

Small Battery Shipping Manual

2024



Revision Log

Ver. #	Date of Revision	Revised by	Summary of Revision
2021v1	12/30/2020	K Sumner	Year revised on cover
2021v1	12/31/2020	K Sumner	Pg. 3 1.a reworded to emphasize training
2021v1	12/31/2020	K Sumner	Pg. 4 1.c reworded for clarity
2021v1	12/31/2020	K Sumner	Pg. 6 New regulatory language for damaged/defective, rephrasing
2021v1	12/31/2020	K Sumner	Pg. 7 3.a.iii – added “equipment” per regulatory change
2021v1	12/31/2020	K Sumner	Pg 8 3.d added clarifying language
2021v1	12/31/2020	K Sumner	Pg. 10 4.c new Lithium Battery Mark size minimums added per regulatory change
2021v1	12/31/2020	K Sumner	Pg 15 5.a.ii clarified preprinted sticker may be used
2021v1	12/31/2020	K Sumner	Pg. 17 6.b reworded for regulatory change and clarity
2022v1	12/20/2021	K Sumner	Revised for regulatory changes beginning 1/1/22. Revisions on Pages 3, 4, 5, 6, 7, 8, 10 and 18. Updated current year in entire document, removed broken hyperlinks, added battery packs to battery definition, lithium battery mark size requirement (100mm x 100mm), packaging requirements (“rigid” outer, movement within package and orientation of drop test), removed ESPN online training and added example images.
2023v1	12/29/2022	K Sumner	Revised for regulatory changes beginning 1/1/23 and miscellaneous clarifications. Revisions on cover, Pages 3, 6, 10, 15 and 18. Changed cover page year to 2023. On page 3, removed the out of date 2 nd violation example and replaced it with a description and link to the FAA lithium battery incident chart. On page 6, added photo frames and button cell battery exception. On page 10, added regulatory change for optional phone number entry (recommended continuing until 2024) and size requirement for Lithium Battery Mark. On page 15, added clarification about electronic entry of the Air Waybill statement for FEDEX and UPS. On page 18, reworded training statements to clarify requirements.
2024v1	1/17/2024	K Sumner	Revised for regulatory updates, edits for clarity and ESPN contact changes. Year on front cover revised to 2024. Page 4, 1.d. added drone battery as an example with link for help. Pages 12-14 removed “Phone #” from images, added deadline of 2026 for phone # entry. Pages 17 & 18 ESPN contact information revised.

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1. Why is this Manual and Training is important to you?

1.a. Battery Dangers

Batteries, particularly lithium ones, can provide extremely high electrical currents and can discharge very rapidly. Although this is useful in certain equipment and applications, it can result in dangerous overheating, rupture or explosion of the battery. Because of these risks, shipping and carriage of batteries is restricted to properly trained personnel.

1.b. Transportation Regulations and Penalties

Domestic and International regulations have very strict packaging standards, quantity limits, special marks, labels and document entries to mitigate the dangers. This manual is designed to protect you and ESPN from physical dangers and fines, loss of reputation, and criminal penalties, which may include fines up to \$250,000.00 and imprisonment for up to 10 years based on the severity of the crime. While these are serious penalties, remember batteries are shipped every day without problems when the regulations are followed.

WASHINGTON – The U.S. Department of Transportation’s Federal Aviation Administration (FAA) proposes a \$1.1 million civil penalty against Braille Battery, Inc. of Sarasota, Fla., for allegedly violating the Hazardous Materials Regulations.

This is the largest civil penalty the FAA has proposed for alleged violations of the requirements for offering an air shipment of lithium batteries.

WASHINGTON, DC – The U.S Department of Transportation’s Federal Aviation Administration (FAA) has tracked incident reports and created a useful chart to show the risk from Lithium Batteries on airplanes. The number of incidents has been rising in recent years and 2022 had a record number of incidents. The top items posing a risk are common things used in our operations – batteries by themselves, cell phones and laptops. The vast majority of these incidents have been on passenger aircraft. We can expect very strong enforcement operations in the near future.

[Click here to see the chart](#)

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1.c. What can you do with this manual?

This manual is designed to help you ship the most frequently used batteries at ESPN. It is not intended to cover all potential battery shipments. If a battery shipment is not described in this manual, it must be prepared and offered for shipment by [Distribution Services](#) or other personnel with specialized Dangerous Goods training.

This manual covers:

- i. Air/Ground/Ocean shipment of Alkaline, NiCad, NiMH, Zinc and Non-spillable Lead Acid batteries.
- ii. Air shipment of Lithium Ion (rechargeable) batteries ($\leq 100\text{Wh}$) packed with/contained in equipment.
- iii. Air shipment of Lithium Metal (nonrechargeable) batteries ($\leq 2\text{g}$) packed with/contained in equipment.
- iv. Ground/Ocean shipment of Lithium Ion batteries ($\leq 100\text{Wh}$) with or without equipment.
- v. Ground/Ocean shipment of Lithium Metal batteries ($\leq 2\text{g}$) with or without equipment.
- vi. Ground Only shipment in the U.S. of Lithium Ion batteries up to 300Wh.
- vii. Ground Only shipment in the U.S. of Lithium Metal batteries up to 25g.
- viii. Carrying batteries yourself by ground or as an airline passenger.

1.d. What you cannot do with this manual.

There are many additional requirements for more powerful batteries and batteries with other electrolytes not covered in this manual. **An example would be a Lithium Polymer 700 Wh drone battery which has an entirely different set of requirements than shown in this manual.** Contact [Distribution Services](#) for help. Without additional training, you are not allowed to:

- i. Air ship Lithium batteries without the equipment they power.
- ii. Air ship Lithium Ion batteries over 100Wh or Lithium Metal batteries over 2g.
- iii. Air ship refurbished, damaged or defective batteries.
- iv. Ocean ship Lithium Ion batteries over 100Wh or Lithium Metal over 2g.
- v. Ground ship in the U.S. Lithium Ion batteries over 300Wh or Lithium Metal over 25g.
- vi. Ship any batteries not covered in this manual.
- vii. Ship any other “Dangerous Goods”/“Hazardous Materials”

What is a “Dangerous Good” or “Hazardous Material”? There are 9 different classes of materials regulated in transportation. Many chemicals you can buy in a retail store are regulated in transportation and have strict requirements. Examples include aerosols (spray paint, air freshener, Lysol, bug spray, contact cleaner, canned air), flammable liquids (adhesives, alcohol-based hand sanitizer, Isopropanol) and corrosives (drain cleaner, acid-based batteries). Do not add any chemicals to your battery shipment cases. Below are some hazardous materials markings frequently seen by ESPN personnel.



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2. Battery Basics

2.a. Types of Batteries

Batteries include a wide variety of technologies, shapes and sizes. The list below covers only the batteries with shipping instructions in this manual. Contact [Distribution Services](#) for a battery type not listed below.

TYPE	DEFINITION
Dry Batteries	Alkali-manganese (alkaline), nickel-cadmium (NiCad), nickel-metal hydride (NiMH) and zinc-carbon (zinc) batteries for small electronic devices (AAA, AA, C, D, 9v, Anton Bauer Hytron, etc.).
Non-spillable Batteries	Lead acid battery sealed, with a gelled electrolyte that will not flow from a cracked case (example, Uninterruptible Power Supply (UPS)). Manufacturer verifies it passed tests by marking it "NONSPILLABLE".
Lithium Ion Batteries	Rechargeable lithium batteries, including lithium polymer batteries. Examples; rechargeable lithium batteries for cameras, portable lights, voice recorders, laptops, cell phones, radios, etc.
Lithium Metal Batteries	Non-rechargeable batteries using lithium as an anode. Examples: lithium button cells, AA, or 9v batteries.

2.B. Lithium Battery Descriptions

LITHIUM TERM	DEFINITION
Battery	Two or more cells which are electrically connected and fitted with devices necessary for use (case, terminals, protective devices, etc.). Examples include batteries for cameras, laptops, mobile phones, 9v batteries and battery packs.
Cell	A single encased electrochemical unit (one positive and one negative electrode) which exhibits a voltage differential across two terminals. Examples include AA, AAA and button cells. <i>Button cells (a cell wider than its height) installed in equipment are not subject to marking and documentation.</i>
Equipment	Equipment means the device or apparatus for which the lithium cells or batteries will provide electrical power for its operation. Examples are a radio with its battery, a camera with its battery or a laptop with its battery. It does not include equipment the battery does not power (ex. a battery charger with batteries or cable with a cell phone battery).
Lithium Battery by itself	The equipment powered by the battery is not in the shipping case.
Lithium Battery contained in equipment	Lithium batteries are all installed in the equipment they are intended to power within the shipping case. No spares.
Lithium Battery packed with equipment	Lithium batteries are in the shipping case with the equipment they are intended to power BUT some are not installed (spares).
Small Lithium Batteries	Called "Section II" or "Excepted" in the regulations. Lithium Ion cells $\leq 20\text{Wh}$ or batteries $\leq 100\text{Wh}$. Lithium Metal cells ≤ 1 gram of lithium content or batteries ≤ 2 grams of lithium content.
Medium Lithium Batteries	Only used for U.S. ground shipments. Lithium Ion cells $\leq 60\text{Wh}$ or batteries $\leq 300\text{Wh}$. Lithium Metal cells ≤ 8 grams of lithium content or batteries ≤ 25 grams of lithium content.
Wh	Watt hours (Wh) is a measurement of power within a battery (volts x amps). Lithium Ion batteries will have Watt hours written on them.

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Batteries by ThemselvesPacked with EquipmentContained In EquipmentWatt hours on a battery2.c. Lithium Battery Manufacturer Tests

The manufacturer of Lithium batteries must conduct a series of tests to insure the safe functioning of the batteries. It is illegal to ship untested Lithium batteries; therefore, you must verify testing has occurred. Manufacturers and distributors are now required to make a test summary available (except for button cells installed in equipment). If they are not on the vendor's website, contact them directly. The test summary should indicate the Lithium battery has passed the UN Manual of Tests and Criteria, Part III, 38.3 tests, also known as the T1 to T8 tests. The tests include dropping, impact, overcharging, temperature extremes, overcharging and others.

It is illegal to ship untested Lithium batteries. Verify they have been tested and avoid third party replacements to original equipment batteries.

2.d. Air Limitations for damaged or defective batteries

It is illegal to ship or carry damaged or defective batteries on an airplane. These must be disposed of with a qualified recycler or returned by ground transport (example, recalled battery) if not damaged. Damaged batteries must always be given to qualified recycler, click here to [locate a recycler](#). Look for physical or mechanical damage, venting, leaking, color changing, warping, bulging or deformation of the battery. No batteries intended for "waste" should be shipped by air transport.

2.e. Carrier shipments vs personally delivered/carried

This manual separates instructions for carrier shipments verses those you personally carry. Carriers are companies that specialize in logistics and move materials from one location to another for pay. Examples are FEDEX, UPS and freight forwarders like SOS Global Express. Carriers move larger quantities of Dangerous Goods (like batteries) and subject packages to more stress than a typical private citizen carrying their own

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equipment. As there is more risk associated with those shipments, there are more packaging, marking, labeling and documentation requirements to minimize the risk. As a private citizen, you can transport smaller amounts of Dangerous Goods (like batteries) with fewer restrictions. Be aware, there are very specific limits and minimum packaging standards you must meet when [carrying batteries yourself](#).

3. Battery Packaging

3.a. Minimum Standards

- i. Protect batteries against short circuit (i.e. cover the terminals or install in equipment). All batteries not installed in equipment must be completely enclosed by an inner packaging to prevent short circuit. Thick plastic sleeves, Ziplock bags or bubble wrap work well.
- ii. Protect against accidental activation of equipment (on/off switches) when batteries are inside equipment.
- iii. Cushion batteries and equipment to prevent damage or movement within a rigid shipping case. Nothing likely to cause short circuit (metal tools, cables or mounts) or damage can be allowed to move into or damage the batteries or equipment.
- iv. All shipping cases must be closed and able to survive conditions normally incident to transport without damage to the batteries or short circuiting. This includes hard drops (1.2 m drop), stacking, vibration, extreme heat and cold, air pressure changes and other rough handling.
- v. Damaged packaging must be replaced.
- vi. Batteries recalled for safety reasons or damaged must not be transported by air.
- vii. **Do not place other hazardous materials in a case or package with batteries.** Some examples at ESPN are alcohol-based hand sanitizer, spray sunscreen, flammable adhesives and paints, alcohol for cleaning, hair spray and nail polish remover.
- viii. All shipping cases must be strong, rigid, closed and sealed properly and have enough space for marks/labels. Tape must not cover any required marks/labels unless it is clear tape.

3.b. ESPN Examples

The examples below are meant to illustrate ways to comply with the General Packaging Standards but are not the only acceptable way to package batteries.



Case specially designed and cut for radio batteries. Terminals reversed to prevent contact.



Pelican case with foam cut to shape for radios, batteries and charger. Batteries wrapped and surrounded by foam.



Battery strapped in place with terminal caps in a hard case.

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3.c Lithium Battery Drop Test Standard

Shipping cases and packages (Pelican cases, Storm cases, fiberboard boxes, etc.) containing lithium batteries by themselves or packed with equipment must be capable of surviving a 1.2 meter (4 foot) drop in any orientation onto a solid surface without shifting of or damage to the batteries. You do not have to test cases, but they must be capable of surviving such a test. Inspect inner and outer packaging to make sure it will survive such impact without damage to the batteries.

3.d. Quantity Limits per shipping case/package given to a Carrier

Battery Type	Shipment Type	Limit per Shipping Case
Dry (Alkaline, NiCad, Zinc)	Air/Ground/Ocean	No limit
Dry (NiMH)	Air/Ground/Ocean	≤100 kg (220lbs.) per Shipment
Non-spillable	Air/Ground/Ocean	No limit
Small Lithium - contained in equipment	Air	≤5 kg net weight (weight of batteries)
Small Lithium - packed with equipment	Air	≤5kg net weight, ≤2 spares per piece of equipment
Lithium - by themselves, no equipment	Ground/Ocean	≤30 kg (66 lbs.) gross weight
Lithium - contained in equipment	Ground/Ocean	No limit
Lithium - packed with equipment	Ground/Ocean	No limit

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4. Shipping Case Instructions for Carrier Shipments

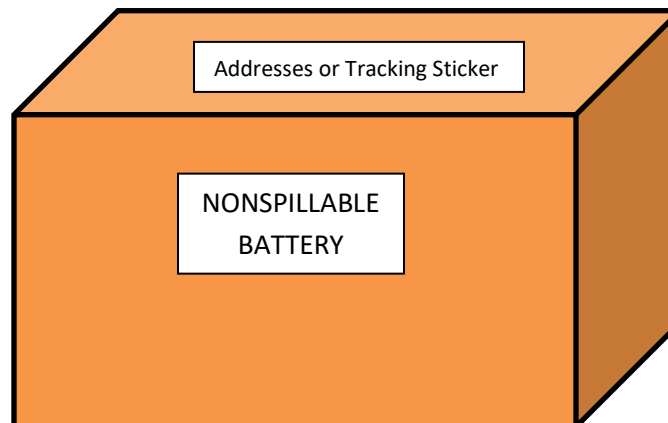
4.a. Dry Batteries (Alkaline, NiCad, NiMH, Zinc)

- i. NiMH has a 100kg (220 lbs.) weight limit per shipment.
- ii. Follow the [packaging standards](#).
- iii. Strong, rigid outer shipping case/package.
- iv. No special markings required. Add addresses or tracking sticker.
- v. Complete [Air Waybill entry](#) if necessary.
- vi. Package example:



4.b. Non-spillable Batteries (Gelled Lead Acid)

- i. Follow the [packaging standards](#).
- ii. Strong, rigid outer shipping case/package.
- iii. Mark the shipping case "NONSPILLABLE BATTERY". It must be a durable marking with letters at least 0.25" high. Add addresses or tracking sticker.
- iv. Complete [Air Waybill entry](#) if necessary.
- v. Package example:



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4.c Lithium Batteries

There are special marks and labels used to identify Lithium Battery shipments. You may order these from vendors such as [Uline](#) or [Air Sea Containers](#). You must use ones that conform to regulatory requirements for size, color and durability. *Note: The Lithium Battery Mark size changed from 120mm x 110mm minimum to 100mm x 100mm minimum (except for tiny packages which can have 100mm x 70mm). Either size may be used on your packages until 2026.*

i. Lithium Battery Label

	<p style="text-align: center;">The Lithium Battery Label</p> <ul style="list-style-type: none"> • Phased out in December 2018. • Do not use. • Replace with new Lithium Battery Mark.
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ii. Lithium Battery Mark

	<p style="text-align: center;">The Lithium Battery Mark</p> <ul style="list-style-type: none"> • Before shipping, fill in the correct UN number at least 0.5" (12mm) high. • "UN3481" - Lithium ion batteries packed with or contained in equipment • "UN3480" - Lithium ion batteries, by themselves, no equipment • "UN3091" - Lithium metal batteries packed with or contained in equipment • "UN3090" - Lithium metal batteries, by themselves, no equipment • A contact phone number is optional. It cannot be added after 2026. It may be written under the UN number.
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iii. Can I print the Lithium Battery Mark?

In an emergency, Yes, but it must be printed in **COLOR**, and of the correct size, and applied with high quality clear packaging tape. The dimensions must be 4 inches wide by 4 inches high.

iv. Whose phone number goes on the Mark?


A contact phone number at the bottom of the Lithium Battery Mark is optional. If a carrier asks for one, add it below the UN number. It cannot be added after 2026. The phone number must be to a knowledgeable person (they should know what is in the shipping case). Include the country code if shipping internationally.

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v. Cargo Aircraft Only Label

	<p style="text-align: center;">Cargo Aircraft Only Label</p> <ul style="list-style-type: none"> • This label is used to avoid routing errors and placing airline passengers at greater risk. • Place this label on all shipping cases of Lithium Batteries shipped by themselves, no equipment, by ground and ocean shipment. • Place this label on shipping cases of Lithium Batteries contained in or packed with equipment that exceed 5 kg (11 lbs.) net weight of batteries per shipping case. In this manual, that would be ground and ocean shipments only. The limit for air shipments is 5 kg net weight per shipping case which would NOT require the Cargo Aircraft Only label.
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vi. Overpack Mark

	<p style="text-align: center;">OVERPACK</p> <ul style="list-style-type: none"> • Overpack means an enclosure used by a single shipper to contain one or more packages to form one handling unit for the convenience of handling and stowage. • Overpacks require this mark and all other marks must be repeated on it. • It may be handwritten if letters are at least 0.25" high.
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vii. Lithium Battery Instructions

The following instructions are for "[Small Lithium Batteries](#)" (except for one ground shipment instruction for "[Medium Lithium Batteries](#)") as defined in this manual. **If your battery exceeds these power or quantity limits, contact [Distribution Services](#).**

viii. Air - Lithium Batteries packed with or contained in equipment

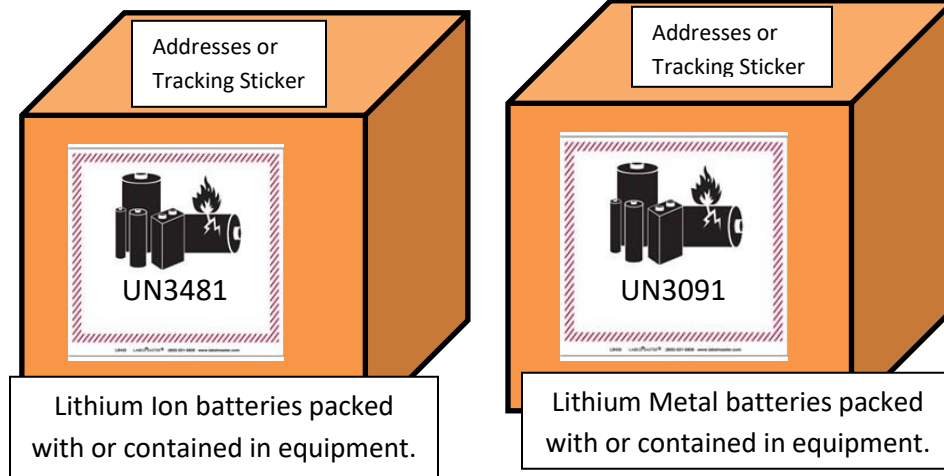
1. Follow the [packaging standards](#).
2. Strong, rigid outer shipping case/package.
3. Place a filled in (correct UN number) Lithium Battery Mark on the shipping case. It must not be damaged or wrap around corners.
4. Add addresses or tracking sticker.
5. If placing the shipping case in an "Overpack", mark with the word "Overpack" and repeat the Lithium Battery Mark on the Overpack.
6. Complete [Air Waybill entry](#).

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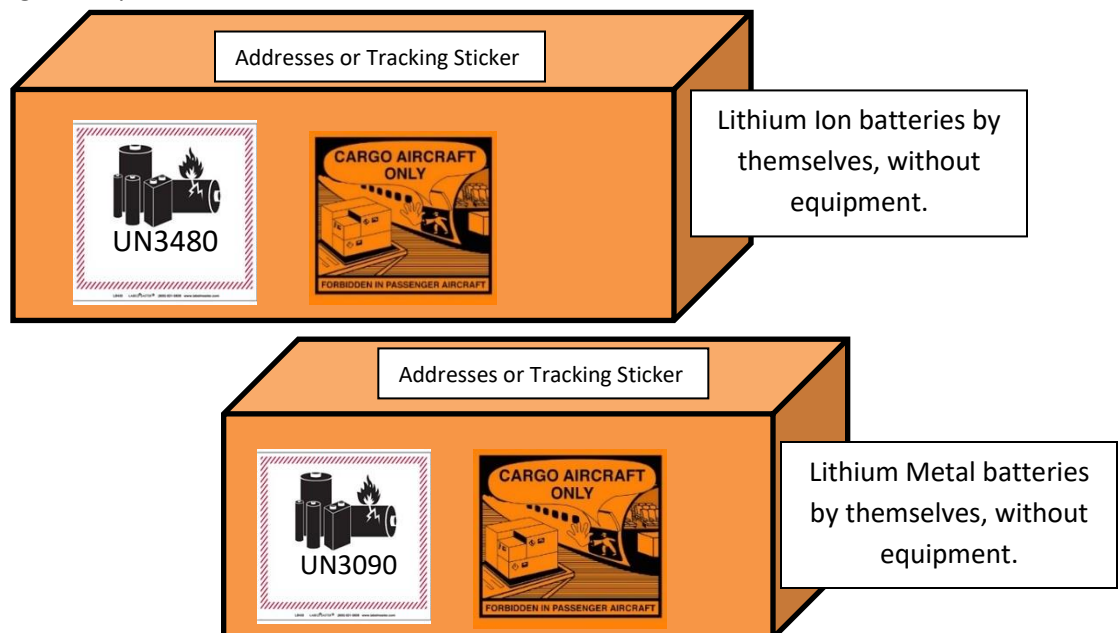
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7. Package examples:



ix. Ground/Ocean - Lithium Batteries by themselves

1. Follow the [packaging standards](#).
2. Strong, rigid outer shipping case/package. No more than 66 lbs. gross weight.
3. Place a filled in (correct UN number) Lithium Battery Mark on the shipping case. It must not be damaged or wrap around corners.
4. Add a Cargo Aircraft Only Label.
5. Add addresses or tracking sticker.
6. If placing the shipping case in an “Overpack”, mark with the word “Overpack” and repeat all other markings on the Overpack.
7. Complete [Air Waybill entry](#).
8. Package examples:

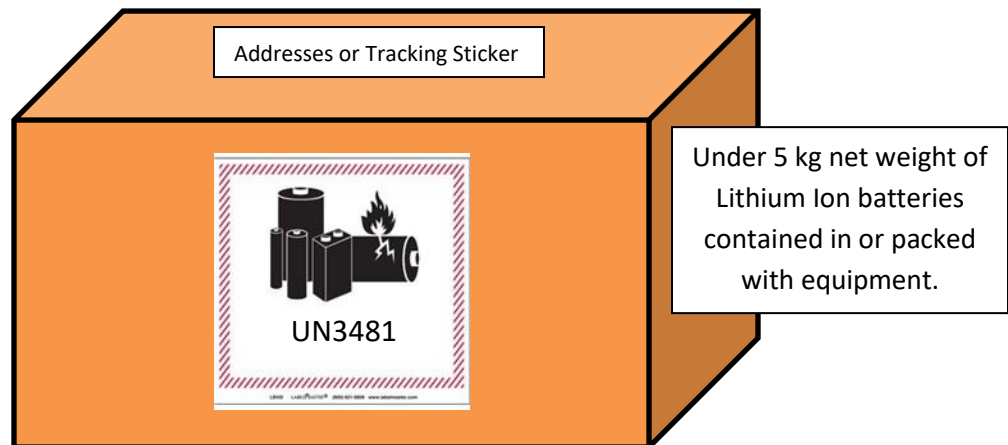


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- x. Ground/Ocean - Lithium Batteries packed with or contained in equipment
1. Follow the [packaging standards](#).
 2. Strong, rigid outer shipping case/package. No more than 66 lbs. gross weight.
 3. Place a filled in (correct UN number) Lithium Battery Mark on the shipping case. It must not be damaged or wrap around corners.
 4. If over 5 kg (11 lbs.) net weight of batteries in the shipping case, add a Cargo Aircraft Only Label.
 5. Add addresses or tracking sticker.
 6. If placing the shipping case in an "Overpack", mark with the word "Overpack" and repeat all other markings on the Overpack.
 7. Complete [Air Waybill entry](#).
 8. Package examples:

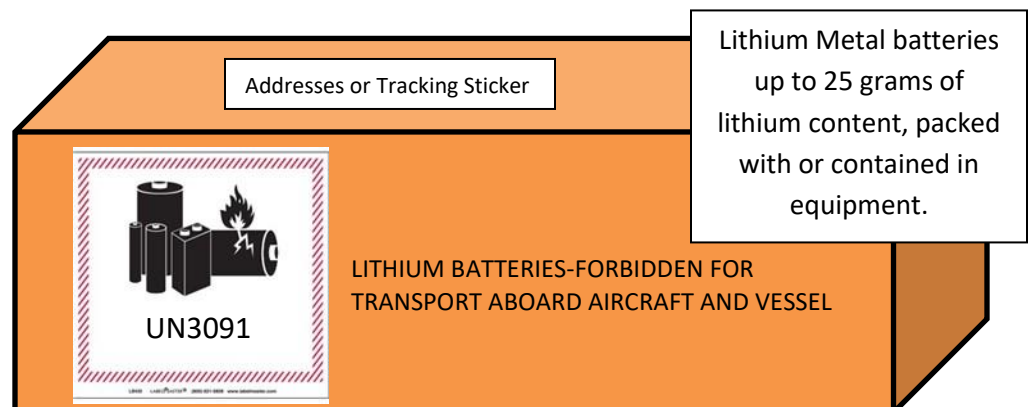
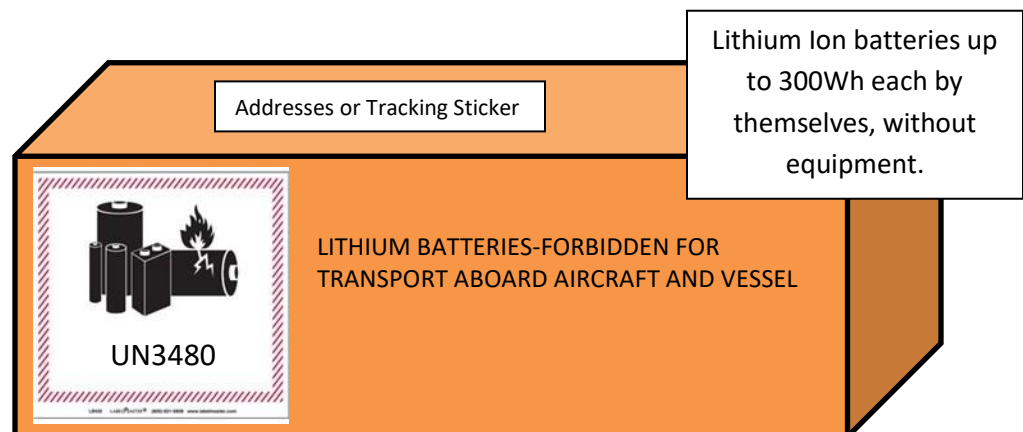


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- xi. Ground Only in the U.S. - Lithium Batteries up to 300Wh or 25g of Lithium
1. Follow the [packaging standards](#).
 2. Strong, rigid outer shipping case/package. No more than 66 lbs. gross weight if the batteries are without equipment. No weight limit if in or with equipment.
 3. Place a filled in (correct UN number) Lithium Battery Mark on the shipping case. It must not be damaged or wrap around corners.
 4. Add the sentence, "LITHIUM BATTERIES - FORBIDDEN FOR TRANSPORT ABOARD AIRCRAFT AND VESSEL". It must be in letters at least 0.25" high.
 5. Add addresses or tracking sticker.
 6. If placing the shipping case in an "Overpack", mark with the word "Overpack" and repeat all markings on the Overpack.
 7. Complete [Air Waybill entry](#) if necessary.
 8. Package examples:



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5. Air Waybill Entries for Carrier Shipments

5.a. FEDEX, UPS and SOS Global Express - Air Waybill Entry location

- i. FEDEX and UPS require all Overnight and 2nd Day service shipments to be prepared as Air shipments. Only follow the Ground shipment rules (and quantity limits) when giving shipments to FEDEX Ground Services or UPS Ground Service.
- ii. If not available electronically in their systems, FEDEX and UPS requires the Air Waybill statement be written on or beside the tracking sticker or beside the Lithium Battery Mark (if a Lithium Battery shipment). You may use a preprinted sticker.
- iii. SOS Global Express requires the Air Waybill entry to be written on their Air Waybill in the description area.
- iv. SOS Global Express does not have a dedicated ground service and uses their Air Waybill for air, ground and ocean shipments. Therefore, they always require a battery statement be written on their Air Waybill to ensure proper routing.
- v. Check with any other carriers or freight forwarders for their specific preferences.

5.b. Dry Batteries (Alkaline, NiCad, NiMH, Zinc) Air Waybill Entry

- i. Nothing special is required for Ground or Ocean shipments unless requested by the carrier. SOS Global Express requires the correct statement below to be written on all their Air Waybills (air, ground or ocean shipments).
- ii. Alkaline, NiCad, Zinc Air shipments require:
“Not restricted, Special Provision A123”.
- iii. NiMH Air shipments require:
“Not restricted, Special Provision A199”

5.c. Non-spillable Batteries (Gelled Lead Acid) Air Waybill Entry

- i. Nothing special is required for Ground or Ocean shipments unless requested by the carrier. SOS Global Express requires the correct statement below to be written on all their Air Waybills (air, ground or ocean shipments).
- ii. Non-spillable battery Air shipments require:
“Not restricted, Special Provision A67”.

5.d. Air Carrier - Lithium Batteries contained in or packed with equipment Air Waybill Entry

- i. For FEDEX and UPS write the statement on the tracking sticker, next to it or next to the Lithium Battery Mark. SOS Global Express requires the correct statement below to be written on their Air Waybills.
- ii. Lithium Ion batteries packed with equipment requires:
“Lithium Ion Batteries in compliance with Section II of PI966”.
- iii. Lithium Ion batteries contained in equipment requires:
“Lithium Ion Batteries in compliance with Section II of PI967”.

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- iv. Lithium Metal batteries packed with equipment requires:
“**Lithium Metal Batteries in compliance with Section II of PI969**”.
- v. Lithium Metal batteries contained in equipment requires:
“**Lithium Metal Batteries in compliance with Section II of PI970**”.

5.e. Ground/Ocean Carrier - Lithium Batteries (by themselves, with or in equipment) Air Waybill Entry

- i. Nothing special is required for Ground or Ocean shipments (ex. FEDEX GROUND) unless requested by the carrier. Note: *All FEDEX and UPS overnight and 2nd day services are considered air transport.*
- ii. SOS Global Express requires a statement to be written on all their Air Waybills (air, ground or ocean shipments) in order to properly route the shipment and avoid air shipment. Write:
“**Lithium batteries - Ground or Ocean Shipment Only**”.

5.f. Ground Only in the U.S. - Lithium Batteries up to 300Wh or 25g Air Waybill Entry

- i. Nothing special is required for U.S. Ground shipments (ex. FEDEX GROUND, UPS GROUND) unless requested by the carrier. Note: *All FEDEX and UPS overnight and 2nd day services are considered air transport.*
- ii. SOS Global Express requires a statement to be written on all their Air Waybills (air, ground or ocean shipments) in order to properly route the shipment and avoid air and ocean shipment. Write:
“**Lithium batteries - Ground Shipment in U.S. Only**”.

6. Personally Delivering

6.a. Ground vehicle

This instruction is intended for personnel carrying batteries themselves to use in ESPN work related activities. This can be in a car, truck, van or other ground vehicle. **NOTE: Damaged, recalled or otherwise unsafe batteries may not be transported.**

Ground Shipments as Passenger or Driver (ESPN controls the vehicle):

Package according to the [Minimum Packaging Standards](#) and

≤66 lbs. limit per package

≤440 lbs. limit per vehicle

Mark the package or case with a description of the batteries or equipment, i.e. “Lithium Batteries” or “Battery powered equipment” or “Batteries”. You have flexibility, just be clear that the case or package contains batteries.

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6.b. Airline Passenger

Personal Electronic Devices (PED) are allowed. Carriers have the right to reject anything they determine dangerous. Always ask if in doubt or for other types of batteries or equipment.

Checked Bags

- ≤ 100 Wh for Lithium Ion batteries, ≤ 2 g lithium content for Lithium Metal batteries, Alkaline, NiCad, NiMH and Zinc are acceptable.
- No spares of any type of battery.
- Batteries contained in equipment only. No E-Cigarettes. No hover boards.

Carry on

- ≤ 100 Wh for Lithium Ion, ≤ 2 g lithium content for Lithium Metal. For all types of batteries the limit is 15 PED and 20 total spare batteries. Individually wrap and protect spares.
- Up to 2 individually wrapped spares per person if >100 Wh but <160 Wh.
- Alkaline, NiCad, NiMH and Zinc batteries are acceptable.
- E-Cigarettes can be carried on, but not used, if properly packed. Ask about hoverboards
- You can view additional information at the [FAA's website](#) and [TSA's Website](#).

7. Reporting Incidents

7.a. Reporting Incidents

If a transportation incident occurs involving lithium batteries it must be reported internally and in certain cases, to the Department of Transportation (DOT). You will need to report it to the proper ESPN contacts below. They will determine if a report needs to be filed with the DOT.

Report all battery shipping incidents. What is an incident?

- FIRE or SCORCHING or CHARRING
- HEAT or MELTING
- BULGING or RUPTURE
- DAMAGE TO THE BATTERY
- Anything that looks like the battery is failing or short circuiting
- Immediately document dates, times, what happened, which equipment and batteries were involved, any damage discovered, any injuries, which carrier and mode of transport (ground, air or Ocean) are involved.
- Take photos of relevant packaging, equipment and batteries.
- Keep copies of any shipping papers, waybills or other transport documents.
- Save any electronic communications relevant to the incident.

Who do you contact?

- **TWDC Enterprise Risk, Facilities Safety, TWDCSafeEnvrion@Disney.com**

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8. Training

In order to properly ship batteries according to government regulations, training is required. Employees must be provided adequate instructions on the duties that they will perform. Training must occur:

- Before shipping batteries
- Every 2 years thereafter.
- Note: *While the Department of Transportation (DOT) requires recurrent training every three (3) years for shipping dangerous goods (hazardous materials), major shipping carriers (like FEDEX and UPS) treat all dangerous goods shipments (like batteries), as air shipments, and subject them to International Air Transport Association (IATA) requirements. IATA Dangerous Goods regulations are based on United Nations requirements and trade association standards which airlines are free to adopt for domestic use. To comply with the IATA training is required every two (2) years.*
- Each time regulations change (this can happen at any time)

Contact TWDC Enterprise Risk, Facilities Safety, TWDCSafeEnvrion@Disney.com, to request training.

9. ESPN Contacts

ESPN Distribution Services - ESPNDistributionServ@espn.com, 860-766-2215 (8am to 4:30pm EST Monday through Friday) *for help with packaging, marks, labels, and general shipping questions.*

TWDC Enterprise Risk, Facilities Safety, TWDCSafeEnvrion@Disney.com *for emergencies involving fire or risk of physical harm. If off site, local responders should be contacted first. Also contact for training programs and regulatory questions.*

KWS Training, Inc. - hazmat@kwstrain.com - *for shipment help when others listed above are not available.*

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10. Common Violations

To avoid transport delays, rejections and fines and penalties it is important review your packages for compliance. Remember thousands of dollars in fines can occur for any of these mistakes. The most common errors we have noticed at ESPN are:

<p>Ripped or Torn Lithium Battery Marks</p> <p>Never offer packages with damaged marks to a carrier. Carriers occasionally damage marks while delivering freight and these must be replaced before reoffering the shipping case.</p>	
<p>Self-printed marks that are not in color</p> <p>Buy appropriate marks, or if no other choice is available, print in color in the correct size and apply with high quality clear tape.</p>	
<p>Old Lithium Battery Labels</p> <p>These labels have been discontinued. Replace with the Lithium Battery Mark.</p>	
<p>Wrong statement on Lithium Battery Marks</p> <p>“Nonspillable” is never the correct entry on a Lithium Battery Mark.</p>	
<p>Lithium Battery Marks over corners or covered</p> <p>Do not fold, wrap or cover over marks.</p>	
<p>Blank Lithium Battery Marks</p> <p>The UN number and phone number must be filled in.</p>	
<p>Wrong statement on the Air Waybill for the carrier</p> <p>This was used with a case of lithium batteries packed with equipment. It has the incorrect Packing Instruction. It should be 966.</p>	<p>“Lithium ion batteries in compliance with Section II of P1967.”</p>

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11. Battery SDS Examples

To properly classify your batteries you should get a Safety Data Sheet from the manufacturer or distributor. Look at Section 14 for the transportation information you will need.

Lithium Ion Battery Example

14. Transport Information

With regard to transport, the following regulations are cited and considered:

- UN No. 3480
- UN proper shipping name: Lithium Ion Batteries.
- Transportation hazard class 9
- Air PI 965 Section I B: Dangerous Goods
- Sea, Land, Air PI965 Section II : Non dangerous Goods

Our products are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to all the applicable international and national governmental regulations, not limited to the above mentioned. We further certify that the enclosed products have been tested and fulfilled the requirements and conditions in accordance with UN Recommendations (T1 – T8) on the Transport of Dangerous Goods Model Regulations and the Manual of Testes and Criteria.

Test results of the UN Recommendation on the Transport of Dangerous Goods

Manual of Test and Criteria (38.3 Lithium batteries)		Test Results	Remark
No	Test item		
T1	Altitude Simulation	Pass	
T2	Thermal Test	Pass	
T3	Vibration	Pass	
T4	Shock	Pass	
T5	External Short Circuit	Pass	
T6	Impact/Crush	Pass	
T7	Overcharge	Pass	For pack and single cell battery only
T8	Forced Discharge	Pass	

Lithium Metal Battery Example

14. Transport information

During the transportation of a large amount of batteries by ship, trailer or railway, do not leave them in the places of high temperatures and do not allow them to be exposed to condensation.

During the transportation do not allow packages to be dropped or damaged.

Proper shipping name : Lithium metal batteries

UN Number, UN Class : UN3090, Class9 (for the Air transport by PI968 Section IA or IB)
 : Exemption (for the Marine transport and the Air transport by Section II of PI 968, 969 or 970)
 Even though the cells are classified as lithium metal batteries (UN3090 or UN3091), they are not subject to some requirements of

Dangerous Goods Regulations because they meet the following:

1. for cells, the lithium content is not more than 1g ;
2. each cell is of the type proven to meet the requirements of each test in the UN Manual of Tests and Criteria, PartIII, sub-section 38.3.
3. each cell is manufactured in ISO9001 certified factory.

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