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-2020), international air (2020 IATA DGR, 61st 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: DISCLAIMER

This guide will be updated as lithium battery regulations change. Please check www.hazmateam.com 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) CELL/BATTERY?
- **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**
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. Refer 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 49 CFR 173.185 (e). Prototype batteries must be shipped fully regulated.

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NAVIGATE (CLICK):
# Lithium Ion Cell & Battery Size Definitions

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

<table>
<thead>
<tr>
<th>SIZE &amp; TYPE</th>
<th>AIR TRANSPORT</th>
<th>VESSEL TRANSPORT</th>
<th>DOMESTIC USA GROUND TRANSPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MAXIMUM WATT HOUR RATING</td>
<td>MAXIMUM WATT HOUR RATING</td>
<td>MAXIMUM WATT HOUR RATING</td>
</tr>
<tr>
<td>SMALL CELL</td>
<td>20 WH</td>
<td>20 WH</td>
<td>20 WH</td>
</tr>
<tr>
<td>SMALL BATTERY</td>
<td>100 WH</td>
<td>100 WH</td>
<td>100 WH</td>
</tr>
<tr>
<td>MEDIUM CELL</td>
<td>Not applicable to air transport</td>
<td>Not applicable to vessel transport</td>
<td>60 WH</td>
</tr>
<tr>
<td>MEDIUM BATTERY</td>
<td>Not applicable to air transport</td>
<td>Not applicable to vessel transport</td>
<td>300 WH</td>
</tr>
<tr>
<td>FULLY REGULATED CELL</td>
<td>&gt; 20 WH</td>
<td>&gt; 20 WH</td>
<td>&gt; 60 WH</td>
</tr>
<tr>
<td>FULLY REGULATED BATTERY</td>
<td>&gt; 100 WH</td>
<td>&gt; 100 WH</td>
<td>&gt; 300 WH</td>
</tr>
</tbody>
</table>

“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.

NAVIGATE (CLICK):

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**LITHIUM METAL CELL & BATTERY SIZE DEFINITIONS**

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

<table>
<thead>
<tr>
<th>SIZE &amp; TYPE</th>
<th>AIR TRANSPORT</th>
<th>VESSEL TRANSPORT</th>
<th>DOMESTIC USA GROUND TRANSPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMALL CELL</td>
<td>1 GRAM</td>
<td>1 GRAM</td>
<td>1 GRAM</td>
</tr>
<tr>
<td>SMALL BATTERY</td>
<td>2 GRAMS&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2 GRAMS&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2 GRAMS&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>MEDIUM CELL</td>
<td>Not applicable to air transport</td>
<td>Not applicable to vessel transport</td>
<td>5 GRAMS</td>
</tr>
<tr>
<td>MEDIUM BATTERY</td>
<td>Not applicable to air transport</td>
<td>Not applicable to vessel transport</td>
<td>25 GRAMS</td>
</tr>
<tr>
<td>FULLY REGULATED CELL</td>
<td>&gt; 1 GRAM</td>
<td>&gt; 1 GRAM</td>
<td>&gt; 5 GRAMS</td>
</tr>
<tr>
<td>FULLY REGULATED BATTERY</td>
<td>&gt; 2 GRAMS</td>
<td>&gt; 2 GRAMS</td>
<td>&gt; 25 GRAMS</td>
</tr>
</tbody>
</table>

**“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.

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**NAVIGATE (CLICK):**

[HAZMATEAM]

[HAZMATEAM TRAINING]
**SMALL LITHIUM ION CELL/BATTERY REQUIREMENTS**

<table>
<thead>
<tr>
<th>PACKAGE OF SMALL LITHIUM ION CELLS/BATTERIES</th>
<th>MODE (CLICK):</th>
</tr>
</thead>
<tbody>
<tr>
<td>BATTERIES ONLY</td>
<td>HAZMATEAM</td>
</tr>
<tr>
<td>BATTERIES CONTAINED IN EQUIPMENT * (INSTALLED)</td>
<td>HAZMATEAM</td>
</tr>
<tr>
<td>BATTERIES PACKED WITH EQUIPMENT*</td>
<td>HAZMATEAM</td>
</tr>
</tbody>
</table>

- *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?**
<table>
<thead>
<tr>
<th>PACKAGE OF MEDIUM LITHIUM ION CELLS/BATTERIES</th>
<th>MODE (CLICK):</th>
</tr>
</thead>
<tbody>
<tr>
<td>BATTERIES ONLY</td>
<td>HAZMATEAM</td>
</tr>
<tr>
<td>BATTERIES CONTAINED IN EQUIPMENT (^2) (INSTALLED)</td>
<td>HAZMATEAM</td>
</tr>
<tr>
<td>BATTERIES PACKED WITH EQUIPMENT (^2)</td>
<td>HAZMATEAM</td>
</tr>
</tbody>
</table>

\(^*\)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

<table>
<thead>
<tr>
<th>Package of Fully Regulated Lithium Ion Cells/Batteries</th>
<th>Mode (Click):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batteries Only</td>
<td><img src="HazmatTeam.png" alt="Hazmat Team" /></td>
</tr>
<tr>
<td>Batteries Contained in Equipment <em>(Installed)</em></td>
<td><img src="HazmatTeam.png" alt="Hazmat Team" /></td>
</tr>
<tr>
<td>Batteries Packed with Equipment <em>(Installed)</em></td>
<td><img src="HazmatTeam.png" alt="Hazmat Team" /></td>
</tr>
</tbody>
</table>

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

**Navigate (Click):**

![Hazmat Team](HazmatTeam.png)

**What Size Is My Lithium Ion (Rechargeable) Cell/Battery?**
<table>
<thead>
<tr>
<th>PACKAGE OF SMALL LITHIUM METAL CELLS/BATTERIES</th>
<th>MODE (CLICK):</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BATTERIES ONLY</strong></td>
<td><img src="image" alt="HAZMATEAM" /></td>
</tr>
<tr>
<td><strong>BATTERIES CONTAINED IN EQUIPMENT * (INSTALLED)</strong></td>
<td><img src="image" alt="HAZMATEAM" /></td>
</tr>
<tr>
<td>**BATTERIES PACKED WITH EQUIPMENT * **</td>
<td><img src="image" alt="HAZMATEAM" /></td>
</tr>
</tbody>
</table>

- *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?**
## MEDIUM\textsuperscript{1} LITHIUM METAL CELL/BATTERY REQUIREMENTS

<table>
<thead>
<tr>
<th>Package of Medium Lithium Metal Cells/Batteries</th>
<th>Mode (Click):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batteries Only</td>
<td></td>
</tr>
<tr>
<td>Batteries Contained in Equipment \textsuperscript{2} (Installed)</td>
<td>HAZMATEAM</td>
</tr>
<tr>
<td>Batteries Pack with Equipment \textsuperscript{2}</td>
<td>HAZMATEAM</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Package of Fully Regulated Lithium Metal Cells/Batteries</th>
<th>Mode (Click):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batteries Only</td>
<td><img src="image1" alt="Hazmat Team" /></td>
</tr>
<tr>
<td>Batteries Contained in Equipment (Installed)</td>
<td><img src="image4" alt="Hazmat Team" /></td>
</tr>
<tr>
<td>Batteries Packed with Equipment</td>
<td><img src="image7" alt="Hazmat Team" /></td>
</tr>
</tbody>
</table>

**Navigate (Click):**

- **What Size Is My Lithium Metal (Non-Rechargeable) Cell/Battery?**
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

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

NAVIGATE (CLICK):
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

**NAVIGATE (CLICK):**
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 (UN Tested)
- 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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REFERENCE:

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

VESSEL: IMDG CODE, CHAPTER 3.3, SP 188

**NAVIGATE (CLICK):**
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

NAVIGATE (CLICK):

© HAZMATEAM, INC

REFERENCE:

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

NAVIGATE (CLICK):
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
- CLICK HERE IF SMALL LITHIUM ION BATTERY OTHER THAN BUTTON CELL INSTALLED

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

NAVIGATE (CLICK):
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
- CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE

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REFERENCE:

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

NAVIGATE (CLICK):
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 (UN Tested)
- 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]

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**REFERENCE:**

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

VESSEL: IMDG CODE, CHAPTER 3.3, SP 188

**NAVIGATE (CLICK):**

- HAZMATEAM
- HAZMATEAM TRAINING
- HAZMATEAM AIRCRAFT TESTING
SMALL LITHIUM ION BATTERIES – NO EQUIPMENT (PI 965 SECTION II)

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:

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

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

© HAZMATEAM, INC;

REFERENCE:
DOMESTIC USA: 49 CFR 173.185 (c)(4)
INTERNATIONAL AIR: IATA PACKING INSTRUCTION 965, SECTION II

NAVIGATE (CLICK):
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 ≤ 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:

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

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

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

ADDRESS LABEL MANDATORY

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

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

NAVIGATE (CLICK):
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
- [CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED (OTHER THAN BUTTON CELLS)]
- [CLICK HERE IF SHIPPING BUTTON CELLS INSTALLED IN EQUIPMENT]

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REFERENCE:
DOMESTIC USA: 49 CFR 173.185 (c)(3), (c)(4)
INTERNATIONAL AIR: IATA, PACKING INSTRUCTION 967, SECTION II

[Navigate (Click):]
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
- CLICK HERE IF SMALL LITHIUM ION BATTERIES OTHER THAN BUTTON CELLS CONTAINED IN EQUIPMENT

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:
DOMESTIC USA: 49 CFR 173.185 (c)(3), (c)(4)
INTERNATIONAL AIR: IATA, PACKING INSTRUCTION 967, SECTION II

NAVIGATE (CLICK):
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.
- [CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE](#)

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REFERENCE:

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

INTERNATIONAL AIR: IATA, PACKING INSTRUCTION 967, SECTION II

NAVIGATE (CLICK):
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

LITHIUM BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD AIRCRAFT AND VESSEL

TO: HAZMATEAM, INC
FROM: XYZ, INC

Address label optional

© HAZMATEAM, INC
REFERENCE:
GROUND: 49 CFR 173.185 (c)(1)(iv), (vi) & (c)(3)

NAVIGATE (CLICK):
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/SHELLING PAPER: NO
- EQUIPMENT AND BATTERY IN SAME PACKAGE. BATTERY NOT INSTALLED.

© HAZMATEAM, INC

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.
- [CLICK HERE FOR MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE](#)

[Image:צהמהאמטמ, IN]

**LITHIUM BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD AIRCRAFT AND VESSEL**

TO: HAZMATEAM, INC
FROM: XYZ, INC

Address label optional

**LITHIUM BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD AIRCRAFT AND VESSEL**

TO: HAZMATEAM, INC
FROM: XYZ, INC

Address label optional

IF MORE THAN 2 PACKAGES PER CONSIGNMENT.

© HAZMATEAM, INC

REFERENCE:

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

**NAVIGATE (CLICK):**
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.
- CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE

LITHIUM BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD AIRCRAFT AND VESSEL

TO: HAZMATEAM, INC
FROM: XYZ, INC

Address label optional

© HAZMATEAM, INC

REFERENCE:

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

NAVIGATE (CLICK):
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

© HAZMATEAM, INC

REFERENCE:

GROUND: 49 CFR 172.301, 172.447 & 173.185

VESSEL: IMDG CODE, CHAPTER 5.2, PI P903

NAVIGATE (CLICK):
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)

© HAZMATEAM, INC

REFERENCE:

GROUND: 49 CFR 172.301, 172.400 (b) & 173.185

VESSEL: IMDG CODE, CHAPTER 5.2, PI P903

**NAVIGATE (CLICK):**
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

REFERENCE:
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):
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

© 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

NAVIGATE (CLICK):
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

UN 3481
LITHIUM ION BATTERIES PACKED WITH EQUIPMENT
NET QTY: ___________

TO: HAZMATEAM, INC
FROM: XYZ, INC

4G/Y19/S/17
USA/M-32493

Address label mandatory

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

© HAZMATEAM, INC

REFERENCE:
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

NAVIGATE (CLICK):
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

© 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):
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 FLAMMABLE GASES OR VAPORS UNDER NORMAL CONDITIONS OF TRANSPORT SHALL NOT BE TRANSPORTED

© 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]
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

© HAZMATEAM, INC

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

NAVIGATE (CLICK):
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.
- CLICK HERE IF MORE THAN 5 KG NET PER PACKAGE

Address label optional

© HAZMATEAM, INC

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

NAVIGATE (CLICK):
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
- [CLICK HERE IF NO MORE THAN 5 KG NET PER PACKAGE]

© HAZMATEAM, INC

REFERENCE:

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

VESSEL: IMDG CODE, CHAPTER 3.3, SP 188

NAVIGATE (CLICK):
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
- **CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED (OTHER THAN BUTTON CELLS) & NO MORE THAN 5 KG NET**
- **CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED (OTHER THAN BUTTON CELLS) & OVER 5 KG NET**
- **CLICK HERE IF LITHIUM METAL BUTTON CELLS CONTAINED IN EQUIPMENT**

© HAZMATEAM, INC

REFERENCE:

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

VESSEL: IMDG CODE, CHAPTER 3.3, SP 188

NAVIGATE (CLICK):

IF MORE THAN 2 PACKAGES PER CONSIGNMENT.
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
- CLICK HERE IF SMALL LITHIUM METAL BATTERY OTHER THAN BUTTON CELL INSTALLED

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

© HAZMATEAM, INC

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

NAVIGATE (CLICK):
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
- CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED (OTHER THAN BUTTON CELLS) & OVER 5 KG NET
- CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED (OTHER THAN BUTTON CELLS) & NO MORE THAN 5 KG NET
- CLICK HERE IF LITHIUM METAL BUTTON CELLS CONTAINED IN EQUIPMENT

© HAZMATEAM, INC

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

NAVIGATE (CLICK):
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
- CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED (OTHER THAN BUTTON CELLS) & NO MORE THAN 5 KG NET
- CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES INSTALLED (OTHER THAN BUTTON CELLS) & NO MORE THAN 5 KG NET
- CLICK HERE IF LITHIUM METAL BUTTON CELLS CONTAINED IN EQUIPMENT

© HAZMATEAM, INC

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

NAVIGATE (CLICK):
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 **PI 968 SECTION 1B**)
- WITHIN THE LIMITS OF THE FOLLOWING TABLE:

<table>
<thead>
<tr>
<th>Contents</th>
<th>Lithium metal cells and/or batteries with a lithium content not more than 0.3 g</th>
<th>Lithium metal cells with a lithium content more than 0.3 g but not more than 1 g</th>
<th>Lithium metal batteries with a lithium content more than 0.3 g but not more than 2 g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum number of cells/batteries per package.</td>
<td>No Limit ................</td>
<td>8 cells ..........................</td>
<td>2 batteries ................</td>
</tr>
</tbody>
</table>
SMALL LITHIUM METAL BATTERIES – NO EQUIPMENT (PI 968 SECTION IB)

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:

<table>
<thead>
<tr>
<th>Contents</th>
<th>Lithium metal cells and/or batteries with a lithium content not more than 0.3 g</th>
<th>Lithium metal cells with a lithium content more than 0.3 g but not more than 1 g</th>
<th>Lithium metal batteries with a lithium content more than 0.3 g but not more than 2 g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum number of cells/batteries per package.</td>
<td>No Limit .............................................</td>
<td>8 cells .....................................</td>
<td>2 batteries ..............................</td>
</tr>
<tr>
<td>Maximum net quantity (mass) per package.</td>
<td>2.5 kg ............................................</td>
<td>n/a ....................................</td>
<td>n/a ....................................</td>
</tr>
</tbody>
</table>

**CLICK HERE IF WITHIN TABLE LIMITS**

---

**UN 3090**

**LITHIUM METAL BATTERIES**

**NET QTY:**

**Address label mandatory**

**REFERENCE:**

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

**NAVIGATE (CLICK):**

© HAZMATEAM, INC
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.

© HAZMATEAM, INC

REFERENCE:
DOMESTIC USA: 49 CFR 173.185 (c)(3), (c)(4)
INTERNATIONAL AIR: IATA, PACKING INSTRUCTION 969, SECTION II

NAVIGATE (CLICK):
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.
- **CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES (OTHER THAN BUTTON CELLS) ARE CONTAINED IN EQUIPMENT PER PACKAGE**
- **CLICK HERE IF LITHIUM METAL BUTTON CELLS ARE CONTAINED IN EQUIPMENT**

© HAZMATEAM, INC

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

NAVIGATE (CLICK):
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**
- **CLICK HERE IF SMALL LITHIUM METAL BATTERY OTHER THAN BUTTON CELL INSTALLED**

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

TO: HAZMATEAM, INC
FROM: XYZ, INC

Address label optional

© HAZMATEAM, INC

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

NAVIGATE (CLICK):
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.
- CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES ARE CONTAINED IN EQUIPMENT PER PACKAGE

ADDRESS LABEL OPTIONAL

© HAZMATEAM, INC

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

NAVIGATE (CLICK):
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 BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD AIRCRAFT AND VESSEL

TO: HAZMATEAM, INC
FROM: XYZ, INC

Address label optional

© HAZMATEAM, INC

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

NAVIGATE (CLICK):
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.**

© 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.
- CLICK HERE IF MORE THAN 4 CELLS OR 2 BATTERIES ARE CONTAINED IN EQUIPMENT PER PACKAGE

© HAZMATEAM, INC

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

NAVIGATE (CLICK):
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
- CLICK HERE IF NO MORE THAN 4 CELLS OR 2 BATTERIES CONTAINED IN EQUIPMENT PER PACKAGE

© HAZMATEAM, INC

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

NAVIGATE (CLICK):
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

NAVIGATE (CLICK):
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

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

NAVIGATE (CLICK):
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

REFERENCE:
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):
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

© 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

NAVIGATE (CLICK):
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

© 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 969 SECTION I

NAVIGATE (CLICK):
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: __________

Address label mandatory

© 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

NAVIGATE (CLICK):
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 FLAMMABLE GASES OR VAPORS UNDER NORMAL CONDITIONS OF TRANSPORT SHALL NOT BE TRANSPORTED

© 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):
## SHIPPING PAPER/DECLARATION EXAMPLES

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

**USA Ground:**  
INTERNATIONAL VESSEL:  
INTERNATIONAL AIR:

**49 CFR 172.200 (CLICK)**  
IMDG Code, Volume 1, Chapter 5.4  
IATA DGR, Section 8 **(Note):** New declaration format as of IATA 60th Edition, 2019; May use declaration illustrated in the 59th Edition until 31-Dec-2024.

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

**NAVIGATE (CLICK):**

![HAZMATEAM](image)
EXAMPLE 1

- 10 FIBREBOARD BOXES of UN 3480 (NO EQUIPMENT): Each Box contains 5 KG net batteries; Each Box weighs 11 KG, GROSS
- 1 box of non-regulated material

FROM: HAZMATEAM, INC
Shipper
12 KIMBALL HILL ROAD
Hudson, NH 03051

TO: XYZ, INC.
Consignee
1 MAIN STREET
OMAHA, NE 72111

Route
No of Units & Container Type HM
10 BOXES X
1 BOX

BASIC DESCRIPTION
Proper Shipping Name, Hazard Class, Identification Number (UN or MA), Packing Group, per 172.101, 172.202, 172.203

TOTAL QUANTITY
GROSS

WEIGHT
(Subject to Correction)

CHARGES
(For Carrier Use Only)

10 KG (GROSS)
50 KG (NET)
110 KG (GROSS)

TOTAL QTY, CAN BE NET OR GROSS

IF USING 3RD PARTY	ER PHONE SERVICE,
INCLUDING CONTRACT NUMBER

PLACARDS TENDERED: YES NO

COD
Amount

COD FEES
Purchased

TRAINED PERSON'S SIGNATURE

Note - (1) Where the rate is dependent on value, shipments are valued in full specifically, in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding \_

(2) Where the applicable tariff provisions specify a limitation of the carrier's liability, to the extent of the limit of liability declared or as written on the bill of lading, the carrier does not release the carrier's liability or declare a value which is less than the liability stated by the shipper on the bill of lading. See INRCF Item 172.5

(3) Commodities requiring special or additional care or attention in handling or storage, or commodities subject to temperature control, or those where speed is of the essence, must be so marked and packaged to ensure safe transportation. See Section 390 of the Rules of Lading, Freight Bills, and Statements of Charges and Section 109 of the Contract Terms and Conditions for a list of such articles.

COD
Subject to Section 7 of the conditions, if the consignee fails to respond within the time specified in the Contract Terms and Conditions for a list of such articles.

Tom Thumb Signature

SIGNATURE OF CONSIGNEE

NAVIGATE (CLICK):
**EXAMPLE 2**

- 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, shrink wrapped (an overpack)

<table>
<thead>
<tr>
<th>No. of Units &amp; Container Type</th>
<th>HM</th>
<th>Route No.</th>
<th>Specification</th>
<th>BASIC DESCRIPTION</th>
<th>TOTAL QUANTITY</th>
<th>WEIGHT</th>
<th>RATE</th>
<th>CHARGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 BOXES</td>
<td>X</td>
<td>(4D)</td>
<td>UN 3091, LITHIUM METAL BATTERIES</td>
<td>PACKED WITH EQUIPMENT, 9 ERG # 138 ABOVE PLACED IN 1 OVERPACK</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 'X' in HM column if hazardous
- Overpack contains 20 properly marked and labeled packages
- If using 3rd party ER phone service, include contract number

---

**.navigate (click):**

**SHIPPING PAPER EXAMPLES**

**EMERGENCY RESPONSE INFORMATION**

---

**Placards Tendered:**

- **YES**

---

**E. Nunez**

---

**COD**

- **Amit $**

---

Subject to Section 7 of the Consignor, if the shipping contract agrees that the carrier or any other person delivering or storing any of the property is subject to injury, death or illness, the carrier or such other person delivering or storing any of the property must be so protected as to ensure safe transportation. See section 7 of this bill of lading. Bills of lading, Freight Bills, Statements of Charges, and Section 7 of the Contract Terms and Conditions for a list of such damages.
### Example 3

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.

**Route**: HM

<table>
<thead>
<tr>
<th>No. of Units &amp; Container Type</th>
<th>HM</th>
<th>BASIC DESCRIPTION</th>
<th>TOTAL QUANTITY</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>X</td>
<td>UN 3481, LITHIUM ION BATTERIES</td>
<td>70 KG (NET) 200 KG, GROSS</td>
<td></td>
</tr>
<tr>
<td>2 BAGS</td>
<td></td>
<td>NON-REGULATED MATERIAL</td>
<td>5 KG, GROSS</td>
<td></td>
</tr>
</tbody>
</table>

**'X' IN HM COLUMN IF HAZARDOUS**

- **RECHARGEABLE LITHIUM BATTERIES INSTALLED IN EQUIPMENT**
- **IF USING 3RD PARTY ER PHONE SERVICE, INCLUDE CONTRACT NUMBER**

**PLACARDS TENDERED: YES**

**REMIT TO ADDRESS**

**COD Amt $**

**COD FEES**

**SIGNATURE**

**NAVIGATE (CLICK):**

**EMERGENCY RESPONSE INFORMATION**
EXAMPLE 4

UN 3090: Each box contains 5 kg of lithium metal batteries; UN 3091, ‘packed with’, box contains one 5 kg lithium metal battery in same package with equipment; UN 3091, ‘contained in’ box contains one 12 kg lithium battery installed in equipment.

The four packages are sent to a freight forwarder.

### MULTIMODAL DANGEROUS GOODS FORM

<table>
<thead>
<tr>
<th>1. Shipper/Consignor/Sender</th>
<th>HAZMATEAM, INC</th>
</tr>
</thead>
<tbody>
<tr>
<td>------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>12 KIMBALL HILL ROAD</td>
<td>12 KIMBALL HILL ROAD</td>
</tr>
<tr>
<td>HUDSON NH 03051 USA</td>
<td>HUDSON NH 03051 USA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Transport document number</th>
<th></th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>3. Page 1 of 1</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>4. Shipper’s reference</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>5. Freight forwarder’s reference</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>6. Consignee</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZMATEAM - JAMAICA</td>
</tr>
<tr>
<td>21 RASTA WAY</td>
</tr>
<tr>
<td>KINGSTON JAMAICA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Carrier</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>10. Vessel</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>11. Port of loading</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>12. Port of discharge</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>13. Destination</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>9. Additional handling instructions</th>
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</table>

24 HR ER - INFOTRAC 1-011-352-323-3500; Contract ID – 123S3B

<table>
<thead>
<tr>
<th>14. Shipping marks</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>15. Container identification No.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>16. Seal number(s)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>17. Cost/vehicle size &amp; type</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>18. Tire</th>
</tr>
</thead>
</table>

### IMDG EMS – COLUMN 15 OF DGL

- UN 3090, LITHIUM METAL BATTERIES, 9
- IMDG EMS: F-A, S-I; DOT ERG 138 2 (4G) FIBREBOARD BOXES

### DOT ERG – ’ORANGE BOOK’ CODE

- UN 3091, LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT, 9
- IMDG EMS: F-A, S-I; DOT ERG 138 1 (4G) FIBREBOARD BOX

- UN 3091, LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, 9
- IMDG EMS: F-A, S-I; DOT ERG 138 1 PLYWOOD BOX

<table>
<thead>
<tr>
<th>21. RECEIVING ORGANIZATION RECEIVED</th>
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</table>

<table>
<thead>
<tr>
<th>22. Name of co. of shipper preparing this note</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>HAZMATEAM</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>23. Name of company</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Vehicle reg. no</th>
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</table>

<table>
<thead>
<tr>
<th>24. Name/status of declarant</th>
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<table>
<thead>
<tr>
<th>Signature and date</th>
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</table>

<table>
<thead>
<tr>
<th>25. Place and date</th>
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</table>

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<th>26. Name of company</th>
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<table>
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<tr>
<th>27. Name/status of declarant</th>
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<th>Signature and date</th>
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<tr>
<th>28. Place and date</th>
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<th>29. Name of company</th>
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<table>
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<th>Vehicle reg. no</th>
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<tr>
<th>30. Name/status of declarant</th>
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<table>
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<tr>
<th>Signature and date</th>
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<thead>
<tr>
<th>31. Place and date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Signature of declarant</th>
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<tr>
<th>32. Name of company</th>
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<th>Vehicle reg. no</th>
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<th>33. Name/status of declarant</th>
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<th>Signature and date</th>
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<table>
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<tr>
<th>34. Place and date</th>
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<table>
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<tr>
<th>Signature of declarant</th>
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</thead>
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<table>
<thead>
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<th>35. Name of company</th>
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<table>
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<th>Vehicle reg. no</th>
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<table>
<thead>
<tr>
<th>36. Name/status of declarant</th>
</tr>
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<table>
<thead>
<tr>
<th>Signature and date</th>
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<table>
<thead>
<tr>
<th>37. Place and date</th>
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<table>
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<tr>
<th>Signature of declarant</th>
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<table>
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<th>38. Name of company</th>
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</thead>
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<table>
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<th>Vehicle reg. no</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>39. Name/status of declarant</th>
</tr>
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<table>
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<tr>
<th>Signature and date</th>
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<table>
<thead>
<tr>
<th>40. Place and date</th>
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<table>
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<th>41. Name of company</th>
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<table>
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<table>
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<th>Signature and date</th>
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</table>

<table>
<thead>
<tr>
<th>43. Place and date</th>
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</thead>
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<table>
<thead>
<tr>
<th>Signature of declarant</th>
</tr>
</thead>
</table>

### BOX 22 ALWAYS REQUIRES A SIGNATURE BY TRAINED SHIPPER

**NAVIGATE (CLICK):**
EXAMPLE 5

250 Packages of rechargeable lithium batteries loaded into a freight container at the shipper’s facility. Each package contains a 10 Kg battery. Gross wt of each package is 20 KG.

**MULTIMODAL DANGEROUS GOODS FORM**

<table>
<thead>
<tr>
<th>1. Shipper/Consignor/Sender</th>
<th>2. Transport document number</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZMATEAM, INC</td>
<td></td>
</tr>
<tr>
<td>12 KIMBALL HILL ROAD</td>
<td></td>
</tr>
<tr>
<td>HUDSON NH 03051 USA</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Consignee</th>
<th>7. Carrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZMATEAM - NETHERLANDS</td>
<td></td>
</tr>
<tr>
<td>ZANDESTEEN 66</td>
<td></td>
</tr>
<tr>
<td>2669 VL AMSTERDAM NETHERLANDS</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10. Vessel</th>
<th>11. Port of loading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SHIPPER’S</td>
</tr>
<tr>
<td></td>
<td>I hereby declare</td>
</tr>
<tr>
<td></td>
<td>that the goods</td>
</tr>
<tr>
<td></td>
<td>described above</td>
</tr>
<tr>
<td></td>
<td>have been</td>
</tr>
<tr>
<td></td>
<td>packed/together</td>
</tr>
<tr>
<td></td>
<td>into the</td>
</tr>
<tr>
<td></td>
<td>container/vehicle</td>
</tr>
<tr>
<td></td>
<td>identified above</td>
</tr>
<tr>
<td></td>
<td>in accordance</td>
</tr>
<tr>
<td></td>
<td>with the</td>
</tr>
<tr>
<td></td>
<td>applicable</td>
</tr>
<tr>
<td></td>
<td>provisions.”**</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24 HR ER - INFOTRAC 1-011-352-323-3500, Contract ID – 12033B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14. Shipping marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Number and kind of packages: description of goods</td>
</tr>
<tr>
<td>Gross mass (kg)</td>
</tr>
<tr>
<td>UN 3480, LITHIUM ION BATTERIES, 9</td>
</tr>
<tr>
<td>IMDG EMS: F-A, S-I; ERG 147</td>
</tr>
<tr>
<td>250 (4G) FIBREBOARD BOXES</td>
</tr>
<tr>
<td>5000 KG</td>
</tr>
</tbody>
</table>

**IMDG EMS – COLUMN 15 OF DGL**

**DOT ERG – ‘ORANGE BOOK’ CODE**

**PACKAGE CODES (EX – 4G) OPTIONAL**

**IF LOADING FREIGHT CTN, SIGN BOX 20**

| 15. Container identification No./ |
| 16. Seal number(s) |
| 17. Cont./vehicle size & type |
| 18. Tare mass (kg) |
| 19. Total gross mass (including tare) (kg) |

**CONTAINER/VEHICLE PACKING CERTIFICATE**

I hereby declare that the goods described above have been packed/together, into the container/vehicle identified above in accordance with the applicable provisions.”**

**RECEIVING ORGANIZATION RECEIPT**

Received the above number of packages/containers/trailers in apparent good order and condition, unless stated herein: RECEIVING ORGANIZATION REMARKS.

20. Name of company

<table>
<thead>
<tr>
<th>21. Name of co. of shipper preparing this note</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZMATEAM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>22. Name of shipper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Dambek, Shipper</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name/status of declarant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Dambek, Shipper</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Place and date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hudson, NH, 1-JAN-2020</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signature of declarant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Dambek</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Driver’s signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature of declarant</td>
</tr>
<tr>
<td>Leo Traverse</td>
</tr>
</tbody>
</table>

**NAVIGATE (CLICK):**

**HAZMATEAM**

**SHIPPING PAPER EXAMPLES**

**EMERGENCY RESPONSE INFORMATION**
UN 3480: 5 Packages of rechargeable lithium batteries (no equipment), each box contains 5 kg of batteries; UN 3090: 10 packages of non-rechargeable lithium batteries (no equipment), each box contains 3 kg of batteries. The 15 packages are placed on pallet and shrink wrapped. The overpack was sent to a freight forwarder.

<table>
<thead>
<tr>
<th>Shipment Details</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN 3480</td>
<td>LITHIUM ION BATTERIES, 9 MD GM EMS: F-A, S-I; DOT ERG 147 5 (4G) FIBREBOARD BOXES</td>
</tr>
<tr>
<td>UN 3090</td>
<td>LITHIUM METAL BATTERIES, 9 MD GM EMS: F-A, S-I; DOT ERG 138 10 (4G) FIBREBOARD BOXES</td>
</tr>
</tbody>
</table>

**PACKAGE CODES** *(EX – 4G) OPTIONAL*

**OVERPACK**

**SHIPPING MARKS**

- IMDG EMS – COLUMN 15 OF DGL
- DOT ERG – ‘ORANGE BOOK’ CODE

**HAZMAT TEAM, INC.**
12 KIMBALL HILL ROAD
HUDSON NH 03051 USA

**CONSIGNEE**
HAZMAT TEAM - NETHERLANDS
ZANDERSTEEN 66
2669 VL AMSTERDAM NETHERLANDS

**Vessel**
**Port of loading**
**Port of discharge**
**Destination**

**SHIPPING MARKS**

- IMDG EMS: F-A, S-I; DOT ERG 147 5 (4G) FIBREBOARD BOXES
- IMDG EMS: F-A, S-I; DOT ERG 138 10 (4G) FIBREBOARD BOXES

**OVERPACK**

**CONTAINER/VEHICLE PACKING CERTIFICATE**
I hereby declare that the goods described above have been packed/load, placed together inside the container/vehicle identified above in accordance with applicable provisions.*

**RECEIVING ORGANIZATION RECEIPT**
Received the above number of packages/container/trailer in apparent good order and condition, unless stated herein: RECEIVING ORGANIZATION REMARKS.

**Name of company**
HAZMAT TEAM, INC.

**Hauler’s name**

**Vehicle reg. no**

**Name/status of declarant**
Stephanie Traverse, Shipper

**Signature and date**
Hudson, NH, 1-JAN-2020

**Name of co. of shipper preparing this note**

**Driver’s signature**

**Signature of declarant**

**NAVIGATE (CLICK):**

- HAZTEAM
- SHIPPING PAPER EXAMPLES
- EMERGENCY RESPONSE INFORMATION
**EXAMPLE 7**

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

<table>
<thead>
<tr>
<th>SHIPPER’S DECLARATION FOR DANGEROUS GOODS</th>
<th></th>
</tr>
</thead>
</table>
| **Shipper** | HAZMATEAM, INC  
12 KIMBALL HILL ROAD  
HUDSON, NH 03051 |  |
| **Air Waybill No.** | 6980  
Page 1 of 1 Pages  
Shipper’s Reference Number (optional) |  |

**Consignee**  
PHOENIX PARTS  
123 MAIN STREET  
PHOENIX, AZ 77777

**SHIPMENT CANNOT GO ON PASSENGER AIR**  
This shipment is subject to restrictions for TRANSPORT DETAILS.

**AIRWAYBILL #, AIRPORTS OF DEPARTURE OR DESTINATION CAN BE COMPLETED BY AIRLINE**

**Airport of Departure**  
MANCHESTER, MA

**Airport of Destination**  
PHOENIX, AZ

**SHIPPING DETAILS**

<table>
<thead>
<tr>
<th>Shipment Type (delete non-applicable)</th>
<th>NON-RADIOACTIVE XXXXX</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>NATURE AND QUANTITY OF DANGEROUS GOODS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UN or ID No.</td>
<td>3090</td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td>LITHIUM METAL BATTERIES</td>
</tr>
<tr>
<td>Class or Division (Subclass) Hazard</td>
<td>9</td>
</tr>
<tr>
<td>Packing Group</td>
<td></td>
</tr>
<tr>
<td>Quantity and Type of Packing</td>
<td>2 FIBREBOARD BOXES x 4 KG</td>
</tr>
<tr>
<td>Packing Instructions</td>
<td>968</td>
</tr>
</tbody>
</table>

**NUMBER OF PACKAGES X NET WT PER PACKAGE**

| ICAO/IATA ERG Code from Column N of DGL; DOT ERG – ‘ORANGE BOOK’ CODE |  |
|______________________________________________________________________|--|
| ICAO/IATA ERG Code: 12Z | DOT ERG: 138 |

**Additional Handling Information**

<table>
<thead>
<tr>
<th>INFOTRAC, 800-535-5053 (CONTRACT 12345)</th>
<th></th>
</tr>
</thead>
</table>

**Emergency Telephone Number**

| Name of signatory | Paul Dambek  
Date | 1-JAN-2020  
Signature (as appearing above) | Paul J. Dambek |

**IF USING 3RD PARTY OR PHONE SERVICE, INCLUDED CONTRACT NUMBER**

**NAVIGATE (CLICK):**

[HAZMATEAM]

[SHIPPING PAPER EXAMPLES]

[EMERGENCY RESPONSE INFORMATION]
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.
### EXAMPLE 9

5 FIBREBOARD BOXES. Each box contains 20 KG net of FULLY REGULATED lithium ion batteries shipped according to IATA PI 965 Section IA

---

### SHIPPER'S DECLARATION FOR DANGEROUS GOODS

**Shippers Declaration**

HAZMATEAM, INC  
12 KIMBALL HILL ROAD  
HUDSON, NH 03051

**Air Waybill No.**

Page 1 of 1 Pages  
Shipper's Reference Number (optional)

**Consignee**

GIZMO EMPORIUM  
19 BOWDOWIN STREET  
BLOOMINGTON, IL 61761

**Airport of Departure**

This shipment is within the limitations prescribed for:  
(PASSenger & CARGO aircraft only)

**Airport of Destination**

**Shipment Type (delete as applicable)**

- NON-RADIOACTIVE (XXXXX)

---

### NATURE AND QUANTITY OF DANGEROUS GOODS

**UN or ID No.**

- UN 3480

**Proper Shipping Name**

- LITHIUM ION BATTERIES

**Class or Division (Secondary Subclass)**

- 9

**Packing Group**

- 965

**Quantity and Type of Packing**

- 5 FIBREBOARD BOXES x 20 KG

**Authorization**

---

### ICAO/IATA ERG CODE FROM COLUMN N OF DGL; DOT ERG – ‘ORANGE BOOK’ CODE

**ICAO/IATA ERG CODE**: 12FZ; DOT ERG 147

---

**Emergency Telephone Number**

INFOTRAC, 800-535-5053 (CONTRACT 12345)

---

**IF USING 3RD PARTY ER PHONE SERVICE, INCLUDE CONTRACT NUMBER**

---

**By** Stephanie Traverse  
**Name of Signatory**

1-JAN-2020  
**Date**

Steph Traverse  
**Signature**

(if applicable)

---

**NAVIGATE (CLICK):**

[HAZMATEAM]

[SHIPPING PAPER EXAMPLES]

[EMERGENCY RESPONSE INFORMATION]
EXAMPLE 10

SHIPPERS DECLARATION FOR DANGEROUS GOODS

**Shipper:** HAZMATEAM, INC  
12 KIMBALL HILL ROAD  
HUDSON, NH 03051

**Consignee:** GIZMO EMPORIUM  
19 BOWDOIN STREET  
BLOOMINGTON, IL 61761

**Air Waybill No.**  
Page 1 of 1 Pages  
Shipper's Reference Number (optional)

**Transport Tails:**  
This shipment is within the limitations prescribed for:  
Passenger Aircraft  
Cargo Aircraft Only

**Airport of Departure:**

**Airport of Destination:**

**Shipment Type:** (delete non-applicable)  
NON-OREACTIVE

**Nature and Quantity of Dangerous Goods**

<table>
<thead>
<tr>
<th>UN or ID No.</th>
<th>Proper Shipping Name</th>
<th>Class or Division (Subdivision Hazard)</th>
<th>Packing Group</th>
<th>Quantity and Type of Packing</th>
<th>Packing Instructions</th>
<th>Authorization</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN 3480</td>
<td>LITHIUM ION BATTERIES</td>
<td></td>
<td>9</td>
<td>2 FIBREBOARD BOXES x 9 KG</td>
<td>965</td>
<td>1B</td>
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</table>

**ICAO/IATA ERG Code from Column N of DGL; DOT ERG – ‘ORANGE BOOK’ Code:**

<table>
<thead>
<tr>
<th>ICAO/IATA ERG Code</th>
<th>DOT ERG</th>
</tr>
</thead>
<tbody>
<tr>
<td>12FZ</td>
<td>147</td>
</tr>
</tbody>
</table>

**Additional Handling Information:**  
**Name of Signatory:**  
**Date:**  
**Signature:**

**Stephanie Traverse**  
1-JAN-2020  
Stephanie Traverse

**Navigate (Click):**

- HAZMATEAM
- Shipping Paper Examples
- Emergency Response Information
EXAMPLE 1

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 shrink wrapped (i.e., 'OVERPACK').

<table>
<thead>
<tr>
<th>SHIPPER'S DECLARATION FOR DANGEROUS GOODS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shipper</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Consignee</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**AIRWAYBILL #, AIRPORTS OF DEPARTURE OR DESTINATION CAN BE COMPLETED BY AIRLINE**

**PASSENGER AIR LIMIT PER PACKAGE = 5 KG**

**TRANSPORT DETAILS**

<table>
<thead>
<tr>
<th><strong>Airport of Departure</strong></th>
<th>XXXXX</th>
</tr>
</thead>
</table>

**NATURE AND QUANTITY OF DANGEROUS GOODS**

<table>
<thead>
<tr>
<th><strong>UN or ID No.</strong></th>
<th>LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proper Shipping Name</strong></td>
<td><strong>Class or Division</strong> (Subsidiary Hazard)</td>
</tr>
<tr>
<td><strong>Packing Group</strong></td>
<td><strong>Quantity and Type of Packing</strong></td>
</tr>
<tr>
<td><strong>Packing Instructions</strong></td>
<td><strong>Authorization</strong></td>
</tr>
<tr>
<td>UN 3481</td>
<td>9</td>
</tr>
<tr>
<td>10 FIBREBOARD BOXES X 4 KG</td>
<td>OVERPACK USED</td>
</tr>
</tbody>
</table>

**ICAO/IATA ERG CODE FROM COLUMN N OF DGL; DOT ERG – ‘ORANGE BOOK’ CODE**

**ICAO/IATA ERG CODE** | 12FZ; DOT ERG 147

**Additional Handling Information**

INFOTRAC, 800-535-5053 (CONTRACT 12345)

**IF USING 3RD PARTY ER PHONE SERVICE, INCLUDE CONTRACT NUMBER**

<table>
<thead>
<tr>
<th><strong>Name of Signatory</strong></th>
<th>BROCK HOLT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date</strong></td>
<td>11-JAN-2020</td>
</tr>
<tr>
<td><strong>Signature</strong></td>
<td>Brock Holt</td>
</tr>
</tbody>
</table>

**NAVIGATE (CLICK):**

[HAZMATEAM]

[SHIPPING PAPER EXAMPLES]

[EMERGENCY RESPONSE INFORMATION]
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.

**SHIPPER'S DECLARATION FOR DANGEROUS GOODS**

**Shippers:**
HAZMateAM, INC
12 KIMBALL HILL ROAD
HUDSON, NH 03051 USA

**Consignee:**
BATTERIES ITALIA
VIALE CASTRO PRETORIO 199 OFFICES
VIA GAETA 99
00188 ROME ITALY

**Transport Details:**
This shipment is within the limitations prescribed for: CARGO AIRCRAFT ONLY

**Airport of Departure:**

**Airport of Destination:**

**Shipment Type:**
NON-RADIOACTIVE

**Nature and Quantity of Dangerous Goods**

<table>
<thead>
<tr>
<th>UN or ID No.</th>
<th>Proper Shipping Name</th>
<th>Class or Division (Subsidiary Hazard)</th>
<th>Packing Group</th>
<th>Quantity and Type of Packing</th>
<th>Packing Instructions</th>
<th>Authorization</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN 3091</td>
<td>LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT</td>
<td>9</td>
<td>4 FIBREBOARD BOXES x 6 KG</td>
<td>969</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ICAO/IATA ERG Code from Column N of DGL; DOT ERG – ‘ORANGE BOOK’ Code:**

**Emergency Telephone Number:**
INFOTRAC, 1-011-352-323-3500 (CONTRACT 12345)

**IF USING 3RD PARTY ER PHONE SERVICE, INCLUDE CONTRACT NUMBER, FOR INTERNATIONAL DO NOT USE 800 NUMBERS**

**Name of Signatory:**
Paul Dambek

**Date:**
12-FEB-2020

**Signature:**
Paul J. Dambek

**NAVIGATE (CLICK):**

**HAZMateAM**

**SHIPPING PAPER EXAMPLES**

**EMERGENCY RESPONSE INFORMATION**
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 49 CFR 172.602. 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 49 CFR 172.604. 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.

**NAVIGATE (CLICK):**
(THIS DOCUMENT OR A SDS FOR BATTERY MUST ACCOMPANY ALL FULLY REGULATED SHIPMENTS OF LITHIUM METAL BATTERIES)
GUIDE 138

SUBSTANCES - WATER-REACTION (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 may cause pollution.

PUBLIC SAFETY
- CALL EMERGENCY RESPONSE Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- As an 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.
- Keep unauthorized personnel away.
- Stay upwind, uphill and/or upstream.
- Ventilate the area before entry.

PROTECTIVE CLOTHING
- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

EVACUATION

Spill
- See Table 1 - Initial Isolation and Protective Action Distances for highlighted materials. For non-highlighted materials, increase, in the downwind direction, as necessary, the isolation distance shown under “PUBLIC SAFETY”.

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 document and/or the ERAP Program Section (page 391).
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.
- Move containers from fire area if you can do it without risk.

**Fire Involving Metals or Powders (Aluminum, Lithium, Magnesium, etc.)**
- Use dry chemical, DRY sand, sodium chloride powder, graphite powder or Met-L-X® powder; 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 hose holders 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 in 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

- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- Move victim to fresh air.
- Call 911 or emergency medical service.
- 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 eyes with running water for at least 20 minutes.
- Keep victim calm and warm.
**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 suffocation.

**PUBLIC SAFETY**
- **CALL** Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind, uphill and/or upstream.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**
- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters’ protective clothing will only provide limited protection.

**EVACUATION**

**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.
EMERGENCY RESPONSE

FIRE
Small Fire
• Dry chemical, CO₂, water spray or regular foam.

Large Fire
• Water spray, fog or regular foam.
• Move containers from fire area if you can do it without risk.

SPILL OR LEAK
• ELIMINATE all ignition sources (no smoking, flares, sparks or flames in 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
• Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
• Move victim to fresh air.
• Call 911 or emergency medical service.
• 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.
To determine package test requirements, select (click) one of the following

- Small or Medium lithium batteries shipped ground domestic USA

- Small lithium batteries shipped international air

- Small lithium batteries shipped international vessel

- Fully regulated, damaged or prototype lithium batteries requiring UN specification packaging

**NAVIGATE (CLICK):**
<table>
<thead>
<tr>
<th>PACKAGE</th>
<th>VIBRATION TEST²</th>
<th>DROP TEST³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small UN 3480</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Small UN 3090</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Small UN 3481, “packed with”</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Small UN 3481, “contained in”</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Small UN 3091, “packed with”</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Small UN 3091, “contained in”</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Medium UN 3480</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Medium UN 3090</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Medium UN 3481, “packed with”</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Medium UN 3481, “contained in”</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Medium UN 3091, “packed with”</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Medium UN 3091, “contained in”</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

1- Does not require UN Specification packaging
3- 49 CFR 173.185 (c)(2)
SMALL LITHIUM BATTERIES SHIPPED AIR

<table>
<thead>
<tr>
<th>PACKAGE</th>
<th>VIBRATION TEST</th>
<th>DROP TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small UN 3480</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Small UN 3090</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Small UN 3481, “packed with”</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Small UN 3481, “contained in”</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Small UN 3091, “packed with”</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Small UN 3091, “contained in”</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

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.

3- 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

NAVIGATE (CLICK):
### SMALL LITHIUM BATTERIES SHIPPED VESSEL

<table>
<thead>
<tr>
<th>PACKAGE</th>
<th>VIBRATION TEST</th>
<th>DROP TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small UN 3480</td>
<td><img src="#" alt="Checkmark" /></td>
<td><img src="#" alt="Checkmark" /></td>
</tr>
<tr>
<td>Small UN 3090</td>
<td><img src="#" alt="Checkmark" /></td>
<td><img src="#" alt="Checkmark" /></td>
</tr>
<tr>
<td>Small UN 3481, “packed with”</td>
<td><img src="#" alt="Checkmark" /></td>
<td><img src="#" alt="Checkmark" /></td>
</tr>
<tr>
<td>Small UN 3481, “contained in”</td>
<td><img src="#" alt="Checkmark" /></td>
<td><img src="#" alt="Checkmark" /></td>
</tr>
<tr>
<td>Small UN 3091, “packed with”</td>
<td><img src="#" alt="Checkmark" /></td>
<td><img src="#" alt="Checkmark" /></td>
</tr>
<tr>
<td>Small UN 3091, “contained in”</td>
<td><img src="#" alt="Checkmark" /></td>
<td><img src="#" alt="Checkmark" /></td>
</tr>
</tbody>
</table>

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

**NAVIGATE (CLICK):**
FULL REGULATED, DAMAGED OR PROTOTYPE LITHIUM BATTERIES REQUIRING PACKAGING

<table>
<thead>
<tr>
<th>PACKAGE²</th>
<th>AIR TRANSPORT</th>
<th>VESSEL TRANSPORT</th>
<th>DOMESTIC USA GROUND TRANSPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully regulated UN 3480</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Fully regulated UN 3090</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Fully regulated UN 3481, “packed with”</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Fully regulated UN 3481, “contained in”</td>
<td>Note 3</td>
<td>Note 4</td>
<td>Note 5</td>
</tr>
<tr>
<td>Fully regulated UN 3091, “packed with”</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Fully regulated UN 3091, “contained in”</td>
<td>Note 3</td>
<td>Note 4</td>
<td>Note 5</td>
</tr>
<tr>
<td>Damaged or defective batteries</td>
<td>Note 6</td>
<td>✔️ Note 7</td>
<td>✔️ Note 8</td>
</tr>
<tr>
<td>Prototype Batteries</td>
<td>Note 9</td>
<td>✔️ Note 10</td>
<td>✔️ Note 11</td>
</tr>
<tr>
<td>Lithium batteries weighing 12 KG or more with strong, impact resistant casing</td>
<td>Note 12</td>
<td>Note 13</td>
<td>Note 14</td>
</tr>
</tbody>
</table>

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)

NAVIGATE (CLICK):
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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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