged.

**Prototype Cells and Batteries (not UN tested):** must be shipped Fully Regulated regardless of lithium metal content per battery/cell.

Note 2 - Aggregate lithium content: the sum of the grams of lithium content contained by the cells comprising a battery.

These size definitions do not apply to UN 3171, Battery-Powered Vehicles

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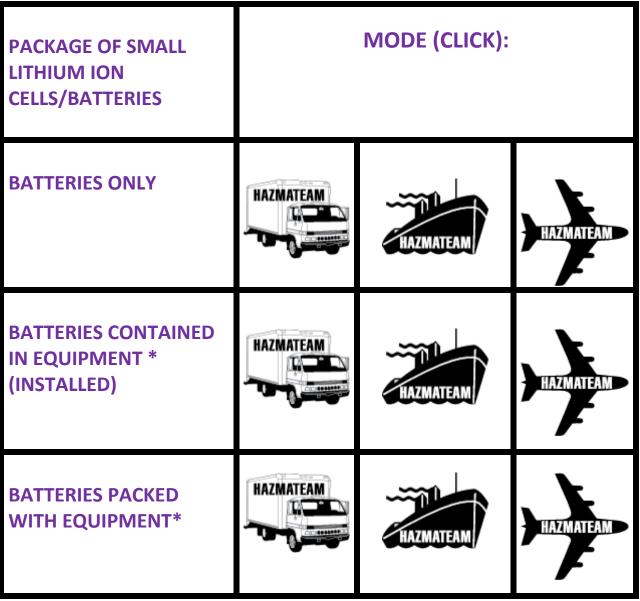




## SMALL LITHIUM ION

**CELL/BATTERY** 

REQUIREMENTS



• *Equipment* means the device or apparatus for which the lithium cells or batteries will provide electrical power for its operation





WHAT SIZE IS MY LITHIUM ION (RECHARGEABLE) CELL/BATTERY?

## **MEDIUM<sup>1</sup> LITHIUM ION**

**CELL/BATTERY** 

## REQUIREMENTS

PACKAGE OF MEDIUM LITHIUM ION CELLS/BATTERIES	MODE (CLICK):
BATTERIES ONLY	HAZMATEAM
BATTERIES CONTAINED IN EQUIPMENT <sup>2</sup> (INSTALLED)	HAZMATEAM
BATTERIES PACKED WITH EQUIPMENT <sup>2</sup>	HAZMATEAM

\*NOTES:

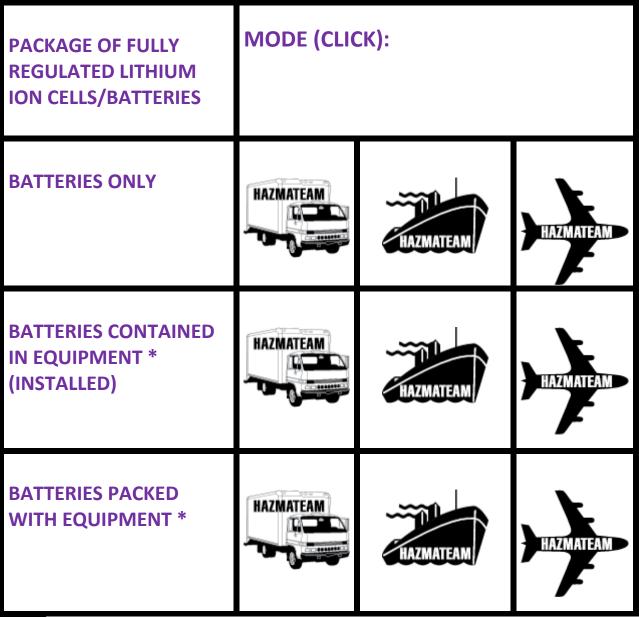
1) MEDIUM BATTERIES IS A DESIGNATION FOR GROUND DOMESTIC USA ONLY

2) Equipment means the device or apparatus for which the lithium cells or batteries will provide electrical power for its operation

NAVIGATE (CLICK):



WHAT SIZE IS MY LITHIUM ION (RECHARGEABLE) CELL/BATTERY? FULLY REGULATED LITHIUM ION CELL/BATTERY REQUIREMENTS



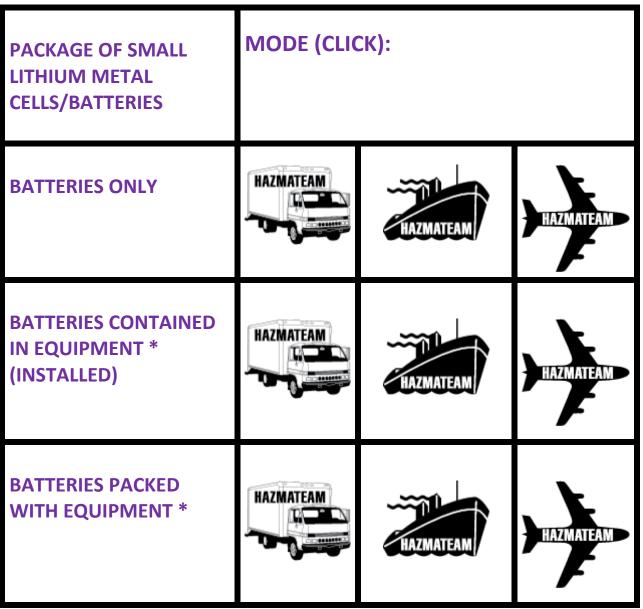
• *Equipment* means the device or apparatus for which the lithium cells or batteries will provide electrical power for its operation

NAVIGATE (CLICK):



WHAT SIZE IS MY LITHIUM ION (RECHARGEABLE) CELL/BATTERY?

## SMALL LITHIUM METAL CELL/BATTERY REQUIREMENTS



• Equipment means the device or apparatus for which the lithium cells or batteries will provide electrical power for its operation

NAVIGATE (CLICK):



WHAT SIZE IS MY LITHIUM METAL (NON-RECHARGEABLE) <u>CELL/BATTERY?</u>

## **MEDIUM<sup>1</sup> LITHIUM METAL CELL/BATTERY** REQUIREMENTS

PACKAGE OF MEDIUM LITHIUM METAL CELLS/BATTERIES	MODE (CLICK):
BATTERIES ONLY	HAZMATEAM
BATTERIES CONTAINED IN EQUIPMENT <sup>2</sup> (INSTALLED)	HAZMATEAM
BATTERIES PACKED WITH EQUIPMENT <sup>2</sup>	HAZMATEAM

NOTES:

1) MEDIUM BATTERIES IS A DESIGNATION FOR GROUND DOMESTIC USA ONLY;

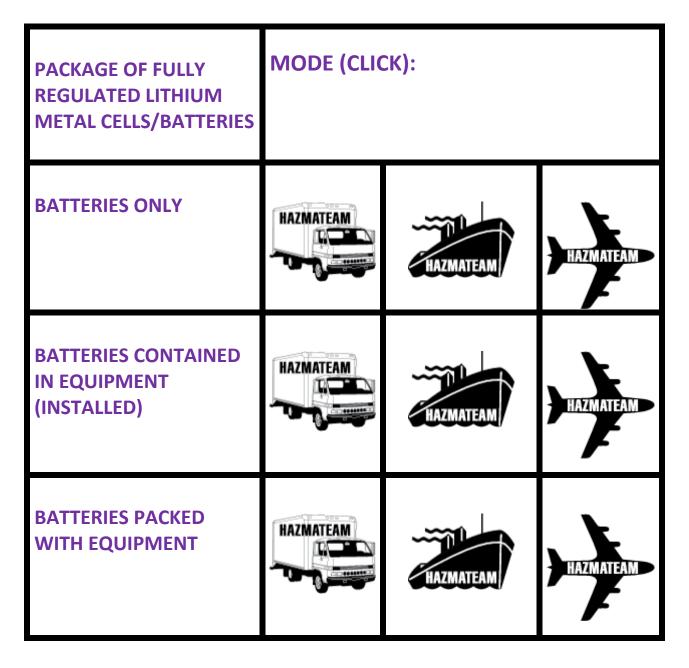
2) Equipment means the device or apparatus for which the lithium cells or batteries will provide electrical power for its operation

NAVIGATE (CLICK):



WHAT SIZE IS MY LITHIUM METAL (NON-RECHARGEABLE) **CELL/BATTERY?** 

FULLY REGULATED LITHIUM METAL CELL/BATTERY REQUIREMENTS



NAVIGATE (CLICK):



WHAT SIZE IS MY LITHIUM METAL (NON-RECHARGEABLE) CELL/BATTERY?

## **BATTERY-POWERED VEHICLES**

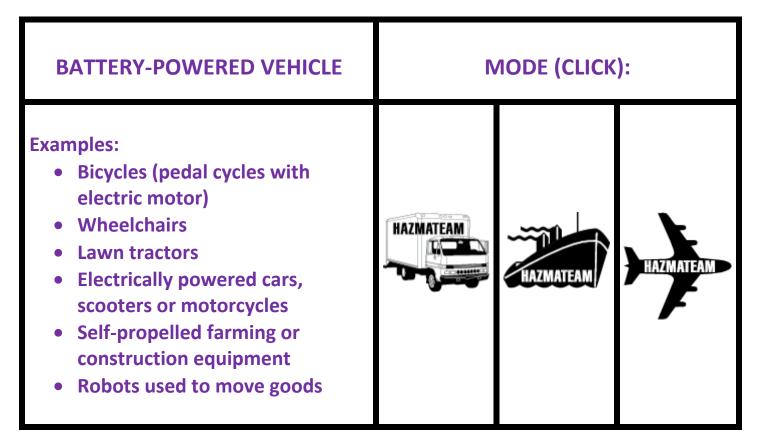
*"Battery-Powered Vehicles"* are self-propelled apparatus designed to carry one or more persons or goods. In this case some parts of the vehicle may be detached from its frame to fit into the packaging. Reference: 49 CFR 172.102, SP 134.

The information provided in this guide applies to vehicles powered only by a lithium ion or lithium metal battery. If the vehicle is powered by other battery types or fuels, refer to 49 CFR 173.220, IMDG SP 388 & 962 or IATA PI 952, as applicable.

The battery must be UN 38.3 tested and installed in the vehicle. The battery must not be damaged or defective.

If battery is not installed, must ship as "UN 3091, Lithium Metal Batteries Packed with Equipment" or "UN 3481, Lithium Ion Batteries Packed with Equipment", as applicable.

There is no battery size designation (small, medium or fully regulated) for these entries.

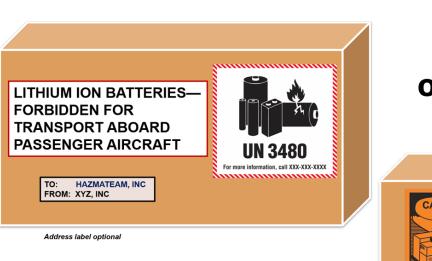




#### SMALL LITHIUM ION BATTERIES – NO EQUIPMENT



- LITHIUM ION BATTERIES, UN 3480
- GROUND & VESSEL TRANSPORT
- BATTERY SIZE: SMALL (UN Tested)
- NO EQUIPMENT
- DECLARATION/SHIPPING PAPER: NO
- Limit: 30 KG GROSS WT







Address label optional

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**REFERENCE:** 

GROUND: 49 CFR 173.185 (c)(1)(iii) & (c)(3)

VESSEL: IMDG CODE, CHAPTER 3.3, SP 188







#### SMALL LITHIUM ION BATTERIES PACKED WITH EQUIPMENT



#### NET WT OF SMALL BATTERIES PER PACKAGE IS NO MORE THAN 5 KG

- LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, UN 3481
- GROUND & VESSEL TRANSPORT
- BATTERY SIZE: SMALL (UN Tested)
- DECLARATION/SHIPPING PAPER: NO
- EQUIPMENT AND BATTERY IN SAME PACKAGE. BATTERY NOT INSTALLED.
- CLICK HERE IF MORE THAN 5 KG NET PER PKG



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REFERENCE:
GROUND: 49 CFR 173.185 (c)(1)(iii) & (c)(3)
VESSEL: IMDG CODE, CHAPTER 3.3, SP 188





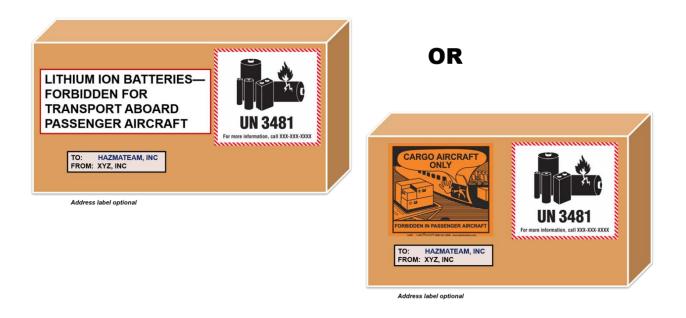


#### SMALL LITHIUM ION BATTERIES PACKED WITH EQUIPMENT



#### NET WT OF SMALL BATTERIES PER PACKAGE IS GREATER THAN 5 KG

- LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, UN 3481
- GROUND & VESSEL TRANSPORT
- BATTERY SIZE: SMALL (<u>UN Tested</u>)
- DECLARATION/SHIPPING PAPER: NO
- EQUIPMENT AND BATTERY IN SAME PACKAGE. BATTERY NOT INSTALLED.
- CLICK HERE IF NO MORE THAN 5 KG NET PER PACKAGE



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GROUND: 49 CFR 173.185 (c)(1)(iii) & (c)(3)

VESSEL: IMDG CODE, CHAPTER 3.3, SP 188





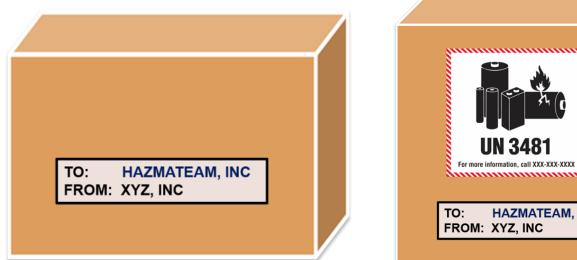
#### SMALL LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT



#### NO MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE

NET WT OF SMALL BATTERIES PER PACKAGE IS NO MORE THAN 5 KG

- LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, UN 3481 •
- **GROUND & VESSEL TRANSPORT**
- BATTERY SIZE: SMALL (UN Tested) •
- DECLARATION/SHIPPING PAPER: NO
- BATTERY INSTALLED IN EQUIPMENT.
- CLICK HERE IF MORE THAN 5 KG NET PER PACKAGE
- CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED
- CLICK HERE IF LITHIUM ION BUTTON CELLS INSTALLED



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**REFERENCE:** 

GROUND: 49 CFR 173.185 (c)(1)(iii) & (c)(3)

VESSEL: IMDG CODE, CHAPTER 3.3, SP 188

IF MORE THAN 2 PACKAGES PER CONSIGNMENT.







#### SMALL LITHIUM ION BUTTON CELLS CONTAINED IN EQUIPMENT



#### NET WT OF SMALL BATTERIES PER PACKAGE IS NO MORE THAN 5 KG

- LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, UN 3481
- GROUND & VESSEL TRANSPORT
- BATTERY SIZE: SMALL (UN Tested)
- BUTTON CELL INSTALLED IN EQUIPMENT
- DECLARATION/SHIPPING PAPER: NO
- BUTTON CELL INSTALLED IN EQUIPMENT
- NO LIMIT TO THE NUMBER OF BUTTON CELLS INSTALLED, MUST NOT EXCEED 5 KG NET PER PKG
- <u>CLICK HERE IF SMALL LITHIUM ION BATTERY OTHER THAN BUTTON CELL INSTALLED</u>



Button cell or battery means a round small cell or battery when the overall height is less than the diameter.

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**REFERENCE:** 

GROUND: 49 CFR 173.185 (c)(1)(iii) & (c)(3)

VESSEL: IMDG CODE, CHAPTER 3.3, SP 188







#### SMALL LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT



#### MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE

#### NET WT OF BATTERIES PER PACKAGE NO MORE THAN 5 KG

- LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, UN 3481
- GROUND & VESSEL TRANSPORT
- BATTERY SIZE: SMALL (UN Tested)
- DECLARATION/SHIPPING PAPER: NO
- BATTERY INSTALLED IN EQUIPMENT.
- CLICK HERE IF MORE THAN 5 KG NET PACKAGE
- <u>CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE</u>



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REFERENCE:	
GROUND: 49 CFR 173.185 (c)(1)(iii) & (c)(3)	
VESSEL: IMDG CODE, CHAPTER 3.3, SP 188	







#### SMALL LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT

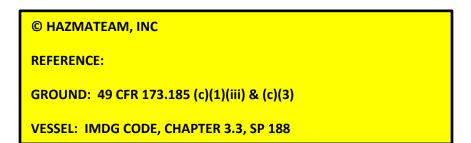


#### NET WT OF BATTERIES PER PACKAGE GREATER THAN 5 KG

- LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, UN 3481
- GROUND & VESSEL TRANSPORT
- BATTERY SIZE: SMALL (<u>UN Tested</u>)
- DECLARATION/SHIPPING PAPER: NO
- BATTERY INSTALLED IN EQUIPMENT.
- CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED AND NO MORE THAN 5 KG PER PKG
- CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED AND NO MORE THAN 5 KG PER PKG













#### WITHIN QUANTITY LIMITS OF PI 965 SECTION II

- LITHIUM ION BATTERIES, UN 3480 .
- **AIR TRANSPORT** •
- NO EQUIPMENT
- BATTERY SIZE: SMALL (UN Tested) •
- **DECLARATION/SHIPPING PAPER: NO**
- STATE OF CHARGE MUST NOT EXCEED 30 % OF RATED DESIGN CAPACITY
- ONLY 1 PKG PER CONSIGNMENT MAY BE OFFERED PER PI 965 Section II (more than 1 PKG to be offered according to PI 965 Section 1B)
- WITHIN THE LIMITS OF THE FOLLOWING TABLE:

Contents	Lithium ion cells and/or batteries with a Watt-hour rating not more than 2.7 Wh	Lithium ion cells with a Watt-hour rating more than 2.7 Wh but not more than 20 Wh	Lithium ion bat- teries with a Watt-hour rating more than 2.7 Wh but not more than 100 Wh
Maximum number of cells/ batteries per package. Maximum net quantity (mass) per package.	No Limit 2.5 kg	8 cells n/a	2 batteries. n/a.

#### CLICK HERE IF TABLE LIMITS EXCEEDED



#### Address label optional

© HAZMATEAM, INC; **REFERENCE:** DOMESTIC USA: 49 CFR 173.185 (c)(4) **INTERNATIONAL AIR: IATA PACKING INSTRUCTION 965, SECTION II** NAVIGATE (CLICK):









#### NOTE:

**FEDEX & UPS WILL NOT** ACCEPT THIS PACKAGE (PI 965 SECTION II)

**MUST BE SHIPPED PI 965 SECTION IB** 

OR

**PI 965 SECTION IA** 

**CELLS AND BATTERIES MUST NOT BE PACKED IN** THE SAME OUTER PACKAGING WITH OTHER **DANGEROUS GOODS** 

#### SMALL LITHIUM ION BATTERIES – NO EQUIPMENT (PI 965 SECTION 1B)

#### **EXCEEDS QUANTITY LIMITS IN PI 965 SECTION II**

- LITHIUM ION BATTERIES, UN 3480 •
- AIR TRANSPORT .
- NO EQUIPMENT •
- PACKAGE CONTAINS  $\leq$  10 KG net, SMALL LITHIUM ION BATTERIES (UN Tested) •
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- STATE OF CHARGE MUST NOT EXCEED 30 % OF RATED DESIGN CAPACITY •
- **EXCEEDS** THE LIMITS OF THE FOLLOWING TABLE OR MORE THAN 1 PKG OF PI 965 SECTION II PER CONSIGNMENT:

				b publication indication for use for the responsible during the initial phases of a bismean/splice initial benchmig bearenisms methodes/splices.
Contents	Lithium ion cells and/or batteries with a Watt-hour rating not more than 2.7 Wh	Lithium ion cells with a Watt-hour rating more than 2.7 Wh but not more than 20 Wh	Lithium ion bat- teries with a Watt-hour rating more than 2.7 Wh but not more than 100 Wh	And
Maximum number of cells/ batteries per package.	No Limit	8 cells	2 batteries.	0 IH 22 23 61
Maximum net quantity (mass) per package.	2.5 kg	n/a	n/a.	BOTH

#### IF WITHIN QUANTITY LIMITS AND 1 PKG PER CONSIGNMENT, CLICK HERE



**CELLS AND BATTERIES MUST NOT BE** PACKED IN THE SAME **OUTER PACKAGING** WITH CLASS 1 (OTHER THAN 1.4S), DIV 2.1, CLASS 3, DIV 4.1 or **DIV 5.1** 

REQUIRED

Address label mandatory

© HAZMATEAM, INC **REFERENCE:** DOMESTIC USA: 49 CFR 173.185 (c)(4) **INTERNATIONAL AIR: IATA PACKING INSTRUCTION 965, SECTION IB** 









#### SMALL LITHIUM ION BATTERIES PACKED WITH EQUIPMENT

- LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, UN 3481
- Air TRANSPORT
- BATTERY SIZE: SMALL (UN Tested)
- LIMIT: NET WT OF BATTERIES PER PACKAGE IS NO MORE THAN 5 KG
- NO MORE THAN THE MINIMUM NUMBER OF BATTERIES TO POWER THE EQUIPMENT PLUS TWO SPARES.
- DECLARATION/SHIPPING PAPER: NO
- EQUIPMENT AND BATTERY IN SAME PACKAGE. BATTERY NOT INSTALLED.



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© HAZMATEAM, INC REFERENCE: DOMESTIC USA: 49 CFR 173.185 (c)(3), (c)(4) INTERNATIONAL AIR: IATA, PACKING INSTRUCTION 966, SECTION II







#### SMALL LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT

#### NO MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE

- LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, UN 3481
- Air TRANSPORT (Battery installed)
- BATTERY SIZE: SMALL (UN Tested)
- LIMIT: NET WT OF BATTERIES PER PACKAGE IS NO MORE THAN 5 KG
- LIMIT: NO MORE THAN 4 LITHIUM ION CELLS OR 2 LITHIUM ION BATTERIES ARE INSTALLED OR IF BUTTON CELL BATTERIES ARE INSTALLED.
- DECLARATION/SHIPPING PAPER: NO
- <u>CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED (OTHER THAN BUTTON CELLS)</u>
- <u>CLICK HERE IF SHIPPING BUTTON CELLS INSTALLED IN EQUIPMENT</u>

TO: HAZMATEAM, INC FROM: XYZ, INC	

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IF SHIPPING ONE OR TWO PACKAGES ACCORDING TO PI 967, SECTION II Address label optional

IF SHIPPING MORE THAN TWO PACKAGES ACCORDING TO PI 967, SECTION II

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REFERENCE:

DOMESTIC USA: 49 CFR 173.185 (c)(3), (c)(4)

INTERNATIONAL AIR: IATA, PACKING INSTRUCTION 967, SECTION II











#### SMALL LITHIUM ION BUTTON CELLS CONTAINED IN EQUIPMENT



#### NO MORE THAN 5 KG NET QTY OF BUTTON CELLS INSTALLED PER PKG

- LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, UN 3481
- AIR TRANSPORT
- BATTERY SIZE: SMALL (UN Tested)
- BUTTON CELL INSTALLED IN EQUIPMENT
- DECLARATION/SHIPPING PAPER: NO
- BUTTON CELL INSTALLED IN EQUIPMENT
- NO LIMIT TO THE NUMBER OF BUTTON CELLS INSTALLED, CANNOT EXCEED 5 KG NET PER PACKAGE
- <u>CLICK HERE IF SMALL LITHIUM ION BATTERIES OTHER THAN BUTTON CELLS CONTAINED IN EQUIPMENT</u>

TO: FROM:	HAZMATEAM, INC XYZ, INC	

Button cell or battery means a round small cell or battery when the overall height is less than the diameter.

Address label optional

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**REFERENCE:** 

DOMESTIC USA: 49 CFR 173.185 (c)(3), (c)(4)

**INTERNATIONAL AIR: IATA, PACKING INSTRUCTION 967, SECTION II** 





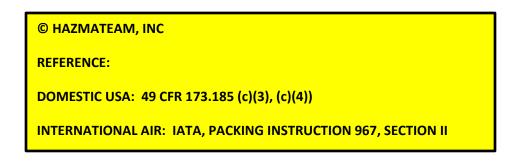
#### SMALL LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT

#### MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE

- LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, UN 3481
- Air TRANSPORT
- BATTERY SIZE: SMALL (UN Tested)
- LIMIT: NET WT OF BATTERIES PER PACKAGE IS NO MORE THAN 5 KG
- DECLARATION/SHIPPING PAPER: NO
- BATTERY IS INSTALLED.
- <u>CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE</u>



Address label optional



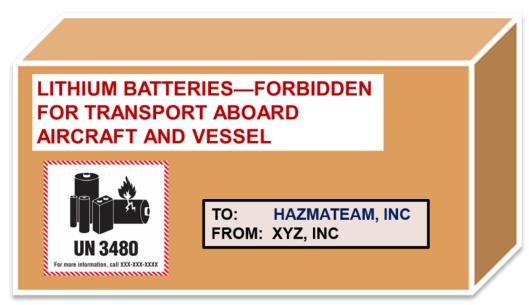




#### **MEDIUM LITHIUM ION BATTERIES – NO EQUIPMENT**

- LITHIUM ION BATTERIES, UN 3480
- GROUND ONLY --- DOMESTIC USA ONLY
- BATTERY SIZE: MEDIUM (UN Tested)
- NO EQUIPMENT
- DECLARATION/SHIPPING PAPER: NO
- Limit: 30 KG GROSS WT





Address label optional

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**REFERENCE:** 

GROUND: 49 CFR 173.185 (c)(1)(iv), (vi) & (c)(3)



#### MEDIUM LITHIUM ION BATTERIES PACKED WITH EQUIPMENT

LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, UN 3481 •



GROUND ONLY --- DOMESTIC USA ONLY BATTERY SIZE: MEDIUM (UN Tested)

•

- DECLARATION/SHIPPING PAPER: NO
- EQUIPMENT AND BATTERY IN SAME PACKAGE. BATTERY NOT INSTALLED. •

LITHIUM BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD AIRCRAFT AND VESSEL TO: HAZMATEAM, INC FROM: XYZ, INC UN 3481 For more information, call XXX-XXX-XXXX

Address label optional

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**REFERENCE:** 

GROUND: 49 CFR 173.185 (c)(1)(iv) & (c)(3)

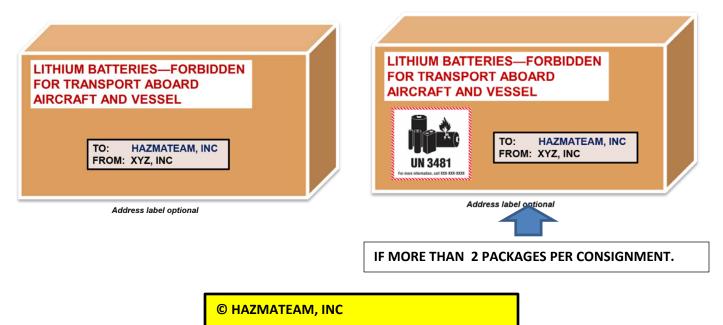


#### MEDIUM LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT

#### NO MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED PER PACKAGE



- LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, UN 3481
- GROUND ONLY --- DOMESTIC USA ONLY
- BATTERY SIZE: MEDIUM (UN Tested)
- NO MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED IN EQUIPMENT OR BUTTON CELLS INSTALLED
- DECLARATION/SHIPPING PAPER: NO
- BATTERY INSTALLED IN EQUIPMENT.
- <u>CLICK HERE FOR MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE</u>



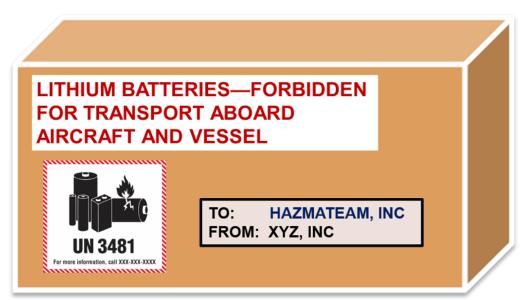
REFERENCE:

GROUND: 49 CFR 173.185 (c)(1)(iv) & (c)(3)

#### MEDIUM LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT

#### MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE

- LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, UN 3481
- GROUND ONLY --- DOMESTIC USA ONLY
- BATTERY SIZE: MEDIUM (UN Tested)
- DECLARATION/SHIPPING PAPER: NO
- BATTERY INSTALLED IN EQUIPMENT.
- <u>CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE</u>



Address label optional

© HAZMATEAM, INC

**REFERENCE:** 

GROUND: 49 CFR 173.185 (c)(1)(iv) & (c)(3)





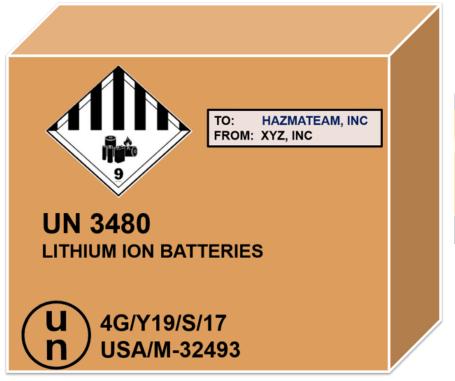




#### FULLY REGULATED LITHIUM ION BATTERIES – NO EQUIPMENT

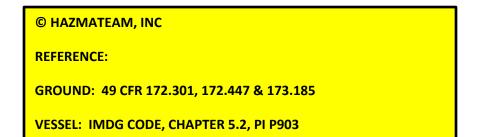


- LITHIUM ION BATTERIES, UN 3480
- GROUND AND VESSEL TRANSPORT
- BATTERY SIZE: FULLY REGULATED (UN Tested)
- NO EQUIPMENT
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- Limit: REFER TO PACKAGE CLOSURE INSTRUCTION



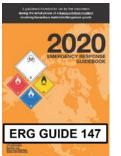


Address label: IMDG optional; DOT see 49 CFR 172.301(d)



### NAVIGATE (CLICK):







## SHIPPING PAPER

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#### FULLY REGULATED LITHIUM ION BATTERIES PACKED WITH EQUIPMENT

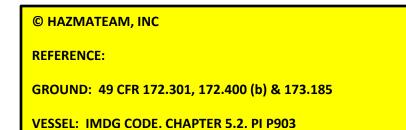
- LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, UN 3481
- GROUND & VESSEL TRANSPORT
- BATTERY SIZE: FULLY REGULATED (UN Tested)
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- EQUIPMENT AND BATTERY IN SAME PACKAGE. BATTERY NOT INSTALLED.
- Limit: REFER TO PACKAGE CLOSURE INSTRUCTION







Address label: IMDG optional; DOT see 49 CFR 172.301(d)



### NAVIGATE (CLICK):







#### SHIPPING PAPER EXAMPLES

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#### FULLY REGULATED LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT

- LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, UN 3481
- GROUND & VESSEL TRANSPORT
- BATTERY SIZE: FULLY REGULATED (UN Tested)
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- BATTERY INSTALLED IN EQUIPMENT





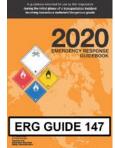


Address label: IMDG optional; DOT see 49 CFR 172.301(d)

### © HAZMATEAM, INC <u>REFERENCE:</u> GROUND: 49 CFR 172.301, 172.447 & 173.185 SPEC PKG NOT REQUIRED: 49 CFR 173.185 (b)(4) VESSEL: IMDG CODE, CHAPTER 5.2, PI P903

### NAVIGATE (CLICK):







#### SHIPPING PAPER EXAMPLES

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#### FULLY REGULATED LITHIUM ION BATTERIES - NO EQUIPMENT (PI 965 SECTION IA)

- LITHIUM ION BATTERIES, UN 3480
- AIR TRANSPORT
- NO EQUIPMENT
- BATTERY SIZE: FULLY REGULATED (UN Tested)
- BATTERY STATE OF CHARGE MUST NOT EXCEED 30 % OF RATED DESIGN CAPACITY
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- FORBIDDEN FOR PASSENGER AIR; MAX NET QTY/PKG CARGO AIRCRAFT = 35 KG
- REFER TO PACKAGE CLOSURE INSTRUCTION





CELLS AND BATTERIES MUST NOT BE PACKED IN THE SAME OUTER PACKAGING WITH CLASS 1 (OTHER THAN 1.4S), DIV 2.1, CLASS 3, DIV 4.1 or DIV 5.1

Address label mandatory

#### © HAZMATEAM, INC

**REFERENCE:** 

DOMESTIC USA: 49 CFR 172.301 & 172.447, 172.402(c), 173.185 INTERNATIONAL AIR: IATA 7.1.4.1, 7.2.3.1, PI 965 SECTION IA





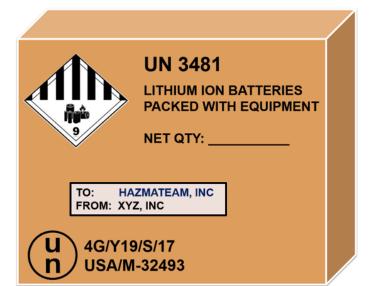






#### FULLY REGULATED LITHIUM ION BATTERIES PACKED WITH EQUIPMENT

- LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, UN 3481
- AIR TRANSPORT
- BATTERY SIZE: FULLY REGULATED (UN Tested)
- EQUIPMENT AND BATTERY IN SAME PACKAGE. BATTERY NOT INSTALLED.
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- MAX NET QTY/PKG PASSENGER AIRCRAFT= 5 KG; MAX NET QTY/PKG CARGO AIRCRAFT = 35 KG
- REFER TO PACKAGE CLOSURE INSTRUCTION



Address label mandatory



ADD THIS LABEL IF PACKAGE CONTAINS GREATER THAN 5 KG NET LITHIUM ION BATTERIES (35 KG MAX)



<u>REFERENCE:</u> DOMESTIC USA: 49 CFR 172.301 & 172.400(b), 172.402(c), 173.185 INTERNATIONAL AIR: IATA 7.1.4.1, 7.2.3.1, PI 966 SECTION I



#### FULLY REGULATED LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT

- LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, UN 3481 •
- AIR TRANSPORT •
- BATTERY SIZE: FULLY REGULATED (UN Tested) •
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES •
- BATTERY INSTALLED IN EQUIPMENT •
- MAX NET PER PKG PASSENGER AIR = 5 KG; MAX NET QTY PER PKG CARGO AIRCRAFT = 35 KG

		CARGO AIRCRAFT ONLY
	UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT	
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то: на	ZMATEAM, INC	ADD THIS LABEL IF PACKAGE CONTAINS GREATER THAN 5 KG NET LITHIUM ION BATTERIES (35 KG MAX)
FROM: XY		

Address label mandatory

#### © HAZMATEAM, INC

**REFERENCE:** 

DOMESTIC USA: 49 CFR 172.301 & 172.400(b), 172.402(c) SPEC PKG NOT REQUIRED: 49 CFR 173.185 (b)(4) INTERNATIONAL AIR: IATA 7.1.4.1, 7.2.3.1, PI 967 SECTION I



### NAVIGATE (CLICK):







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#### DAMAGED/DEFECTIVE LITHIUM ION BATTERIES SHIPPED GROUND & VESSEL

LITHIUM CELLS OR BATTERIES, THAT HAVE BEEN DAMAGED OR IDENTIFIED BY THE MANUFACTURER AS BEING DEFECTIVE FOR SAFETY REASONS, THAT HAVE THE POTENTIAL OF PRODUCING A DANGEROUS EVOLUTION OF HEAT, FIRE, OR SHORT CIRCUIT (e.g. THOSE BEING RETURNED TO THE MANUFACTURER FOR SAFETY REASONS)

- LITHIUM ION BATTERIES, UN 3480
- BATTERY SIZE: ALL (UN Tested)
- GROUND AND VESSEL ONLY
- ONLY PACKAGING DESIGNED FOR DAMAGED OR DEFECTIVE BATTERIES MAY BE USED
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- CELLS AND BATTERIES LIABLE TO RAPIDLY DISASSEMBLE, DANGEROUSLY REACT, PRODUCE A FLAME OR A DANGEROUS EVOLUTION OF HEAT OR DANGEROUS EMISSION OF TOXIC, CORROSIVE OR FLAMMABELE GASES OR VAPORS UNDER NORMAL CONDITIONS OF TRANSPORT SHALL NOT BE TRANSPORTED



Address label: IMDG optional; DOT see 49 CFR 172.301(d)



#### © HAZMATEAM, INC

**REFERENCE:** 

#### <u>IMDG</u>

MARKS AND LABEL: IMDG Code Chapter 5.2 AND SP 376 PACKAGING: IMDG Code Chapter 4.1.4, PI P903 & PI P908

#### DOT GROUND

MARKS AND LABELS: 49 CFR 172 SUBPARTS D & E & 173.185 (f)(4) PACKAGING: <u>49 CFR 173.185 (b), (f) (CLICK)</u>







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#### SMALL LITHIUM METAL BATTERIES – NO EQUIPMENT

- LITHIUM METAL BATTERIES, UN 3090 •
- BATTERY SIZE: SMALL (UN Tested) •
- **GROUND & VESSEL TRANSPORT** •
- NO EQUIPMENT •
- DECLARATION/SHIPPING PAPER: NO •
- Limit: 30 KG GROSS WT •





Address label optional



Address label optional

© HAZMATEAM, INC

**REFERENCE:** 

GROUND: 49 CFR 173.185 (c)(1)(iii) & (c)(3)

VESSEL: IMDG CODE, CHAPTER 3.3, SP 188



#### SMALL LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT

#### NET WT OF SMALL BATTERIES PER PACKAGE IS NO MORE THAN 5 KG

- LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT, UN 3091
- BATTERY SIZE: SMALL (UN Tested)
- GROUND & VESSEL TRANSPORT
- DECLARATION/SHIPPING PAPER: NO
- EQUIPMENT AND BATTERY IN SAME PACKAGE. BATTERY NOT INSTALLED.
- <u>CLICK HERE IF MORE THAN 5 KG NET PER PACKAGE</u>



#### Address label optional

#### © HAZMATEAM, INC

#### **REFERENCE:**

GROUND: 49 CFR 173.185 (c)(1)(iii) & (c)(3) VESSEL: IMDG CODE, CHAPTER 3.3, SP 188







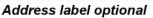
#### SMALL LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT



#### NET WT OF BATTERIES PER PACKAGE IS GREATER THAN 5 KG

- LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT, UN 3091
- BATTERY SIZE: SMALL (UN Tested)
- GROUND & VESSEL TRANSPORT
- DECLARATION/SHIPPING PAPER: NO
- EQUIPMENT AND BATTERY IN SAME PACKAGE. BATTERY NOT INSTALLED.
- CAO OR "PRIMARY..." LABEL ONLY REQUIRED IF SHIPPED FROM, THROUGH OR TO USA
- <u>CLICK HERE IF NO MORE THAN 5 KG NET PER PACKAGE</u>







Address label optional

# © HAZMATEAM, INC REFERENCE: GROUND: 49 CFR 173.185 (c)(1)(iii) & (c)(3) VESSEL: IMDG CODE, CHAPTER 3.3, SP 188







#### SMALL LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT

#### NET WT OF BATTERIES PER PACKAGE IS NO MORE THAN 5 KG



- LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, UN 3091
- GROUND & VESSEL TRANSPORT
- BATTERY SIZE: SMALL (UN Tested)
- NO MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE
- BATTERY INSTALLED IN EQUIPMENT.
- DECLARATION/SHIPPING PAPER: NO
- <u>CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED (OTHER THAN BUTTON CELLS) & NO MORE</u> <u>THAN 5 KG NET</u>
- <u>CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED (OTHER THAN BUTTON CELLS) & OVER 5</u>
   <u>KG NET</u>
- <u>CLICK HERE IF LITHIUM METAL BUTTON CELLS CONTAINED IN EQUIPMENT</u>



Address label optional





IF MORE THAN 2 PACKAGES PER CONSIGNMENT.

© HAZMATEAM, INC

**REFERENCE:** 

GROUND: 49 CFR 173.185 (c)(1)(iii) & (c)(3)

VESSEL: IMDG CODE, CHAPTER 3.3, SP 188







#### SMALL LITHIUM METAL BUTTON CELLS CONTAINED IN EQUIPMENT

#### NET WT OF BATTERIES PER PACKAGE IS NO MORE THAN 5 KG

- LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, UN 3091
- GROUND & VESSEL TRANSPORT
- BATTERY SIZE: SMALL (UN Tested)
- BUTTON CELL INSTALLED IN EQUIPMENT
- DECLARATION/SHIPPING PAPER: NO
- BUTTON CELL INSTALLED IN EQUIPMENT
- NO LIMIT TO THE NUMBER OF BUTTON CELLS INSTALLED, BUT CANNOT EXCEED 5 KG NET
- <u>CLICK HERE IF SMALL LITHIUM METAL BATTERY OTHER THAN BUTTON CELL INSTALLED</u>

TO: HAZMATEAM, INC FROM: XYZ, INC	
FROM: XYZ, INC	

Button cell or battery means a round small cell or battery when the overall height is less than the diameter.

Address label optional

© HAZMATEAM, INC

**REFERENCE:** 

GROUND: 49 CFR 173.185 (c)(1)(iii) & (c)(3)

VESSEL: IMDG CODE, CHAPTER 3.3, SP 188







#### SMALL LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT

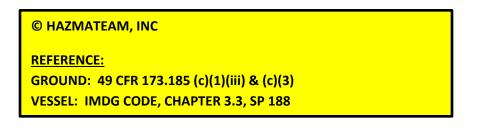


#### NET WT OF BATTERY PER PACKAGE NO MORE THAN 5 KG

- LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, UN 3091
- GROUND & VESSEL TRANSPORT
- BATTERY SIZE: SMALL (UN Tested)
- MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE
- DECLARATION/SHIPPING PAPER: NO
- BATTERIES INSTALLED IN EQUIPMENT
- <u>CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED (OTHER THAN BUTTON CELLS) & OVER 5</u>
   <u>KG NET</u>
- <u>CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED (OTHER THAN BUTTON CELLS) & NO</u> <u>MORE THAN 5 KG NET</u>
- <u>CLICK HERE IF LITHIUM METAL BUTTON CELLS CONTAINED IN EQUIPMENT</u>



Address label optional







#### SMALL LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT

#### NET WT OF BATTERIES PER PACKAGE IS MORE THAN 5 KG

- LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, UN 3091
- BATTERY SIZE: SMALL (UN Tested)
- GROUND & VESSEL TRANSPORT
- MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED IN EQUIPMENT PER PACKAGE
- DECLARATION/SHIPPING PAPER: NO
- BATTERIES INSTALLED IN EQUIPMENT
- CAO OR "PRIMARY..." LABEL ONLY REQUIRED IF SHIPPED FROM, THROUGH OR TO USA
- <u>CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED (OTHER THAN BUTTON CELLS) & NO</u> <u>MORE THAN 5 KG NET</u>
- <u>CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED (OTHER THAN BUTTON CELLS) & NO MORE</u>
   <u>THAN 5 KG NET</u>
- <u>CLICK HERE IF LITHIUM METAL BUTTON CELLS CONTAINED IN EQUIPMENT</u>



Address label optional



#### Address label optional

#### © HAZMATEAM, INC

REFERENCE: GROUND: 49 CFR 173.185 (c)(1)(iii) & (c)(3) VESSEL: IMDG CODE, CHAPTER 3.3, SP 188





#### SMALL LITHIUM METAL BATTERIES - NO EQUIPMENT (PI 968 SECTION II)

#### WITHIN QUANTITY LIMITS

- LITHIUM METAL BATTERIES, UN 3090
- Air TRANSPORT
- NO EQUIPMENT
- BATTERY SIZE: SMALL (UN Tested)
- DECLARATION/SHIPPING PAPER: NO
- ONLY ONE PKG PER CONSIGNMENT MAY BE OFFERED PER PI 968 Section II (IF MORE THAN 1 PKG, SHIP PER <u>PI 968 SECTION 1B</u>)
- WITHIN THE LIMITS OF THE FOLLOWING TABLE:

Contents	Lithium metal cells and/or bat- teries with a lith- ium content not more than 0.3 g	Lithium metal cells with a lith- ium content more than 0.3 g but not more than 1 g	Lithium metal batteries with a lithium content more than 0.3 g but not more than 2 g
Maximum number of cells/ batteries per package.	No Limit	8 cells	2 batteries
Maximum net quantity (mass) per package.	2.5 kg	n/a	n/a

#### CLICK HERE IF PACKAGE EXCEEDS LIMITS IN TABLE





#### NOTE:

FEDEX & UPS WILL NOT ACCEPT THIS PACKAGE (PI 968 SECTION II)

MUST BE SHIPPED

PI 968 SECTION IA

OR

PI 968 SECTION IB

CELLS AND BATTERIES MUST NOT BE PACKED IN THE SAME OUTER PACKAGING WITH OTHER DANGEROUS GOODS





#### **EXCEEDS QUANTITY LIMITS**

- LITHIUM METAL BATTERIES, UN 3090
- Air TRANSPORT
- NO EQUIPMENT
- BATTERY SIZE: SMALL (UN Tested)
- Package contains ≤ 2.5 KG net, lithium metal batteries
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- **EXCEEDS** LIMITS OF THE FOLLOWING TABLE:

Contents	Lithium metal cells and/or bat- teries with a lith- ium content not more than 0.3 g	Lithium metal cells with a lith- ium content more than 0.3 g but not more than 1 g	Lithium metal batteries with a lithium content more than 0.3 g but not more than 2 g
Maximum number of cells/ batteries per package.	No Limit	8 cells	2 batteries
Maximum net quantity (mass) per package.	2.5 kg	n/a	n/a

#### CLICK HERE IF WITHIN TABLE LIMITS



**CELLS AND BATTERIES** 

PACKED IN THE SAME OUTER PACKAGING WITH CLASS 1 (OTHER THAN 1.4S), DIV 2.1, CLASS 3, DIV 4.1 or

**MUST NOT BE** 

**DIV 5.1** 



#### © HAZMATEAM, INC

#### <u>REFERENCE:</u>

DOMESTIC USA: 49 CFR 173.185 (c)(3), (c)(4) INTERNATIONAL AIR: IATA, PACKING INSTRUCTION 968, SECTION 1B

#### NAVIGATE (CLICK):

**UN 3090** 

NET QTY:

LITHIUM METAL BATTERIES



IN 3090

HAZMATEAM, INC

TO:

Address label mandatory

FROM: XYZ, INC



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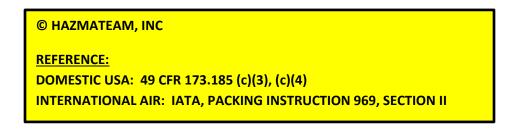


#### SMALL LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT

- LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT, UN 3091
- Air TRANSPORT
- BATTERY SIZE: SMALL (UN Tested)
- LIMIT: NET WT OF BATTERIES PER PACKAGE IS NO MORE THAN 5 KG
- NO MORE THAN THE MINIMUM NUMBER OF BATTERIES TO POWER THE EQUIPMENT PLUS TWO SPARES.
- DECLARATION/SHIPPING PAPER: NO
- EQUIPMENT AND BATTERY IN SAME PACKAGE. BATTERY NOT INSTALLED.



#### Address label optional





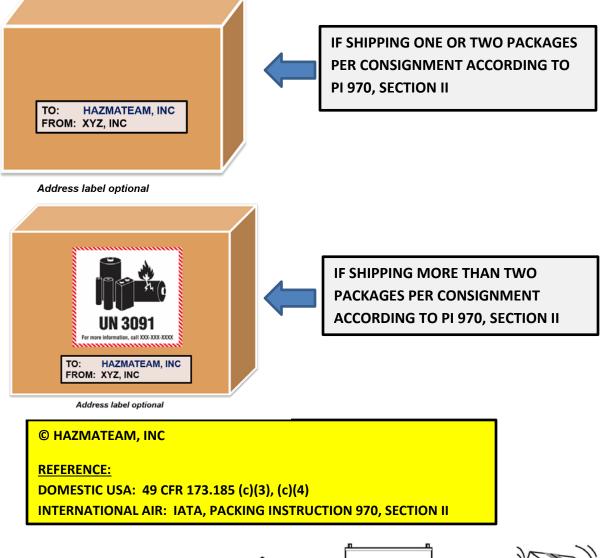




#### SMALL LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT

#### NO MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE

- LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, UN 3091
- Air TRANSPORT
- BATTERY SIZE: SMALL (UN Tested)
- LIMIT: NET WT OF BATTERIES PER PACKAGE IS NO MORE THAN 5 KG
- LIMIT: NO MORE THAN 4 LITHIUM METAL CELLS OR 2 LITHIUM METAL BATTERIES ARE CONTAINED IN EQUIPMENT OR IF BUTTON CELLS ARE INSTALLED PER PACKAGE
- DECLARATION/SHIPPING PAPER: NO
- BATTERY IS INSTALLED.
- <u>CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES (OTHER THAN BUTTON CELLS) ARE CONTAINED IN</u> <u>EQUIPMENT PER PACKAGE</u>
- <u>CLICK HERE IF LITHIUM METAL BUTTON CELLS ARE CONTAINED IN EQUIPMENT</u>













#### SMALL LITHIUM METAL BUTTON CELLS CONTAINED IN EQUIPMENT



#### NO MORE THAN 5 KG NET QTY OF BUTTON CELLS INSTALLED PER PKG

- LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, UN 3091
- AIR TRANSPORT
- BATTERY SIZE: SMALL (UN Tested)
- BUTTON CELL INSTALLED IN EQUIPMENT
- DECLARATION/SHIPPING PAPER: NO
- BUTTON CELL INSTALLED IN EQUIPMENT
- NO LIMIT TO THE NUMBER OF BUTTON CELLS INSTALLED, CANNOT EXCEED 5 KG NET
- <u>CLICK HERE IF SMALL LITHIUM METAL BATTERY OTHER THAN BUTTON CELL INSTALLED</u>



Button cell or battery means a round small cell or battery when the overall height is less than the diameter.

Address label optional

© HAZMATEAM, INC

<u>REFERENCE:</u>

DOMESTIC USA: 49 CFR 173.185 (c)(3), (c)(4) INTERNATIONAL AIR: IATA, PACKING INSTRUCTION 970, SECTION II







#### SMALL LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT

#### MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED PER PACKAGE

- LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, UN 3091
- Air TRANSPORT
- BATTERY SIZE: SMALL (UN Tested)
- LIMIT: NET WT OF BATTERIES PER PACKAGE IS NO MORE THAN 5 KG
- DECLARATION/SHIPPING PAPER: NO
- BATTERY IS INSTALLED.
- <u>CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES ARE CONTAINED IN EQUIPMENT PER PACKAGE</u>



Address label optional

#### © HAZMATEAM, INC

<u>REFERENCE:</u>

DOMESTIC USA: 49 CFR 173.185 (c)(3), (c)(4) INTERNATIONAL AIR: IATA, PACKING INSTRUCTION 970, SECTION II









#### **MEDIUM LITHIUM METAL BATTERIES – NO EQUIPMENT**

- LITHIUM METAL BATTERIES, UN 3090
- GROUND ONLY --- DOMESTIC USA ONLY
- BATTERY SIZE: MEDIUM (UN Tested)
- NO EQUIPMENT
- DECLARATION/SHIPPING PAPER: NO
- Limit: 30 KG GROSS WT



LITHIUM BATTER FOR TRANSPORT AIRCRAFT AND V		
	TO: HAZMATEAM, FROM: XYZ, INC	INC
UN 3090 For more information, call XXX-XXXX	, <b>_</b> ,	

Address label optional

© HAZMATEAM, INC

**REFERENCE:** 

GROUND: 49 CFR 173.185 (c)(1)(iv), (vi) & (c)(3)





#### MEDIUM LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT

- LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT, UN 3091
- GROUND ONLY DOMESTIC USA ONLY
- BATTERY SIZE: MEDIUM (UN Tested)
- DECLARATION/SHIPPING PAPER: NO
- EQUIPMENT AND BATTERY IN SAME PACKAGE. BATTERY NOT INSTALLED.



LITHIUM BATTER FOR TRANSPORT AIRCRAFT AND V		
UN 3091 For more information, call XXX-XXX-XXXX	TO: HAZMATEAM, FROM: XYZ, INC	NC

Address label optional

© HAZMATEAM, INC

**REFERENCE:** 

GROUND: 49 CFR 173.185 (c)(1)(iv) & (c)(3)







#### MEDIUM LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT

#### NO MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED PER PACKAGE

- LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, UN 3091
- GROUND ONLY DOMESTIC USA ONLY
- BATTERY SIZE: MEDIUM (UN Tested)
- NO MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED IN EQUIPMENT OR BUTTON CELLS INSTALLED
- DECLARATION/SHIPPING PAPER: NO
- BATTERY INSTALLED IN EQUIPMENT.
- <u>CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES ARE CONTAINED IN EQUIPMENT PER PACKAGE</u>

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© HAZMATEAM, INC

**REFERENCE:** 

GROUND: 49 CFR 173.185 (c)(1)(iv) & (c)(3)

IF MORE THAN 2 PACKAGES PER CONSIGNMENT.





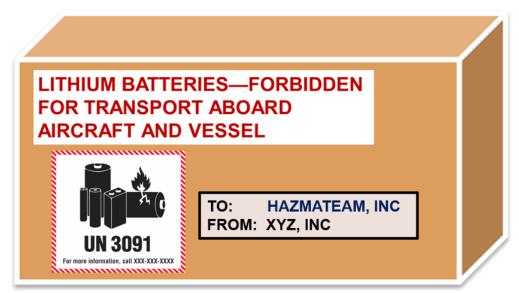




#### MEDIUM LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT

#### MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE

- LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, UN 3091
- GROUND ONLY --- DOMESTIC USA ONLY
- BATTERY SIZE: MEDIUM (UN Tested)
- DECLARATION/SHIPPING PAPER: NO
- BATTERIES INSTALLED IN EQUIPMENT
- <u>CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE</u>



Address label optional

© HAZMATEAM, INC

**REFERENCE:** 

GROUND: 49 CFR 173.185 (c)(1)(iv) & (c)(3)







#### FULLY REGULATED LITHIUM METAL BATTERIES – NO EQUIPMENT

- LITHIUM METAL BATTERIES, UN 3090
- GROUND & VESSEL TRANSPORT
- NO EQUIPMENT
- BATTERY SIZE: FULLY REGULATED (UN Tested)
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- Limit: REFER TO PACKAGE CLOSURE INSTRUCTION







Address label: IMDG optional; DOT see 49 CFR 172.301(d)

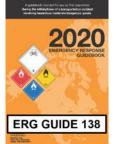
#### © HAZMATEAM, INC

REFERENCE:

GROUND: 49 CFR 172.301 & 172.447, 173.185

VESSEL: IMDG CODE, CHAPTER 5.2, PI P903







SHIPPING PAPER EXAMPLES					
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#### FULLY REGULATED LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT

- LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT, UN 3091
- GROUND & VESSEL TRANSPORT
- BATTERY SIZE: FULLY REGULATED (UN Tested)
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- EQUIPMENT AND BATTERY IN SAME PACKAGE. BATTERY NOT INSTALLED.
- Limit: REFER TO PACKAGE CLOSURE INSTRUCTION





HAZMATEAM

HAZMATEAN

Address label: IMDG optional; DOT see 49 CFR 172.301(d)

#### © HAZMATEAM, INC

**<u>REFERENCE:</u>** GROUND: 49 CFR 172.301, 172.447 & 173.185 VESSEL: IMDG CODE, CHAPTER 5.2, PI P903







SHIPPING PAPER EXAMPLES						
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#### FULLY REGULATED LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT

- LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, UN 3091
- GROUND & VESSEL TRANSPORT
- BATTERY SIZE: FULLY REGULATED (UN Tested)
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- BATTERY INSTALLED IN EQUIPMENT







Address label: IMDG optional; DOT see 49 CFR 172.301(d)

#### © HAZMATEAM, INC

<u>REFERENCE:</u> GROUND: 49 CFR 172.301 & 172.400 (b) SPEC PKG NOT REQUIRED: 49 CFR 173.185 (b)(4) VESSEL: IMDG CODE, CHAPTER 5.2, PI P903

#### NAVIGATE (CLICK):





# SHIPPING PAPER EXAMPLES



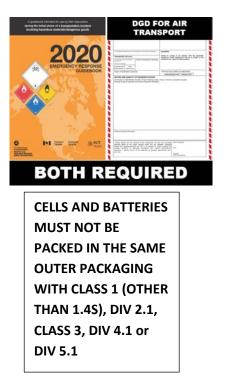
#### FULLY REGULATED LITHIUM METAL BATTERIES - NO EQUIPMENT (PI 968 SECTION IA)

- LITHIUM METAL BATTERIES, UN 3090
- AIR TRANSPORT
- NO EQUIPMENT
- BATTERY SIZE: FULLY REGULATED (UN Tested)
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- FORBIDDEN FOR PASSENGER AIRCRAFT; MAX NET QTY PER CARGO AIRCRAFT = 35 KG
- REFER TO PACKAGE CLOSURE INSTRUCTION



Address label mandatory





#### © HAZMATEAM, INC

REFERENCE: DOMESTIC USA: 49 CFR 172.301 & 172.400(b), 172.402(c) INTERNATIONAL AIR: IATA 7.1.4.1, 7.2.3.1, PI 968 SECTION IA











#### FULLY REGULATED LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT

#### LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT, UN 3091

- AIR TRANSPORT
- BATTERY SIZE: FULLY REGULATED (UN Tested)
- EQUIPMENT AND BATTERY IN SAME PACKAGE. BATTERY NOT INSTALLED.
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- MAX NET PER PKG PASSENGER AIR = 5 KG;
- MAX NET QTY PER PKG CARGO AIRCRAFT = 35 KG
- REFER TO PACKAGE CLOSURE INSTRUCTION

UN 3091 LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT NET QTY:	
TO: HAZMATEAM, INC FROM: XYZ, INC	
U 4G/Y19/S/17 USA/M-32493	

Address label mandatory

#### © HAZMATEAM, INC

**<u>REFERENCE:</u>** 

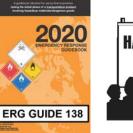
DOMESTIC USA: 49 CFR 172.301 & 172.400(b), 172.402(c) INTERNATIONAL AIR: IATA 7.1.4.1, 7.2.3.1, PI 969 SECTION I CARGO AIRCRAFT ONLY FORBIDDEN IN PASSENGER AIRCRAFT



ADD THIS LABEL IF PACKAGE CONTAINS GREATER THAN 5 KG NET LITHIUM METAL BATTERIES (35 KG MAX)















#### FULLY REGULATED LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT

- LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, UN 3091
- AIR TRANSPORT
- BATTERY SIZE: FULLY REGULATED (UN Tested)
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- BATTERY INSTALLED IN EQUIPMENT
- MAX NET PER PKG PASSENGER AIR = 5 KG; MAX NET QTY PER PKG CARGO AIRCRAFT = 35 KG

UN 3091 LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT NET QTY:	
TO: HAZMATEAM, INC FROM: XYZ, INC	
Address label mandatory	



A7MATFAN

ADD THIS LABEL IF PACKAGE CONTAINS GREATER THAN 5 KG NET LITHIUM METAL BATTERIES (35 KG MAX)



#### © HAZMATEAM, INC

**REFERENCE:** 

DOMESTIC USA: 49 CFR 172.301,172.447, 172.402(c) & 173.185 SPEC PKG NOT REQUIRED: 49 CFR 173.185 (b)(4) INTERNATIONAL AIR: IATA 7.1.4.1, 7.2.3.1, PI 970 SECTION I







#### DAMAGED/DEFECTIVE LITHIUM METAL BATTERIES SHIPPED GROUND & VESSEL

LITHIUM CELLS OR BATTERIES, THAT HAVE BEEN DAMAGED OR IDENTIFIED BY THE MANUFACTURER AS BEING DEFECTIVE FOR SAFETY REASONS, THAT HAVE THE POTENTIAL OF PRODUCING A DANGEROUS EVOLUTION OF HEAT, FIRE, OR SHORT CIRCUIT (e.g. THOSE BEING RETURNED TO THE MANUFACTURER FOR SAFETY REASONS)

- LITHIUM METAL BATTERIES, UN 3090
- BATTERY SIZE: ALL (UN Tested)
- GROUND AND VESSEL ONLY
- ONLY PACKAGING DESIGNED FOR DAMAGED OR DEFECTIVE BATTERIES MAY BE USED
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- CELLS AND BATTERIES LIABLE TO RAPIDLY DISASSEMBLE, DANGEROUSLY REACT, PRODUCE A FLAME OR A DANGEROUS EVOLUTION OF HEAT OR DANGEROUS EMISSION OF TOXIC, CORROSIVE OR FLAMMABELE GASES OR VAPORS UNDER NORMAL CONDITIONS OF TRANSPORT SHALL NOT BE TRANSPORTED



Address label: IMDG optional; DOT see 49 CFR 172.301(d)



HAZMATEAM

#### © HAZMATEAM, INC REFERENCE:

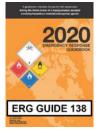
#### IMDG

MARKS AND LABEL: IMDG Code Chapter 5.2 AND SP 376 PACKAGING: IMDG Code Chapter 4.1.4, PI P903 & PI P908

#### DOT GROUND MARKS AND LABELS: 49 CFR 172 SUBPARTS D & E & 173.185 (f)(4) PACKAGING: 49 CFR 173.185 (b), (f) (CLICK)

#### NAVIGATE (CLICK):







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#### **BATTERY-POWERED VEHICLES SHIPPED GROUND**



- BATTERY-POWERED VEHICLE, UN 3171
- BATTERY SIZE: ALL
- BATTERY MUST BE UN 38.3 TESTED (UN Tested)
- MODE: GROUND
- BATTERY MUST BE INSTALLED & NOT DAMAGED/DEFECTIVE
- NO SPARE BATTERIES ARE PERMITTED
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): NO
- THIS INFORMATION APPLIES TO VEHICLES POWERED ONLY BY A LITHIUM METAL OR LITHIUM ION BATTERY. IF THE VEHICLE IS POWERED BY OTHER BATTERY TYPES OR OTHER FUELS, REFER TO 49 CFR 173.220
- *"BATTERY-POWERED VEHICLES"* ARE SELF-PROPELLED APPARATUS DESIGNED TO CARRY ONE OR MORE PERSONS OR GOODS. EXAMPLES OF SUCH VEHICLES ARE ELECTRICALLY-POWERED CARS, MOTORCYCLES, SCOOTERS, THREE AND FOUR-WHEELED VEHICLES OR MOTORCYCLES, TRUCKS, LOCOMOTIVES, BICYCLES (PEDAL CYCLES WITH AN ELECTRIC MOTOR) AND OTHER VEHICLES OF THIS TYPE (*E.G.* SELF-BALANCING VEHICLES OR VEHICLES NOT EQUIPPED WITH AT LEAST ONE SEATING POSITION), LAWN TRACTORS, SELF-PROPELLED FARMING AND CONSTRUCTION EQUIPMENT, BOATS, AIRCRAFT, WHEELCHAIRS AND OTHER MOBILITY AIDS. THIS INCLUDES VEHICLES TRANSPORTED IN A PACKAGING. IN THIS CASE SOME PARTS OF THE VEHICLE MAY BE DETACHED FROM ITS FRAME TO FIT INTO THE PACKAGING. REFERENCE: 49 CFR 172.102, SP 134.
- VEHICLE MUST BE RESTRAINED WITHIN THE OUTER PACKAGE.



PACKAGE DOES NOT REQUIRE ANY HAZARD MARKS OR LABELS. © HAZMATEAM, INC, REFERENCE:

DOT GROUND Applicability of UN 3171: <u>49 CFR 172.102, SP 134 (CLICK)</u>

Requirements: 49 CFR 173.220 (a),(d) and (h) (CLICK)

NAVIGATE (CLICK):

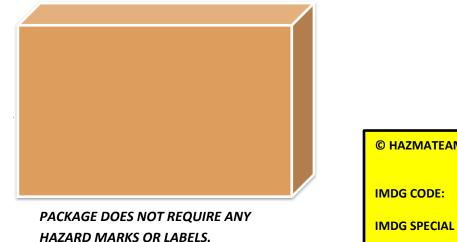


**BATTERY-POWERED VEHICLES** 

#### **BATTERY-POWERED VEHICLES SHIPPED VESSEL**



- BATTERY-POWERED VEHICLE, UN 3171
- BATTERY SIZE: ALL
- BATTERY MUST BE UN 38.3 TESTED (UN Tested)
- MODE: VESSEL
- BATTERY MUST BE INSTALLED & NOT DAMAGED/DEFECTIVE
- NO SPARE BATTERIES ARE PERMITTED
- DECLARATION & ER INFO (SDS or ERG Page): YES
- DECLARATION & ER INFO NOT REQUIRED IF IMDG SP 961 IS APPLICABLE
- FREIGHT CONTAINERS DO NOT REQUIRE PLACARDS
- THIS INFORMATION APPLIES TO VEHICLES POWERED ONLY BY A LITHIUM METAL OR LITHIUM ION BATTERY. IF THE VEHICLE IS POWERED BY OTHER BATTERY TYPES OR OTHER FUELS, REFER TO IMDG SP 388 & 962.
- *"BATTERY-POWERED VEHICLES"* ARE SELF-PROPELLED APPARATUS DESIGNED TO CARRY ONE OR MORE PERSONS OR GOODS. EXAMPLES OF SUCH VEHICLES ARE ELECTRICALLY-POWERED CARS, MOTORCYCLES, SCOOTERS, THREE- AND FOUR-WHEELED VEHICLES OR MOTORCYCLES, TRUCKS, LOCOMOTIVES, BICYCLES (PEDAL CYCLES WITH AN ELECTRIC MOTOR) AND OTHER VEHICLES OF THIS TYPE (*E.G.* SELF-BALANCING VEHICLES OR VEHICLES NOT EQUIPPED WITH AT LEAST ONE SEATING POSITION), LAWN TRACTORS, SELF-PROPELLED FARMING AND CONSTRUCTION EQUIPMENT, BOATS, AIRCRAFT, WHEELCHAIRS AND OTHER MOBILITY AIDS. THIS INCLUDES VEHICLES TRANSPORTED IN A PACKAGING. IN THIS CASE SOME PARTS OF THE VEHICLE MAY BE DETACHED FROM ITS FRAME TO FIT INTO THE PACKAGING. REFERENCE: IMDG CODE, SP 388.
- VEHICLE MUST BE RESTRAINED WITHIN THE OUTER PACKAGE.





© HAZMATEAM, INC, REFERENCE:

IMDG SPECIAL PROVISIONS 388, 961, & 962

NAVIGATE (CLICK):

BATTERY-POWERED VEHICLES



	EXAMPLES						
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#### **BATTERY-POWERED VEHICLES SHIPPED AIR**

- BATTERY-POWERED VEHICLE, UN 3171
- BATTERY SIZE: ALL
- BATTERY MUST BE UN 38.3 TESTED (UN Tested)
- MODE: AIR
- BATTERY MUST BE INSTALLED & NOT DAMAGED/DEFECTIVE
- NO SPARE BATTERIES ARE PERMITTED
- DECLARATION & ER INFO (SDS or ERG Page): YES
- THIS INFORMATION APPLIES TO VEHICLES POWERED ONLY BY A LITHIUM METAL OR LITHIUM ION BATTERY. IF THE VEHICLE IS POWERED BY OTHER BATTERY TYPES / OTHER FUELS, REFER TO IATA PI 952.
- *"BATTERY-POWERED VEHICLES"* ARE SELF-PROPELLED APPARATUS DESIGNED TO CARRY ONE OR MORE PERSONS OR GOODS. EXAMPLES OF SUCH VEHICLES ARE ELECTRICALLY-POWERED CARS, MOTORCYCLES, SCOOTERS, THREE- AND FOUR-WHEELED VEHICLES OR MOTORCYCLES, TRUCKS, LOCOMOTIVES, BICYCLES (PEDAL CYCLES WITH AN ELECTRIC MOTOR) AND OTHER VEHICLES OF THIS TYPE (*E.G.* SELF-BALANCING VEHICLES OR VEHICLES NOT EQUIPPED WITH AT LEAST ONE SEATING POSITION), LAWN TRACTORS, SELF-PROPELLED FARMING AND CONSTRUCTION EQUIPMENT, BOATS, AIRCRAFT, WHEELCHAIRS AND OTHER MOBILITY AIDS. THIS INCLUDES VEHICLES TRANSPORTED IN A PACKAGING. IN THIS CASE SOME PARTS OF THE VEHICLE MAY BE DETACHED FROM ITS FRAME TO FIT INTO THE PACKAGING. REF: IATA DGR SP 214
- VEHICLE MUST BE RESTRAINED WITHIN THE OUTER PACKAGE.



NET IS THE WEIGHT OF THE VEHICLE

IF VEHICLE IS VISIBLE, NO MARKS OR LABELS (A87):



#### NAVIGATE (CLICK):





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SHIPPING PAPER

**RESTRICTIONS:** 

aircraft.

FOR UN 3171 in USA,

49 CFR 173.220 (d) prohibits Lithium Metal

Batteries installed in

vehicle on passenger

Many airlines have

restrictions with UN 3171.









© HAZMATEAM, INC,

IATA DGR REFERENCE:

SPECIAL PROVISIONS: A87, A185, A214 & PI 952

#### SHIPPING PAPER/DECLARATION EXAMPLES

The following are examples of completed shipping papers/declarations. Always consult the appropriate regulation for complete details:

USA Ground:	<u>49 CFR 172.200 (CLICK)</u>
International vessel:	IMDG Code, Volume 1, Chapter 5.4
International air:	IATA DGR, Section 8 ( <b>Note:</b> New declaration format as of IATA 60 <sup>th</sup> Edition,
	2019; May use declaration illustrated in the 59 <sup>th</sup> Edition until 31-Dec-2024.

EXAMPLE #	MODE	CONSIGNMENT
<u>1 (click)</u>	Ground	UN 3480 and non-regulated material
2 (click)	Ground	UN 3091, Lithium Metal Batteries Packed with Equipment in an overpack
<u>3 (click)</u>	Ground	Wooden crates - UN 3481, Lithium Ion Batteries Contained in equipment and non- regulated material
<u>4 (click)</u>	Vessel	Consignment of UN 3090, UN 3091 ('packed with') and UN 3091 ('contained in')
<u>5 (click)</u>	Vessel	250 packages of UN 3480 loaded into a freight container
<u>6 (click)</u>	Vessel	Packages of UN 3480 and UN 3090 contained in an overpack
<u>7 (click)</u>	Air	Fully regulated UN 3090 shipped according to IATA PI 968 Section IA
<u>8 (click)</u>	Air	Small UN 3090 shipped according to IATA PI 968 Section IB
<u>9 (click)</u>	Air	Fully regulated UN 3480 shipped according to IATA PI 965 Section IA
<u>10 (click)</u>	Air	SMALL UN 3480 batteries shipped according to IATA PI 965 Section IB
<u>11 (click)</u>	Air	UN 3481, Lithium Ion Batteries Contained in Equipment within an overpack
<u>12 (click)</u>	Air	UN 3091, Lithium Metal Batteries packed with equipment. Shipped out of USA.
13 (click)	Vessel	UN 3171, Battery-Powered Vehicle. Powered by a lithium metal battery.
<u>14 (click)</u>	Air	UN 3171, Battery-Powered Vehicle. Powered by a lithium ion battery.





• 10 FIBREBOARD BOXES of UN 3480 (NO EQUIPMENT) : Each Box contains 5 KG net batteries; Each Box weighs 11 KG, GROSS

 $\circ \quad \textbf{1 box of non-regulated material}$ 

Page 1 of		(Name o	(carrier)	(SCAC)	Date	-JAN-2021
On Collect on Delivery shipments the letters "CO TO: Consignee	DD" must appear before consignee's name or as otherwae pr	(Name o	FROM: HAZM	IATEAM, INC		
1 MAIN ST	REET			IBALL HILL RO	A 100 A 100 A 10 A 10	
Sileer		72111	City HUDSON			up Code 03051
City OMAHA	State NE	Zip Code 72111	24 hr. Emergency Conta	act Tel. No. 800-535	-5053, CON	TRACT 12345
Route	·				Vehicle Number	<u></u>
No of Units & Container Type	Proper	BASIC DESCRIPTON Shipping Name, Hazard Class, NA), Packing Group, per 172 101,	172 202, 172 203	(Weight, Volume, Gallons, etc)	(Subject to Correction)	CHARGES (For Carner Use Only)
						<b>_</b>
10 BOXES X	UN 3480, LITHIU	M ION BATTER	RIES, 9	50 KG (NET)	110 KG (GROSS)	
1	ERG # 147			1	λ .	
						┝──┥┟────
<u>1 BOX</u>	NON-REGULATE	ED MATERIAL	/		10 KG (GROSS)	
		PDOUG				
		RDOUS				
			$\Delta TY, CAN B$		SING 3RD	
					HONE SE	
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					MBER	
		1.10 L L XL 7000				
	dent on value shippeers are required to state	I hereby declare that the contents of this	REMIT C O D TO ADDRESS			
agreed or declared value of the propert be not exceeding per	ty is hereby specifically stated by the shipper to r	consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are	COD	Amt \$	COD FEE PREPAID	
absent a release or a value declaration i the carrier's liability or declare a value it provided by such provisions. See NMF(	by the shipper and the shipper does not release the carrier's liability shall be limited to the extent C Item 172	in all respects in proper condition for transport according to applicable international and national governmental	Subject to Section 7 of the con consignee without recourse of		INED PER	SON'S
must be so marked and packaged as t	a conversion transportation Son control 2(a)	A. Fauci	following statement		NATURE	
			(5)	gnature of Consigne		







- 20 Plywood boxes of Lithium Metal Batteries Packed with Equipment: Each Package contains 3 Kg, net lithium metal batteries; Each Package weighs 10 KG, GROSS WT
- All 20 boxes are on a pallet, shrunk wrapped (an overpack)

Page 1 of 1			(Name a		(6040)	Date	FEB 5	, 2021
			(Name d	of carrier)	(SCAC)			
TO: XYZ, INC		ame or as otherwise provided in item 430. Sec	,	Shipper HAZM	IATEAM, INC			
Consignee				Street 12 KIN	IBALL HILL RO	DAD		
Street 1 MAIN S				City HUDSON		State NH	Zıp Code	03051
City OMAHA	State NE	Zip Code 7	2111	24 hr. Emergency Conta	act Tel. No. 800-535	5-5053, CO	NTRAC	T 12345
Route						Vehic		<u> </u>
No of Units & Container Type	Identification	BASIC DESCRI Proper Shipping Name, Number (UN or NA), Packing Gr	Hazard Class,	. 172 202, 172 203	TOTAL QUANTITY (Weight, Volume, Gallons, etc)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
20 BOXES X	UN 3091,	LITHIUM MET	AL BAT	TERIES	60 KG (NET)	200 KG,GROS	s	
(4D)	PACKED	WITH EQUIPN	IENT, 9					
/	ERG # 13	8						
	ABOVE P	LACED IN 1 C	VERPA	CK				
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- 'X' IN HM	COLUMN						+-1	
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						<b>3<sup>RD</sup> PAR</b>	TY ER	
	OVERPAC	<b>CONTAINS</b>	20 PRC	OPERLY		SERVICE,		
	MARKED A	AND LABELE	D PACK	AGES	- CONTRA	CT NUM	BER	
						ļ	-	<b></b>
	1	r					-	t
PLACARDS T	ENDERED: YES			REMIT				L
Note - (1) Where the rate is depen- specifically in writing the agreed or of agreed or declared value of the prope	declared value of the property,	as follows "The consignment are by the shipper to described above by	at the contents of this fully and accurately y the proper shipping	ADDITECC		COD	EE	
be not exceeding p (2) Where the applicable tariff provis absent a release or a value declaration	er sions specify a limitation of the n by the shipper and the shipper	carrier's liability marked and labelle does not release in all respects in	lassified, packaged d/placarded, and are proper condition for	0 h		ED PERS		;    —
the carrier's liability or declare a value provided by such provisions. See NMI (3)Commodities requiring special or a must be so marked and packaged as	FC Item 172 additional care or attention in hai to ensure safe transportation	ndling or stowing regulations	ting to applicable ational governmenta	consignee without recourse of following statement				
of item 360 Bills of Lading, Freight Bi of the Contract Terms and Conditions	ills and Statements of Charges	and Section 1(a) E. Nune	2ZSignature	/0.	anature of Consumption	TABLE IN CASE	0.00	arges to be collect



SHIPPING PAPER EXAMPLES									
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10 WOODEN CRATES; Each crate contains a piece of equipment with one lithium ion battery installed. The net wt of the battery = 7 KG; The gross wt of one completed crate = 20 KG. The crates are not placed in an overpack.

Consignment also includes 2 bags of non-regulated material.

Page 1 of	1		(Name d	of carrier)	(SCAC)	Da	ate FEB	5, 2021
On Collect on Delivery shipments TO: Consignee		<sup>or</sup> must appear before consignee's name or as otherwae ; PORATION	provided in Item 430 Sec 1		IATEAM, INC			
Street 2502	INDU	STRIAL BLVD						02051
	TER	State NY	<sub>Zip Code</sub> 14602	City HUDSON	800-535	State NH		<sup>ые</sup> 03051 CT 12345
		State		24 hr. Emergency Conta	act Tel. No.			<u> </u>
Route	<b></b>	ı ———	BASIC DESCRIPTON		TOTAL QUANTITY		umber	CHARGES
No of Units & Container Type	нм		r Shipping Name, Hazard Class. r NA), Packing Group, per 172 101	, 172 202, 172 203	(Weight, Volume, Gallons, etc)	(Subject to Correction	•	E (For Carner Use Only)
10	Х	UN 3481, LITHIL	JM ION BATTEI	RIES	70 KG (NET)	200 KG,GR	oss	
WOODEN		CONTAINED IN	EQUIPMENT, 9					
CRATES		ERG # 147	1	<b>}</b>				
				TOTAL QTY, C	GROSS			
2 BAGS		NON-REGULAT	ED MATERIAL			5 KG, GRO		
	' <mark>X'</mark> IN	HM COLUMN						
	F HA	ZARDOUS						
			L		IF USING	B <sup>RD</sup> PAR	TY ER	
		CHARGEABLE I		ERIES	PHONE SE	RVICE,	INCLU	DE
	IN	STALLED IN EQ	UIPMENT		CONTRAC		BER	
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PLACA			1	REMIT				
Note - (1) Where the ra specifically in writing the a	te is depende agreed or dec	ent on value shippeers are required to state clared value of the property, as follows "The	I hereby declare that the contents of this consignment are fully and accurately deschared above by the second se	CODTO ADDRESS			DEEE	
(2) Where the applicable t absent a release or a value	per tariff provision declaration b	ns specify a limitation of the carrier's liability y the shipper and the shipper does not release	described above by the proper shipping name and are classified, packaged marked and labelled/placarded, and are in all respects in proper condition for	COD		000		
the carrier's liability or deck provided by such provision (3)Commodities requiring s	are a value th s See NMFC special or add	e carrier's liability shall be limited to the extent I tem 172 litional care or attention in handling or stowing	transport according to applicable international and national governmenta regulations	Subject to Section 7 of the con consignee without recourse of	n the c		SOIVS	s
must be so marked and pa of item 360 Bills of Lading of the Contract Terms and	, Freight Bills	<ul> <li>ensure safe transportation. See Section 2(e) and Statements of Charges and Section 1(a) r a list of such articles</li> </ul>	Lily Von Schtuk Signature	(5)		URE		charges re to be collect







<u>UN 3090:</u> Each box contains 5 kg of lithium metal batteries; <u>UN 3091, 'packed with'</u>, box contains one 5 kg lithium metal battery in same package with equipment; <u>UN 3091, 'contained in</u>" box contains one 12 kg lithium battery installed in equipment

The four packages are sent to a freight forwarder.

1 Obligger (Canadana (Canadan			and a sub-				
1 Shipper/Consignor/Sender		2 Transport docur	ment number				
HAZMATEAM, INC		3 Page 1 of	pages 4 S	Shipper's re	ference		
12 KIMBALL HILL ROAD		1					
HUDSON NH 03051 USA		Booking Number	5	Freight for	warder's referen	ice	
6 Consignee		7 Carrier					
HAZMATEAM - JAMAICA							
21 RASTA WAY			F USING	3 <sup>RD</sup> P	ARTY ER	PHONE	
KINGSTON JAMAICA		s s	ERVICE.	. INCL	UDE CON	ITRACT	
10 Vessel	14. Dest of least in a		-			ATIONAL	
10 vessel	11 Port of loading	SHIPPER'S L		-	00 NUM		cribed below
		ty the Proper are in all respects					lacarded and ble international and
12 Port of discharge	13 Destination	national governme	-		_		
12 Port of discharge	15 Destination	9 Additional hand	ling instruction	S			
		24 HR ER - IN	IFOTRAC 1-	011-352	323-3500; C	ontract ID – 12	3S3B
14 Shipping marks	*) Number and kind of package	es: description of goo	ods	G	ross mass (kg)	Net	Cube (m <sup>3</sup> )
	UN 3090, LITHIUN			S 0	30 KG	10 KG	
IMDG EMS –				3, 9			
COLUMN 15	IMDG EMS: F-A, S	S-I; DOT ER	G 138				
OF DGL	2 (4G) FIBREBOA	RD BOXES					
DOT ERG –	UN 3091, LITHIUN			s	25 KG	5 KG	
				.0			
'ORANGE	PACKED WITH E						
BOOK' CODE	IMDG EMS: F-A, S	S-I; DOT ER	G 138				
	1 (4G) FIBREBOA	RD BOX					
PACKAGE					66 KG	12 KG	
CODES	UN 3091, LITHIUN	MMETALB	ATTERIE	s			
(EX – 4G)	CONTAINED IN E	QUIPMENT	, 9				
OPTIONAL	IMDG EMS: F-A,	S-I; DOT ER	G 138	BC	1X 22	ALWAY	's
	1 PLYWOOD BOX	(					3
15 Container identification No./	16 Seal number(s)	17 Cont./vehicle s	ize & type 18		QUIR	ES A	-
				SI	GNAT	JRE BY	,
CONTAINER/VEHICLE PACKIN		21 RECEIVING C	ORGANIZATIO		AINF	D SHIP	PER
	ds described above have been ner, into the container/vehicle ith the applicable provisions **)	Received the above unless stated here		ba			on,
MUST BE COMPLETED AND S VEHICLE LOADS BY PERSON	SIGNED FOR ALL CONTAINER/ RESPONSIBLE FOR PACKING/	uniess stated here	MI. RECEIVIN	IS OKGAN			
LOADING 20 Name of company		Haulier's name			22 Nam	e of co. of shipper	preparing this note
					HAZM	ATEAM	
		Vehicle reg. no				0.00-00000	
Name/status of declarant		Signature and date	e		Name/st	atus of declarant	
						averse, Shipp	er
Place and date					Place an Huds	on, NH, 6-JA	N-2021
Signature of declarant		Driver's signature				e of declarant	
					Leo	Travers	е

#### MULTIMODAL DANGEROUS GOODS FORM







#### MULTIMODAL DANGEROUS GOODS FORM

1 Shipper/Consignor/Sender		2 Transport docur	nent numb	er			
HAZMATEAM, INC		2 Dece 4 eF					
12 KIMBALL HILL ROAD		3 Page 1 of 1	pages	4 Shipper's r	eterence		
HUDSON NH 03051 USA		Booking Number	-	5 Freight for	warder's r	reference	
				• • • • • • • •			
6 Consignee		7 Carrier					
HAZMATEAM - NETHERLAN	IDS						
ZANDERSTEEN 66	105						
2669 VL AMSTERDAM NETH		IF U	<b>ISING</b> :	3 <sup>RD</sup> PAR	TY ER	PHONE	
2009 VL AWSTERDAW NETH	IERLANDS	SER	VICE.		E CON	TRACT	
10 Vessel 11	1 Port of loading	SHIPPER NUMBER, FOR INTERNATIONAL					
		I hereby d DO NOT LISE 800 NUMBERS rately described below					
		ty the Propare in all respects				abelled/placarded and	
		national governme					
12 Port of discharge 13	B Destination	9 Additional handl	ing instruct	tions			
		24 HR FR - IN	FOTRAC	1-011-352	-323-350	00; Contract ID – 123S3B	
		24 million Elice mil	1011040	1-011-002	-020-000		
14 Shipping marks	*) Number and kind of package	s: description of goo	ods	(	Gross mas	ss (kg) Net Cube (m <sup>3</sup> )	
	UN 3480, LITHIUN			0	5000	KG 2500 KG	
				, 5			
	IMDG EMS: F-A, S	S-I; ERG 147					
COLUMN 15	250 (4G) FIBREBO		2				
OF DGL							
DOT ERG –							
'ORANGE	PACKAGE						
	CODES						
BOOK' CODE					οον	22 ALWAYS	
	(EX – 4G)				БОХ	ZZ ALVVATS	
	OPTIONAL				REQ	UIRES A	
		_					
		_			SIGI	NATURE BY	
IF LOADING I	FREIGHT				TRA	INED SHIPPER	
CTN SIGN DO	04 20						
CTN, SIGN BO	UX 20						
15 Container identification No./ 16	Seal number(s)	17 Cont./vehicle si	ze & type	18 Tare ma	iss (kg)	19 Total gross mass (including tare) (kg)	
CONTAINER/VEHICLE PACKING C	ERTIFICATE	21 RECEIVING O	RGANIZA	TION RECEIL	PT		
I hereby declare that the goods packed/loaded, packed together,	described above have been					Arailers in apparent good order and condition	
identified above in accordance with the	he applicable provisions.**)	unless stated here	on: RECEI	VING ORGA	NIZATION	Arailers in apparent good order and condition, I REMARKS:	
MUST BE COMPLETED AND SIGN VEHICLE LOADS BY PERSON RE LOADING	NED FOR ALL CONTAINER/ SPONSIBLE FOR PACKING/						
20 Name of company		Haulier's name			22	Name of co. of shipper preparing this note	
HAZMATEAM, INC					н	AZMATEAM	
		Vehicle reg. no					
Name/status of declarant Paul Dambek, Shipper		Signature and date	)			ame/status of declarant .eo Traverse, Shipper	
Place and date		4				ace and date	
Hudson, NH, 9-JAN-2021						Hudson, NH, 9-JAN-2021	
Signature of declarant		Driver's signature			Sig	gnature of declarant	







<u>UN 3480:</u> 5 Packages of rechargeable lithium batteries (no equipment), each box contains 5 kg of batteries; <u>UN 3090</u>: 10 packages of non-rechargeable lithium batteries (no equipment), each box contains 3 KG of batteries. The 15 packages are placed on pallet and shrunk wrapped. The overpack was sent to a freight forwarder.

		MULTIMODA	L DAN	GERC	ous o	GOO	DS FORI	М
1 Shipper/Consignor/Sender			2 Transport do	cument numb	ber			
HAZMATEAM, INC	_		3 Page 1 of	pages	4 Shipper's	s reference		
12 KIMBALL HILL ROA				1				
HUDSON NH 03051 US	A		Booking Numbe	er	5 Freight	forwarder's	reference	
6 Consignee			7 Carrier					
HAZMATEAM - NETHE ZANDERSTEEN 66	RLAN	IDS						
2669 VL AMSTERDAM	NET				G 3RD		ER PHONE	
2005 VE ANISTERDAM	NET						ONTRACT	
10 Vessel	1	1 Port of loading	SHIPPER'S D NUMBER, FOR					
			ty the Proper DO NOT USE 80				ly described below led/placarded and	
			are in all resp national govern					e international and
12 Port of discharge	1:	3 Destination	9 Additional ha	-		$\prec$		
			24 HR FR -		1-011-3	52.323.35	00; Contract ID	- 123S3B
			24 Million Ent					120000
14 Shipping marks		*) Number and kind of package	es: description of	goods		Gross ma	iss (kg) Net	Cube (m <sup>3</sup> )
IMDG EMS –		UN 3480, LITHIUN		TEDIES	0	50 K	G 25 KG	;
	COLUMN 1E				<b>9</b> , 9			
	OF DGI			S-I; DOT ERG 147				
OFDGL		5 (4G) FIBREBOA	RD BOXE	S				
DOT ERG –								
ORANGE		UN 3090, LITHIUN		RATTER	NES 9	120	KG 30 K0	G
BOOK' CODE								
		IMDG EMS: F-A, S						
PACKAGE		10 (4G) FIBREBO	ARD BOX	ES			22 ALW	
CODES								AT5
(EX – 4G)		ABOVE PLACED			ск.	REQ	UIRES A	
OPTIONAL		ADOVETEAGED				SIG	VATURE	BY
						TRA	INED SH	IPPER
15 Container identification No	o./ 10	6 Seal number(s)	17 Cont./vehicl	e size & type	18 Tare	mass (kg)	19 Total gross ma	ass (including tare) (kg)
CONTAINER/VEHICLE PACH		CERTIFICATE described above have been	21 RECEIVING	G ORGANIZA	TION REC	EIPT		
	gether,	into the container/vehicle	Received the al unless stated h	bove number	of package	s/container	s/trailers in apparent	t good order and condition,
MUST BE COMPLETED AN	D SIG	NED FOR ALL CONTAINER/						
LOADING 20 Name of company			Haulier's name			2	2 Name of co. of sh	ipper preparing this note
							HAZMATEAM, IN	IC.
			Vehicle reg. no				,,	
Name/status of declarant			Signature and o	date			lame/status of decla	
Place and date			-				Stephanie Trave	rse, Shipper
Flace and date							Hudson, NH, 1	-JAN-2021
Signature of declarant			Driver's signatu	ire		s	ignature of declaran	
							Steph Tra	verse







2 FIBREBOARD BOXES. Each box contains 4 KG net of FULLY REGULATED lithium metal batteries shipped according to IATA PI 968 Section IA

1:	AZMATEAM, INC 2 KIMBALL HILL ROAD UDSON, NH 03051				Air Waybill No. <b>6980</b> Page <b>1</b> of <b>1</b> Pages Shipper's Reference Number (optional)				
SHIPN ON PA	PHOENIX PARTS 123 MAIN STREET PHOENIX, AZ 77777 MENT CANNOT GO	ust be handed to the	operator.	DE	RWAYBILL #, AIRPO PARTURE OR DEST N BE COMPLETED WARNING Failure to comply in	BY AIRL	N .INE		
(delete non- PASSE1	ment is with the limitations prescribed for: applicable IGER AGO AIRCRAFT ONLY	Airport of Departs			applicable Dangerous may be in breach of th ject to legal penalties.	e applicable			
Airport o	f Destination PHOENIX, AZ			[	Shipment Type (delete non-ap NON-RADIOACTIVE	oplicable)	E		
NATURE	AND QUANTITY OF DANGEROUS GOODS								
r	Dangerous Goods Identifica	tion	Class			Packing			
UN or ID No.	Proper Shipping Name		or Division Subsidiary Hazard)		Quantity and Type of Packing	Instruc- tions	Authorization		
UN 3090	LITHIUM METAL BATTERIES		9		2 FIBREBOARD BOXES x 4 KG	968			
				NUI	MBER OF				
ICAO/	IATA ERG CODE FROM COLUM	N N OF DGL:			KAGES X NET				
•	RG – 'ORANGE BOOK' CODE	· ·			PER PACKAGE				
I	-	7, 1							
Additional	Handling Information ICAO/IATA ERG	CODE: 12FZ; D	OT ERG	138	J	l			
7	TILL NULL INFOTRAD COO	E2E E0E2 (00)	TRACT	102 45					
	Telephone Number INFOTRAC, 800-			of signa					
described a marked an IF USI	bove by the proper shipping name, and are of tabelled/placarded, and are in all respects in NG 3 <sup>RD</sup> PARTY ER PHONE SERVI DE CONTRACT NUMBER	rias packaged,	Date	or aigila	1-JAN-2021				
			Signa						









One box contains 2 KG net of SMALL lithium metal batteries shipped according to IATA PI 968 Section IB. Cannot exceed 2.5 kg (net) per pkg.

12	ZMATEAM, INC KIMBALL HILL ROAD DSON, NH 03051				Air Waybill N Page <b>1</b> o Shipper's Refe (op	f <b>1</b> Pa	-	
1: P	HOENIX PARTS 23 MAIN STREET HOENIX, AZ 77777				AIRWAYBI DEPARTUR CAN BE CC	RE OR E	DESTINAT	ION
	PASSENGER AIR	ded to th	e operator.	+	WARNING Failure to cor			
This shipm ( <i>delete non-a</i> ) PASSENG AIRCRA	mAi	port of Depart NCHESTEF			applicable Da may be in brea ject to legal per	ach of the a		
	Destination PHOENIX, AZ		[	Shipment Type <i>(de</i> NON-RADIOACT		icable) (XXXXE		
NATURE A	ND QUANTITY OF DANGEROUS GOODS							
UN or ID No.	Dangerous Goods Identification Proper Shipping Name		Class or Division (Subsidiary Hazard)	Packing Group	Quantity an of Packi			norization
UN 3090	LITHIUM METAL BATTERIES		9		1 FIBREBOA BOX x 2 KG	RD	968 IB	
-	ERG CODE FROM COLUMN N 'ORANGE BOOK' CODE	OF DGL;	PA NE	СКА	ER OF GES X F PER GE	SECT INCL	EN SHIP FION IB, UDE 'IB ERNATIV	MUST ′.
Additional F	Iandling Information ICAO/IATA ERG COD	)E: 12FZ; C	OT ERG	138		CAN	ADD 'II HORIZA	3' то
Emergency '	Telephone Number INFOTRAC, 800-535	5053 (COI	ITRACT	12345)		COL	UMN	
I hereby dec	lare that the contents of this consignment are fully			of Signat	-	I Dambe	ek	
tra	SING 3 <sup>RD</sup> PARTY ER PHONE SEF UDE CONTRACT NUMBER	RVICE,	Date		1-J/	AN-2021		
reg INCL	ODE CONTRACT NOWBER		Signa					



SHIPPING PAPER EXAMPLES					
0	Contractor	20	100	-	17
					_
					_
					_
					_
	control Bia				_



1	IAZMATEAM, INC 2 KIMBALL HILL ROAD IUDSON, NH 03051				Air Waybill No. Page <b>1</b> of <b>1</b> I Shipper's Reference Nu (optional)	0
	GIZMO EMPORIUM 19 BOWDOIN STREET BLOOMINGTON, IL 61761			DEPA	AYBILL #, AIRPORT RTURE OR DESTIN BE COMPLETED BY	ATION
	PMENT CANNOT GO PASSENGER AIR	iust be handed to t	the operator.	_	WARNING Failure to comply in a	ill respects with the
(delete non	oment is within the mitations prescribed for: a-applicable NGER CARGO AIRCRAFT ONLY	r: Airport of Departure			applicable Dangerous may be in breach of the ject to legal penalties.	Goods Regulations
Airport o	of Destination	•		[	Shipment Type <i>(delete non-ap</i> NON-RADIOACTIVE	plicable)
NATURE	E AND QUANTITY OF DANGEROUS GOODS					
	Dangerous Goods Identific	ation	Class	1		Packing
UN or ID No.	Proper Shipping Name		or Division (Subsidiary Hazard)		Quantity and Type of Packing	Instruc- tions
UN 3480	LITHIUM ION BATTERIES		9		5 FIBREBOARD BOXES x 20 KG	965
			D		SER OF AGES X NET	
	/IATA ERG CODE FROM COLUN ERG – 'ORANGE BOOK' CODE	IN N OF DGL	;		R PACKAGE	
		$\checkmark$				
Additiona	l Handling Information ICAO/IATA ERG	CODE: 12FZ;	L DOT ERG	147		
	I Handling Information ICAO/IATA ERG				l.	
Emergeno I h de: IF U		-535-5053 (CC RVICE,			Ctown	anie Traverse

NAVIGATE (CLICK):







EMERGENCY RESPONSE INFORMATION **EXAMPLE 10** 

2 Fibreboard boxes each containing 9 KG (net) of SMALL lithium ion batteries shipped according to IATA PI 965 Section IB

1:	AZMATEAM, INC 2 KIMBALL HILL ROAD UDSON, NH 03051			Page Shippe	aybill No. 1 of 1 Pages r's Reference Number (optional)	
	GIZMO EMPORIUM 19 BOWDOIN STREET BLOOMINGTON, IL 61761			DEPAF	AYBILL #, AIRPO TURE OR DESTI E COMPLETED E	NATION
Per	IPMENT CANNOT GO N PASSENGER AIR	nded to t	he operator.	WARN	ING	
This ship:	AFT CARGO	Airport of Depa	rture	applical may be	to comply in all respect ole Dangerous Goods I in breach of the applicabl egal penalties.	Regulations
Airport o	f Destination				ype (delete non-applicable) IOACTIVE XXXXX	×
NATURE	AND QUANTITY OF DANGEROUS GOODS					
UN or ID No.	Dangerous Goods Identificati Proper Shipping Name	on	Class or Division (Subsidiary Hazard	Packing	ntity and Type Packing of Packing Instructions	Authorization
UN 3480	LITHIUM ION BATTERIES		9	2 FIBRE BOXES	BOARD 965 x 9 KG IB	
			PA	JMBER OF CKAGES X T WT PER	SECTION	HIPPING PI I IB, MUST
-	A ERG CODE FROM COLUMN - 'ORANGE BOOK' CODE	N OF DGL;		CKAGE	INCLUDE	
	Handling Information ICAO/IATA ERG C				ALTERNA CAN ADI AUTHOR	d 'IB' to
Emergency	y Telephone Number INFOTRAC, 800-5	35-5053 (CC	NTRACT	12345)	COLUMN	N
Ib	JSING 3 <sup>RD</sup> PARTY ER PHONE S	ERVICE,	Name o	of Signatory	Stephanie Trave	erse
<sup>ma</sup> INC	LUDE CONTRACT NUMBER	requirements hav	Date Signatu	re	11-JAN-2021	









10 boxes of UN 3481, LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT. Shipped according to IATA PI 967 Section I. Each box contains 4 KG (net) of rechargeable lithium batteries. All 10 boxes placed onto a pallet and shrunk wrapped (i.e., 'OVERPACK').

IF USI	Ielephone Number       INFOTRAC, 800         NG 3 <sup>RD</sup> PARTY ER PHONE S         IDE CONTRACT NUBER			of Signato		
	Iandling Information ICAO/IATA ERG					
	A ERG CODE FROM COLUN – 'ORANGE BOOK' CODE	1N N OF DG マーテ	5L;			WITHIN AN OVERPACK
				PER	PACKAGE	OVERPACK USEE
					GES X NET	NUST USE PHRA
				MB	R OF	
3481	IN EQUIPMENT				BOXES x 4 KG	
ID No.		ONTAINED	Hazard) 9		10 FIBREBOARD	967
UN or	Proper Shipping Name		Class or Division (Subsidiary		Quantity and Type of Packing	Packing Instruc- tions
NATURE A	ND QUANTITY OF DANGEROUS GOODS Dangerous Goods Identifica	ation				
the transferration of					NON-RADIOACTIVE	×××××
AIRCRAI	Destination				Shipment Type (delete non-a)	pplicable)
(delete non-ap PASSENC AND CA	SEK CARGO				ject to legal penalties.	
TRANSP This shipm	er swithin the limitations prescribed for:	Airport of Dep	arture	-	Failure to comply in applicable Dangerous may be in breach of th	Goods Regulations
_	CKAGE = 5 KG	nded to	the operator.		WARNING	11
PAS	SENGER AIR LIMIT I	PER				
1	9 BOWDOIN STREET LOOMINGTON, IL 61761				DEPARTURE OR CAN BE COMPLE	
<sup>Consignee</sup> G				+	AIRWAYBILL #, A	
HU	DSON, NH 03051				Shipper's Reference N (optional)	
	KIMBALL HILL ROAD				Air Waybill No. Page <b>1</b> of <b>1</b>	Pages









4 packages of UN 3091, Lithium metal batteries packed with equipment. Shipped according to IATA PI 969 Section I. Each package contains 6 KG (net) of non-rechargeable lithium batteries and equipment (batteries not installed). Shipped out of USA.

1	IAZMATEAM, INC 2 KIMBALL HILL ROAD IUDSON, NH 03051 USA				Air Waybill No. Page <b>1</b> of <b>1</b> P Shipper's Reference Nu (optional)	
	BATTERIES ITALIA VIALE CASTRO PRETORIO 199 O VIA GAETA 99 00188 ROME ITALY	FFICES		1	AIRWAYBILL #, AIRF DEPARTURE OR DES CAN BE COMPLETEI	STINATION
ACKAG	GO CARGO AIRCRAFT ONLY WH GE EXCEEDS 5 KG NET OF BATTI SFORT DE FILLS		e operator.		WARNING Failure to comply in al	
(delete non	ment is within the limitations prescribed for: - <i>applicable</i> NGER CAROO AIRCRAFT ONLY	Airport of Depa	arture		applicable Dangerous may be in breach of the ject to legal penalties.	
	of Destination			[	Shipment Type (delete non-app NON-RADIOACTIVE	olicable)
NATURE	AND QUANTITY OF DANGEROUS GOODS Dangerous Goods Identifica				I	1 1
UN or ID No.	Proper Shipping Name		Class or Division (Subsidiary Hazard)		Quantity and Type of Packing	Packing Instruc- tions
UN 3091	LITHIUM METAL BATTERIES WITH EQUIPMENT	PACKED	9		4 FIBREBOARD BOXES x 6 KG	969
				NU	JMBER OF	
				PA	CKAGES X NET	
				W	T PER PACKAGE	
	/IATA ERG CODE FROM COLUN ERG – 'ORANGE BOOK' CODE	IN N OF DGI	L;			
		ŢĻ				
		CODE: 12FZ:	L DOT ERG	138	I	
	Handling Information ICAO/IATA ERG	,				
Additional	-		500 (CONTI	RACT	12345)	
Additional Emergenc I hereby d	y Telephone Number INFOTRAC, 1-01	11-352-323-35	Name of	1212.000	• 	ek
Additional	y Telephone Number INFOTRAC, 1-01 ecta abo IF USING 3 <sup>RD</sup> PARTY ER PHON sector SERVICE, INCLUDE CONTRAC	I1-352-323-35	y Name o: , , Date	f Signato	• 	



SHIPPING PAPER EXAMPLES





2 packages (plywood boxes). Each box contains 1 robot with a lithium metal battery installed. The robot weighs 55 KG. The robot moves finished goods in a warehouse. Shipped out of USA via international vessel.

1 Shipper/Consignor/Sender		2 Transport docume	ent number	·
HAZMATEAM, INC		3 Page 1 of p	ages 4 S	Shipper's reference
12 KIMBALL HILL ROAD		1		
HUDSON NH 03051 USA		Booking Number	5	Freight forwarder's reference
6 Consignee		7 Carrier		
BRITISH ROBOT COMPA	NY			
WESTMINSTER, LONDO	N, SW1A 1AA,	IF	USING	<b>5 3<sup>RD</sup> PARTY ER PHONE</b>
UNITED KINGDOM		SE	RVICE,	E, INCLUDE CONTRACT
10 Vessel	11 Port of loading		UMBEF	R, FOR INTERNATIONAL
		I hereby deck D(	<mark>D NOT</mark>	USE 800 NUMBERS
		ty the Proper are in all respects in national government		ndition for transpoint ng to the applicable international and
12 Port of discharge	13 Destination	9 Additional handlin	•	
		24 HR ER - INF	OTRAC 1	1-011-352-323-3500; Contract ID – 123S3B
14 Shipping marks	*) Number and kind of package	s: description of good	ls	Gross mass (kg) Net Cube (m <sup>3</sup> )
	UN 3171, BATTERY-	POWERED VE	HICLE, 9	9, 110 KG
IMDG EMS –	IMDG EMS: F-A, S-I;	DOT ERG 138		
COLUMN 15	2 PLYWOOD BOXES	;		
OF DGL				
DOT ERG –				
<b>'ORANGE</b>				
BOOK' CODE				
UN				
PACKAGING				
NOT R'D				
				BOX 22 ALWAYS
				REQUIRES A
15 Container identification No./	16 Seal number(s)	17 Cont./vehicle size	e & type 18	18
				SIGNATURE BY
CONTAINER/VEHICLE PACKIN	NG CERTIFICATE ods described above have been	21 RECEIVING OR	GANIZATIO	■ TRAINED SHIPPER
packed/loaded, packed toget identified above in accordance v	ther, into the container/vehicle	Received the above unless stated hereor	number of p n: RECEIVIN	r ING ORGANIZATION REMARKS:
MUST BE COMPLETED AND VEHICLE LOADS BY PERSON LOADING	SIGNED FOR ALL CONTAINER/ RESPONSIBLE FOR PACKING/			
20 Name of company		Haulier's name		22 Name of co. of shipper preparing this note
		Vehicle reg. no		HAZMATEAM
Name/status of declarant		Signature and date		Name/status of declarant
				Leo Traverse, Shipper
Place and date				Place and date Hudson, NH, 6-JAN-2021
Signature of declarant		Driver's signature		Signature of declarant
				Leo Traverse

#### MULTIMODAL DANGEROUS GOODS FORM



SHIPPING PAPER EXAMPLES					
1475 <b>W</b>	Alexand Col	127. m.m.	20	100 100	- 52
					E
		14 10 100 500	1	-8	1 70





3 packages (fibreboard boxes). Each box contains 1 bicycle with a lithium ion battery installed. Each bicycle weighs 20 KG. Shipped air transport.

AGE BICYCLE INC COMMERCE BLVD AUL, MN 55105	ust be handed to tl	D	EPARTUF AN BE CC	LL #, AIRPORT RE OR DESTINA DMPLETED BY	ATION	
GER AIR within the limitations prescribed for:	ust be handed to tl	he operator.	WA	PNIINC		
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SHIPPING PAPER EXAMPLES



# **EMERGENCY RESPONSE INFORMATION**

When shipping papers (Bill of lading forms, Dangerous Goods Declaration forms) are required, all lithium battery shipments to, from or through the United States must have written emergency response information accompany the shipment. This written document is typically either a SDS for the material or the applicable ERG pages from the DOT Emergency Response Guidebook (i.e., 'Orange Book'). Applicable ERG Codes from the Orange Book are: Guide 138 (Lithium metal batteries) and Guide 147 (Lithium Ion batteries).

On each shipping paper example provided in this guide, either DOT ERG GUIDE 138 or 147 is referenced. Simply writing the guide number only on the BOL/declaration does not meet the emergency response information requirements described in <u>49 CFR 172.602</u>. Written information (the SDS or ERG pages) must be provided along with the shipping paper.

All shipping papers for shipments from, to or through the United States must also have 24-hour emergency telephone number, as described in <u>49 CFR 172.604</u>. Each shipping paper example provided in this guide illustrates placement of the ER phone number.

The shipping paper examples provided in this guide also reference emergency response guidebooks used by personnel on vessels or aircraft. The vessel and aircraft guides referenced are:

**IMDG CODE:** The EMS Code referenced in column 15 of the IMDG Dangerous Goods List (DGL) is listed in *"The EmS Guide – Emergency Response Procedures for Ships Carrying Dangerous Goods".* 

**IATA DGR:** The IACO/IATA ERG Code referenced in Column N of the IATA DGR Dangerous Goods List (DGL) is the Emergency Response Drill Code as found in the International Civil Aviation Organization (IACO) document, *"The Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods" (ICAO Doc. 9481-AN/928*).

The IMDG Code and IATA DGR emergency response information described on the shipping paper examples in this guide are for the benefit of the operator of the vessel or aircraft.





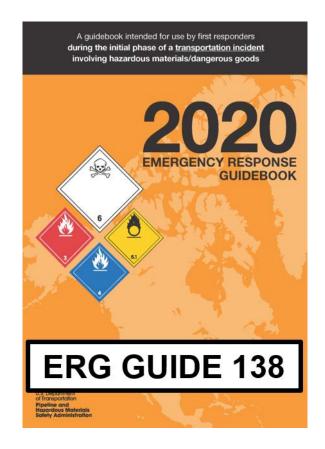




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## **EMERGENCY RESPONSE GUIDE #138 – NEXT PAGE**

# (THIS DOCUMENT OR A SDS FOR BATTERY MUST ACCOMPANY ALL FULLY REGULATED SHIPMENTS OF LITHIUM METAL BATTERIES)









# GUIDE SUBSTANCES - WATER-REACTIVE (EMITTING FLAMMABLE GASES)

# **POTENTIAL HAZARDS**

## FIRE OR EXPLOSION

- Produce flammable gases on contact with water.
- May ignite on contact with water or moist air.
- Some react vigorously or explosively on contact with water.
- May be ignited by heat, sparks or flames.
- May re-ignite after fire is extinguished.
- Some are transported in highly flammable liquids.
- Runoff may create fire or explosion hazard.

## HEALTH

- Inhalation or contact with vapors, substance or decomposition products may cause severe injury or death.
- May produce corrosive solutions on contact with water.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may cause environmental contamination.

## **PUBLIC SAFETY**

- CALL 911. Then call emergency response telephone number on shipping paper. If shipping paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Keep unauthorized personnel away.
- Stay upwind, uphill and/or upstream.
- Ventilate closed spaces before entering, but only if properly trained and equipped.

## PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing that is specifically recommended by the manufacturer when there is NO RISK OF FIRE.
- Structural firefighters' protective clothing provides thermal protection but only limited chemical protection.

## EVACUATION

## Immediate precautionary measure

 Isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids.

## Spill

- For highlighted materials: see Table 1 Initial Isolation and Protective Action Distances.
- For non-highlighted materials: increase the immediate precautionary measure distance, in the downwind direction, as necessary.

#### Fire

• If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.



In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping paper and/or the ERAP Program Section (page 390).

# ERG 2020

#### GUIDE SUBSTANCES - WATER-REACTIVE (EMITTING FLAMMABLE GASES)

# **EMERGENCY RESPONSE**

## FIRE

## DO NOT USE WATER OR FOAM.

## Small Fire

• Dry chemical, soda ash, lime or sand.

## Large Fire

- DRY sand, dry chemical, soda ash or lime or withdraw from area and let fire burn.
- If it can be done safely, move undamaged containers away from the area around the fire.

## Fire Involving Metals or Powders (Aluminum, Lithium, Magnesium, etc.)

• Use dry chemical, DRY sand, sodium chloride powder, graphite powder or class D extinguishers; in addition, for Lithium you may use Lith-X® powder or copper powder. Also, see GUIDE 170.

## Fire Involving Tanks or Car/Trailer Loads

- Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles.
- Do not get water inside containers.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

## SPILL OR LEAK

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames) from immediate area.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.

## DO NOT GET WATER on spilled substance or inside containers.

## Small Spill

- Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
- Dike for later disposal; do not apply water unless directed to do so.

## **Powder Spill**

Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.

## • DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.

## FIRST AID

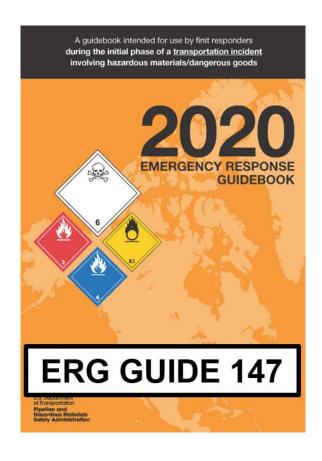
- Call 911 or emergency medical service.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- Move victim to fresh air if it can be done safely.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, wipe from skin immediately; flush skin or eves with running water for at least 20 minutes.
- Keep victim calm and warm.



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## **EMERGENCY RESPONSE GUIDE #147 – NEXT PAGE**

# (THIS DOCUMENT OR A SDS FOR BATTERY MUST ACCOMPANY ALL FULLY REGULATED SHIPMENTS OF LITHIUM ION BATTERIES)







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# GUIDE LITHIUM ION BATTERIES

# **POTENTIAL HAZARDS**

## FIRE OR EXPLOSION

- Lithium ion batteries contain flammable liquid electrolyte that may vent, ignite and produce sparks when subjected to high temperatures (> 150°C (302°F)), when damaged or abused (e.g., mechanical damage or electrical overcharging).
- May burn rapidly with flare-burning effect.
- May ignite other batteries in close proximity.

## HEALTH

- Contact with battery electrolyte may be irritating to skin, eyes and mucous membranes.
- Fire will produce irritating, corrosive and/or toxic gases.
- Burning batteries may produce toxic hydrogen fluoride gas (see GUIDE 125).
- Fumes may cause dizziness or asphyxiation.

# PUBLIC SAFETY

- CALL 911. Then call emergency response telephone number on shipping paper. If shipping paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Keep unauthorized personnel away.
- Stay upwind, uphill and/or upstream.
- Ventilate closed spaces before entering, but only if properly trained and equipped.

## **PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing provides thermal protection but only limited chemical protection.

## EVACUATION

## Immediate precautionary measure

• Isolate spill or leak area for at least 25 meters (75 feet) in all directions.

## Large Spill

• Consider initial downwind evacuation for at least 100 meters (330 feet).

## Fire

• If rail car or trailer is involved in a fire, ISOLATE for 500 meters (1/3 mile) in all directions; also initiate evacuation including emergency responders for 500 meters (1/3 mile) in all directions.

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## **EMERGENCY RESPONSE**

## FIRE

## Small Fire

• Dry chemical, CO<sub>2</sub>, water spray or regular foam.

## Large Fire

- Water spray, fog or regular foam.
- If it can be done safely, move undamaged containers away from the area around the fire.

## SPILL OR LEAK

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames) from immediate area.
- Do not touch or walk through spilled material.
- Absorb with earth, sand or other non-combustible material.
- Leaking batteries and contaminated absorbent material should be placed in metal containers.

## FIRST AID

- Call 911 or emergency medical service.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- Move victim to fresh air if it can be done safely.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.





# PACKAGE TEST REQUIREMENTS

Most fully regulated packages of lithium batteries and cells require UN Specification packaging.

All packages of small and medium lithium batteries require some degree of testing. However, small and medium lithium batteries and cells do not require UN Specification packaging

The following pages summarizes package test requirement for the different sizes of batteries shipped via ground (USA), air and vessel.

HAZMATEAM, INC. offers package testing services. Call 603-882-1112 for more information or for a quote.

To determine package test requirements, select (click) one of the following

- <u>Small or Medium lithium batteries shipped ground domestic USA</u>
- Small lithium batteries shipped international air
- <u>Small lithium batteries shipped international vessel</u>
- <u>Fully regulated, damaged or prototype lithium batteries requiring UN specification</u> <u>packaging</u>





## SMALL AND MEDIUM LITHIUM BATTERIES SHIPPED USA GROUND<sup>1</sup>

PACKAGE	VIBRATION TEST <sup>2</sup>	DROP TEST <sup>3</sup>
Small UN 3480		
Small UN 3090	<ul> <li>O</li> </ul>	$\bigcirc$
Small UN 3481, "packed with"	$\bigcirc$	$\bigcirc$
Small UN 3481, "contained in"	$\bigcirc$	
Small UN 3091, "packed with"	$\bigcirc$	$\bigcirc$
Small UN 3091, "contained in"	$\bigcirc$	
Medium UN 3480	$\bigcirc$	$\bigcirc$
Medium UN 3090	$\bigcirc$	$\bigcirc$
Medium UN 3481, "packed with"	$\bigcirc$	$\bigcirc$
Medium UN 3481, "contained in"	$\bigcirc$	
Medium UN 3091, "packed with"	$\bigcirc$	$\bigcirc$
Medium UN 3091, "contained in"	$\bigcirc$	

- 1- Does not require UN Specification packaging
- 2- 173.185 (b)(1) references 49 CFR 173 Subpart B. 49 CFR 173 Subpart B includes 49 CFR 173.24a(a)(5) vibration testing
- 3- 49 CFR 173.185 (c)(2)







### SMALL LITHIUM BATTERIES SHIPPED AIR<sup>1</sup>

PACKAGE	VIBRATION TEST <sup>2</sup>	DROP TEST <sup>3</sup>
Small UN 3480		
Small UN 3090	- Č	Output to the second
Small UN 3481, "packed with"	$\bigcirc$	$\bigcirc$
Small UN 3481, "contained in"	$\bigcirc$	
Small UN 3091, "packed with"	$\bigcirc$	$\bigcirc$
Small UN 3091, "contained in"	$\bigcirc$	

- 1- Does not require UN Specification packaging
- 2- Section IB of IATA PI 965 & 968 and Section II of PI 965- 970 requires compliance with IATA DGR 5.0.2.4. IATA 5.0.2.4 requires shippers to ensure package is capable of withstanding vibrations normally encountered in transport.
- IATA DGR, PI 965 Section IB, PI 965 Section II, PI 966 Section II, PI 968 Section IB, PI 968 Section II and PI 969 Section II







## SMALL LITHIUM BATTERIES SHIPPED VESSEL<sup>1</sup>

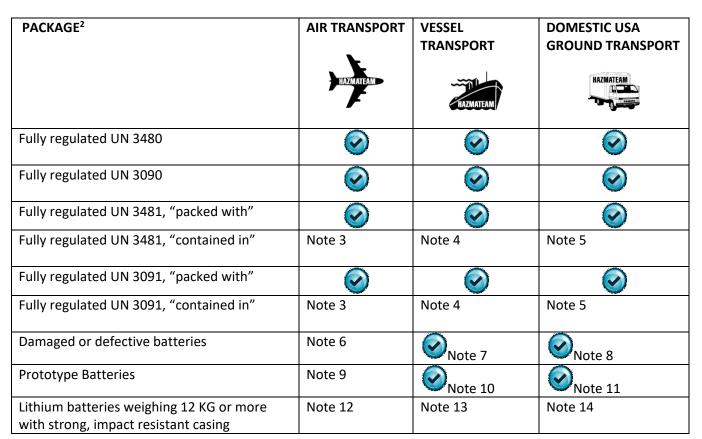
PACKAGE	VIBRATION TEST <sup>2</sup>	DROP TEST <sup>3</sup>
Small UN 3480		$\bigcirc$
Small UN 3090	Optimized and the second se	$\overline{\mathbf{O}}$
Small UN 3481, "packed with"	- Č	Output to the second
Small UN 3481, "contained in"	- Č	
Small UN 3091, "packed with"	- Č	$\bigcirc$
Small UN 3091, "contained in"	<ul> <li>Image: A start of the start of</li></ul>	

- 1- Does not require UN Specification packaging
- 2- IMDG Special Provision 188 paragraph 4 references IMDG 4.1.1.1. IMDG 4.1.1.1 requires shippers to ensure package is capable of withstanding vibrations normally encountered in transport.
- 3- IMDG Special Provision 188 paragraph 7





#### FULL REGULATED, DAMAGED OR PROTOTYPE LITHIUM BATTERIES REQUIRING



PACKAGING<sup>1</sup>

- 1- Unless otherwise specified, must meet PG II performance standards ("X" or "Y" rated packages).
- 2- Assemble according to package closure instructions
- 3- UN packaging not required. IATA 5.0.2.4 requires shippers to ensure package is capable of withstanding vibrations normally encountered in transport.
- 4- UN packaging not required. IMDG 4.1.1.1 requires shippers to ensure package is capable of withstanding vibrations normally encountered in transport.
- 5- UN packaging not required. 49 CFR 173.24a(a)(5) requires shippers to ensure package is capable of withstanding vibrations normally encountered in transport.
- 6- Forbidden for air transport, see IATA SP A154
- 7- Packaged according to IMDG P908
- 8- Packaged according to 49 CFR 173.185 (f) at the PG I performance level ("X" package)
- 9- Forbidden for air transport, unless approval from state of origin see IATA SP A88
- 10- Packaged according to IMDG P910
- 11- Packaged according to 49 CFR 173.185 (e) at the PG I performance level ("X" package)
- 12- UN 3480 and UN 3090 weighing 12 kg or more with strong, impact resistant casing does not require UN packaging. Must have gov't approval. Otherwise, use UN package. See IATA PI 965 and PI 968.
- 13- UN 3480 and UN 3090 weighing 12 kg or more with strong, impact resistant casing does not require UN packaging. See IMDG P903, paragraph (2).
- 14- UN 3480 and UN 3090 weighing 12 kg or more with strong, impact resistant casing does not require UN packaging. See 49 CFR 173.185 (b)(4)





## DISCLAIMER

This guide provides a summary of Dangerous Goods (DG) regulatory transportation requirements, and does not address product use. HAZMATEAM, INC shall not be held liable for any damage resulting from handling or from contact with the products described in this guide.

The user of this guide must be trained and use the classification, packaging instructions and guidance in the most recent versions of the applicable DG regulations (IMDG, IATA, ICAO, 49 CFR and/or other country specific DG regulations). The user must also consult the battery/equipment manufacturer for item specific transportation safety requirements (including verification a lithium battery has been UN tested). This guide does not address waste shipments: consult federal and state waste regulations for shipping requirements.

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# **RETURN TO FIRST PAGE (CLICK)**