The following guide provides a summary of marking, labeling and paperwork requirements for shipping lithium batteries via domestic US ground (6-MAR-2019 49 CFR UPDATE (HM-224I)), international air (2019 IATA DGR, 60th 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.
<table>
<thead>
<tr>
<th>WHAT SIZE IS MY LITHIUM ION (RECHARGEABLE) CELL/BATTERY?</th>
<th>WHAT SIZE IS MY LITHIUM METAL (NON-RECHARGEABLE) CELL/BATTERY?</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMALL LITHIUM ION CELL/BATTERY REQUIREMENTS</td>
<td>SMALL LITHIUM METAL CELL/BATTERY REQUIREMENTS</td>
</tr>
<tr>
<td>MEDIUM LITHIUM ION CELL/BATTERY REQUIREMENTS</td>
<td>MEDIUM LITHIUM METAL CELL/BATTERY REQUIREMENTS</td>
</tr>
<tr>
<td>FULLY REGULATED LITHIUM ION CELL/BATTERY REQUIREMENTS</td>
<td>FULLY REGULATED LITHIUM METAL CELL/BATTERY REQUIREMENTS</td>
</tr>
<tr>
<td>DAMAGED OR DEFECTIVE LITHIUM ION CELL/BATTERY REQUIREMENTS</td>
<td>DAMAGED OR DEFECTIVE LITHIUM METAL CELL/BATTERY REQUIREMENTS</td>
</tr>
</tbody>
</table>
**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)**

For prototypes see **49 CFR 173.185 (e)**. Prototype batteries must be shipped fully regulated.

**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>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): www.hazmateam.com
## 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(^1)</td>
<td>2 GRAMS(^1)</td>
<td>2 GRAMS(^1)</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>

\(^1\) Lithium Metal Cells and Batteries are Non-Rechargeable; Also called “primary” batteries

**“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.
# Small Lithium Ion Cell/Battery Requirements

<table>
<thead>
<tr>
<th>Package of Small Lithium Ion Cells/Batteries</th>
<th>Mode (Click):</th>
<th>Batteries Only</th>
<th>Batteries Contained in Equipment * (Installed)</th>
<th>Batteries Packed with Equipment*</th>
</tr>
</thead>
</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):
<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>HAZMATEAM</td>
</tr>
<tr>
<td></td>
<td>HAZMATEAM</td>
</tr>
<tr>
<td></td>
<td>HAZMATEAM</td>
</tr>
<tr>
<td>BATTERIES CONTAINED IN EQUIPMENT * (INSTALLED)</td>
<td>HAZMATEAM</td>
</tr>
<tr>
<td></td>
<td>HAZMATEAM</td>
</tr>
<tr>
<td></td>
<td>HAZMATEAM</td>
</tr>
<tr>
<td>BATTERIES PACKED WITH EQUIPMENT *</td>
<td>HAZMATEAM</td>
</tr>
<tr>
<td></td>
<td>HAZMATEAM</td>
</tr>
<tr>
<td></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?**
### SMALL LITHIUM METAL CELL/BATTERY REQUIREMENTS

<table>
<thead>
<tr>
<th>PACKAGE OF SMALL LITHIUM METAL 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 METAL (NON-RECHARGEABLE) CELL/BATTERY?**
### MEDIUM\(^1\) 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>Batteries Only</td>
</tr>
<tr>
<td>Batteries Contained in Equipment(^2) (Installed)</td>
<td>Batteries Contained in Equipment(^2) (Installed)</td>
</tr>
<tr>
<td>Batteries Packed with Equipment(^2)</td>
<td>Batteries Packed with Equipment(^2)</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?**
<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>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>

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):
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):
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

REFERENCE:
GROUND: 49 CFR 173.185 (c)(1)(iii) & (c)(3)
VESSEL: IMDG CODE, CHAPTER 3.3, SP 188
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 20 Wh but not more than 100 Wh</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 table limits exceeded**

![UN 3480 label](image)

**Address label optional**

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**REFERENCE:**
DOMESTIC USA: 49 CFR 173.185 (c)(4) and SP A100
INTERNATIONAL AIR: IATA PACKING INSTRUCTION 965, SECTION II

**Navigate (click):**

FEDEX & UPS WILL NOT ACCEPT THIS PACKAGE (PI 965 SECTION II)
MUST BE SHIPPED PI 965 SECTION IB
OR
PI 965 SECTION IA
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</td>
<td>8 cells</td>
<td>2 batteries.</td>
</tr>
<tr>
<td>2.5 kg</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</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) and SP A100
- INTERNATIONAL AIR: IATA PACKING INSTRUCTION 965, SECTION IB

**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):

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

IF SHIPPING MORE THAN TWO PACKAGES ACCORDING TO PI 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
- 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.

© HAZMATEAM, INC

REFERENCE:

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

NAVIGATE (CLICK):

TO: HAZMATEAM, INC
FROM: XYZ, INC

Address label optional
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

© HAZMATEAM, INC

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

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/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

Address label optional

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

NAVIGATE (CLICK):
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]

© 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

© 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

UN 3480
LITHIUM ION BATTERIES

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

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 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/SHIPPIING 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

Address label mandatory

© HAZMATEAM, INC

REFERENCE:
DOMESTIC USA: 49 CFR 172.301 & 172.447, 172.402(c), 173.185 and SP A100
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

© 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

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

NAVIGATE (CLICK):

HAZMATEAM
HAZMATEAM TRAINING
ERG GUIDE 147
DGD EXAMPLES
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):

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

© 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):
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
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 8 cells 2 batteries</td>
<td>Maximum net quantity (mass) per package.</td>
<td>n/a n/a</td>
</tr>
<tr>
<td>2.5 kg</td>
<td>8 cells</td>
<td>2 batteries</td>
<td></td>
</tr>
</tbody>
</table>

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 1A** OR **PI 968 SECTION 1B**

© HAZMATEAM, INC

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

NAVIGATE (CLICK):
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**

© HAZMATEAM, INC

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

**NAVIGATE (CLICK):**
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.

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

**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.

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.

© 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

© 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

© 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.

LITHIUM BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD AIRCRAFT AND VESSEL

© HAZMATEAM, INC

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

NAVIGATE (CLICK):
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)

© 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)
FULLY REGULATED LITHIUM METAL BATTERIES – NO EQUIPMENT

- LITHIUM METAL BATTERIES, UN 3090
- GROUND & VESSEL TRANSPORT
- NO EQUIPMENT
- BATTERY SIZE: FULLY REGULATED (UN Tested)
- DECLARATION/SHPING 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 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

UN 3091
LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT

TO: HAZMATEAM, INC
FROM: XYZ, INC

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

![Image of a box with hazard symbols and text: UN 3090 LITHIUM METAL BATTERIES.](image)

**UN 3090 LITHIUM METAL BATTERIES**  
**NET QTY:** __________

© 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

© 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):

Address label: IMDG optional; DOT see 49 CFR 172.301(d)
SHIPPING PAPER/DECLARATION EXAMPLES

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

<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>

USA Ground: 49 CFR 172.200 (CLICK)

International vessel: IMDG Code, Volume 1, Chapter 5.4

International air: 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.)
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

<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>
<th>RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 BOXES</td>
<td>X</td>
<td>UN 3480, LITHIUM ION BATTERIES, 9 ERG # 147</td>
<td>50 KG (NET)</td>
<td>110 KG (GROSS)</td>
<td></td>
</tr>
<tr>
<td>1 BOX</td>
<td></td>
<td>NON-REGULATED MATERIAL</td>
<td></td>
<td>10 KG (GROSS)</td>
<td></td>
</tr>
</tbody>
</table>

- 'X' IN HM COLUMN IF HAZARDOUS
- TOTAL QTY, CAN BE NET OR GROSS
- IF USING 3RD PARTY ER PHONE SERVICE, INCLUDE CONTRACT NUMBER

TRAINED PERSON’S SIGNATURE

NAVIGATE (CLICK):

SHIPPING PAPER EXAMPLES

EMERGENCY RESPONSE INFORMATION
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, shrunk wrapped (an overpack)

NAVIGATE (CLICK):

- 'X' in HM COLUMN IF HAZARDOUS
- OVERPACK CONTAINS 20 PROPERLY MARKED AND LABELED PACKAGES
- IF USING 3RD PARTY ER PHONE SERVICE, INCLUDE CONTRACT NUMBER

TRAINED PERSON'S SIGNATURE

E. Nunez
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.
**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.
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>12 KIMBALL HILL ROAD</td>
</tr>
<tr>
<td>1401 HUDSON NH 03051 USA</td>
<td></td>
</tr>
<tr>
<td>HAZMATEAM - NETHERLANDS</td>
<td>7. Carrier</td>
</tr>
<tr>
<td>ZANDERSTEEN 66</td>
<td>HAZMATEAM - NETHERLANDS</td>
</tr>
<tr>
<td>2689 VL AMSTERDAM NETHERLANDS</td>
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</table>

<table>
<thead>
<tr>
<th>10. Vessel</th>
<th>11. Port of loading</th>
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</thead>
<tbody>
<tr>
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<td></td>
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</tbody>
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<table>
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<tr>
<th></th>
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<tbody>
<tr>
<td></td>
<td>24 HR ER - CHEMTREC 011-703-527-3887; Contract ID - 123S3B</td>
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<table>
<thead>
<tr>
<th>14. Shipping marks</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>UN 3480, LITHIUM ION BATTERIES, 9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IMDG EMS: F-A, S-I; ERG 147</td>
<td></td>
</tr>
<tr>
<td></td>
<td>250 (4G) FIBREBOARD BOXES</td>
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</table>

<table>
<thead>
<tr>
<th>15. IMDG EMS - COLUMN 15 OF DGL</th>
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<tbody>
<tr>
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<table>
<thead>
<tr>
<th>14. IMDG EMS - COLUMN 15 OF DGL</th>
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<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>16. Package codes (EX – 4G) OPTIONAL</th>
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<table>
<thead>
<tr>
<th>20. Name of company</th>
<th>21. REceiving organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZMATEAM, INC</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>20. Name of company</th>
<th>21. Receiving organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZMATEAM, INC</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>22. 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 co. of shipper preparing this note</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZMATEAM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>23. Name of declarant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Dambek</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>23. Name of declarant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Dambek</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>24. Signature and date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hudson, NH, 1-JAN-2019</td>
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</table>

<table>
<thead>
<tr>
<th>24. Signature and date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hudson, NH, 1-JAN-2019</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>25. Signature of declarant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver’s signature</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>25. Signature of declarant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver’s signature</td>
</tr>
</tbody>
</table>
Example 6

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.

### Shipping Paper Example

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shipper/Consignor/Shipper</td>
</tr>
<tr>
<td>2</td>
<td>Transport document number</td>
</tr>
<tr>
<td>3</td>
<td>Page 1 of pages</td>
</tr>
<tr>
<td>4</td>
<td>Shipper’s reference</td>
</tr>
<tr>
<td>5</td>
<td>Booking Number</td>
</tr>
<tr>
<td>6</td>
<td>Freight forwarder’s reference</td>
</tr>
<tr>
<td>7</td>
<td>Carrier</td>
</tr>
<tr>
<td>8</td>
<td>Consignee</td>
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<tr>
<td>9</td>
<td>Port of loading</td>
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<tr>
<td>10</td>
<td>Port of discharge</td>
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<tr>
<td>11</td>
<td>Destination</td>
</tr>
<tr>
<td>12</td>
<td>Additional handling instructions</td>
</tr>
<tr>
<td>13</td>
<td>Shipping marks</td>
</tr>
</tbody>
</table>

### IMDG EMS – COLUMN 15 OF DGL
- UN 3480, LITHIUM ION BATTERIES, 9 IMDG EMS: F-A, S-I; DOT ERG 147 5 (4G) FIBREBOARD BOXES
- Gross mass (kg): 50 Net mass (kg): 25

### DOT ERG – ‘ORANGE BOOK’ CODE
- UN 3090, LITHIUM METAL BATTERIES, 9 IMDG EMS: F-A, S-I; DOT ERG 138 10 (4G) FIBREBOARD BOXES
- Gross mass (kg): 120 Net mass (kg): 30

**Package Codes (Ex – 4G) Optional**

**Above placed into 1 overpack**

**Box 22 Always requires a signature by trained shipper**
**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

---

**SHIPPER’S DECLARATION FOR DANGEROUS GOODS**

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

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

**Air Waybill No.** 6980
Page 1 of 1 Pages
Shipper’s Reference Number (optional)

---

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

**This shipment is within the limitations prescribed for:**
(PASSenger or CARGO AIRCRAFT ONLY)

**Airport of Departure**
MANCHESTER, MA

**Airport of Destination**
PHOENIX, AZ

**Shipment Type** (delete non-applicable)
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 Handed)</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 3090</td>
<td>LITHIUM METAL BATTERIES</td>
<td>9</td>
<td></td>
<td>2 FIBREBOARD BOXES x 4 KG</td>
<td></td>
<td>968</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 13B

**Emergency Telephone Number**
CHEMTREC, 800-424-9300 (CONTRACT 12345)

**I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packed, marked and labelled in accordance with the applicable Dangerous Goods Regulations.**

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

**Name of signatory**
Paul Dambek

**Date**
1-JAN-2019

**Signature**
(Please sign above)
Paul J. Dambek

---

**NAVIGATE (CLICK):**

[SHIPPING PAPER EXAMPLES]

[EMERGENCY RESPONSE INFORMATION]
EXAMPLE 8

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.

SHOULD NOT BE SHIPPED IN CARGO AIRCRAFT.

SHIPMENT CANNOT GO ON PASSENGER AIR

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

WARNING

Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties.

IATA CODE FOR LITHIUM METAL BATTERIES: UN3090

NUMBER OF PACKAGES X NET WT PER PACKAGE

WHEN SHIPPING PI SECTION IB, MUST INCLUDE ‘IB’. ALTERNATIVELY CAN ADD ‘IB’ TO AUTHORIZATION COLUMN

ICA0/IATA ERG CODE FROM COLUMN N OF DGL; DOT ERG – ‘ORANGE BOOK’ CODE

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

CONTACT CHEMTREC: 800-424-9300 (CONTRACT 12345)
**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

---

**SHIPMENT CANNOT GO ON PASSENGER AIR**

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

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

---

**SHIPPERS DECLARATION FOR DANGEROUS GOODS**

**Shipper**

HAZMATEAM, INC
12 KIMBALL HILL ROAD
HUDSON, NH 03051

**Consignee**

GIZMO EMPORIUM
19 BOWDOIN STREET
BLOOMINGTON, IL 61761

---

**TRANSPORT DETAILS**

**This shipment is with** (delete non-applicable)

- **Passenger Aircraft**
- **Cargo Aircraft Only**

**Airport of Departure**

---

**NATURE AND QUANTITY OF DANGEROUS GOODS**

<table>
<thead>
<tr>
<th>UN or ID No.</th>
<th>Dangerous Goods Identification</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 3480</td>
<td>LITHIUM ION BATTERIES</td>
<td>9</td>
<td></td>
<td>5 FIBREBOARD BOXES x 20 KG</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Additional Handling Information**

ICAO/IATA ERG Code: 12FZ; DOT ERG 147

**Emergency Telephone Number**

CHEMTREC, 800-424-9300 (CONTRACT 12345)

**I hereby declare that the contents of this consignment are fully and accurately described.**

**If using 3rd party ER phone service, include contract number**

---

**NAME OF SIGNATORY**

Stephanie Traverse

**DATE**

1-JAN-2019

**SIGNATURE**

Steph Traverse

---

**NAVIGATE (CLICK):**
EXAMPLE 10

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

SHIPPER'S DECLARATION FOR DANGEROUS GOODS

<table>
<thead>
<tr>
<th>Shipper</th>
<th>Air Waybill No.</th>
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</thead>
<tbody>
<tr>
<td>HAZMATEAM, INC</td>
<td></td>
</tr>
<tr>
<td>12 KIMBALL HILL ROAD</td>
<td>Page 1 of 1 Pages</td>
</tr>
<tr>
<td>HUDSON, NH 03051</td>
<td>Shipper’s Reference Number (optional)</td>
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</table>

<table>
<thead>
<tr>
<th>Consignee</th>
<th>WARNING</th>
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</thead>
<tbody>
<tr>
<td>GIZMO EMPORIUM</td>
<td>Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties.</td>
</tr>
<tr>
<td>19 BOWDOIN STREET</td>
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<tr>
<td>BLOOMINGTON, IL 61761</td>
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<table>
<thead>
<tr>
<th>Person Responsible</th>
<th>AIRWAYBILL #, AIRPORTS OF DEPARTURE OR DESTINATION CAN BE COMPLETED BY AIRLINE</th>
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</thead>
<tbody>
<tr>
<td>Two consignors added to the operator.</td>
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</table>

TRANSPORT DETAILS

<table>
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<tr>
<th>This shipment is within limitations prescribed for:</th>
<th>Airport of Departure</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARGO AIRCRAFT ONLY</td>
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<tr>
<td>PAX/MPG</td>
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</table>

<table>
<thead>
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<th>Airport of Destination</th>
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<tr>
<td></td>
<td>NON-RADIOACTIVE</td>
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</tbody>
</table>

NATURE AND QUANTITY OF DANGEROUS GOODS

<table>
<thead>
<tr>
<th>UN or ID No.</th>
<th>Dangerous Goods Identification</th>
<th>Class or Division (Subcategory)</th>
<th>Quantity and Type of Packing</th>
<th>Authorization</th>
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</thead>
<tbody>
<tr>
<td>UN 3480</td>
<td>LITHIUM ION BATTERIES</td>
<td>9</td>
<td>2 FIBREBOARD BOXES x 9 KG</td>
<td>965 IB</td>
</tr>
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ICAO/IATA ERG CODE FROM COLUMN N OF DGL; DOT ERG – 'ORANGE BOOK' CODE

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

I hereby declare that the contents of this consignment are fully and accurately described and marked in accordance with the transport regulations. If using 3rd party ER phone service, include contract number.

Name of Signatory: Stephanie Traverse
Date: 1-JAN-2019
Signature: Steph Traverse

NAVIGATE (CLICK):
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’).
EXAMPLE 12

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.

**SHIPTER’S DECLARATION FOR DANGEROUS GOODS**

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

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

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

**TRANSPORT DETAILS**

This shipment is within the limitations prescribed for:

- **MUST GO CARGO AIRCRAFT ONLY WHEN PACKAGE EXCEEDS 5 KG NET OF BATTERIES**

**Airport of Departure**

**Airport of Destination**

**SHIPTER’S DECLARATION FOR DANGEROUS GOODS**

**UN or ID No.**

<table>
<thead>
<tr>
<th>UN 3091</th>
<th>LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT</th>
</tr>
</thead>
</table>

**Class or Division (Subsidiary Hazard)**

| 9 |

**Packing Group**

| 4 FIBREBOARD BOXES x 6 KG |

**Quantity and Type of Packing**

| 969 |

**Packing Instructions**

**Authorization**

**NATURE AND QUANTITY OF DANGEROUS GOODS**

**ICA/O/IATA ERG CODE FROM COLUMN N OF DGL; DOT ERG - 'ORANGE BOOK' CODE**

**CA/O/IATA ERG CODE: 12FZ; DOT ERG 138**

**Emergency Telephone Number**

CHEMTREC, 1-001-703-527-3887 (CONTRACT 12345)

**I hereby declare that the contents of this consignment are fully and accurately described and marked and I am in compliance with transport regulations. I have not used 800 numbers.**

**Name of Signatory**
Paul Dambek

**Date**
12-FEB-2019

**Signature**
Paul J. Dambek

**NAVIGATE (CLICK):**
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:


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):
EMERGENCY RESPONSE GUIDE #138 – NEXT PAGE

(THIS DOCUMENT OR A SDS FOR BATTERY MUST ACCOMPANY ALL FULLY REGULATED SHIPMENTS OF LITHIUM METAL BATTERIES)
GUIDE 138 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 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.
EMERGENCY RESPONSE GUIDE #147 – NEXT PAGE

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

NAVIGATE (CLICK):
GUIDE  Lithium Ion Batteries

147

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 gas, 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.

LITHIUM ION BATTERIES
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):
### Small and Medium Lithium Batteries Shipped USA Ground

<table>
<thead>
<tr>
<th>PACKAGE</th>
<th>VIBRATION TEST(^2)</th>
<th>DROP TEST(^3)</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)

**NAVIGATE (CLICK):**
SMALL LITHIUM BATTERIES SHIPPED AIR

<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>
</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 withstand 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>✔️</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- 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):**

![Hazmateam Home](image1.png)

![Hazmateam Drop Test](image2.png)
### FULL REGULATED, DAMAGED OR PROTOTYPE LITHIUM BATTERIES REQUIRING PACKAGING

<table>
<thead>
<tr>
<th>PACKAGE</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):**
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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