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Lithium Battery Transportation

The rules governing the transportation of lithium batteries are divided into slightly differing regulations in the United States and outside the United States. It is anticipated the rules for lithium battery transportation will be harmonized globally in the future, but for now, each set of rules is shown separately below for both battery transportation and for batteries packed with or inside equipment.

This guidance document is meant to cover expected situations for shipments of Energizer lithium batteries only. For special circumstances, please contact your authorized Energizer distributor.

Lithium batteries identified as being defective for safety reasons, that have been damaged or have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for transport (e.g. those being returned to the manufacturer for safety reasons).

For all shipments, it is required that any person preparing or offering lithium cells or batteries for transport receive adequate instruction on these requirements commensurate with their responsibilities.

Within, To and From the United States

Batteries Only - Surface and Air Transportation (49 CFR 172.102.188)

To ship lithium batteries by any method (rail, truck, sea vessel, air) within, to and from the United States, the shipments must meet the criteria shown below.

- Batteries must be packaged in a manner to prevent short circuits and separated so that electrically active terminals cannot come into contact with each other.
- The gross weight of the shippable container shall not exceed 30 kg.
- The shippable container must be capable of passing a 1.2 m. drop test in any orientation without spillage of the contents of the packaging, damage to the batteries inside or shifting of the contents that could lead to short circuit.
- The shippable container must be marked "PRIMARY LITHIUM BATTERIES – FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT" or "LITHIUM METAL BATTERIES – FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT". This marking must be a background of contrasting color and the letters must be at least 6 mm in height.
- The shippable container must be marked to indicate lithium batteries are present and that special procedures should be followed if the package is damaged.

To meet the marking requirements addressed above, Energizer marks packages with the following label.



For customers re-shipping batteries, the CHEMTREC information may not be used without a subscription from CHEMTREC.

- Each shipment must be accompanied by documentation that includes the following statement:

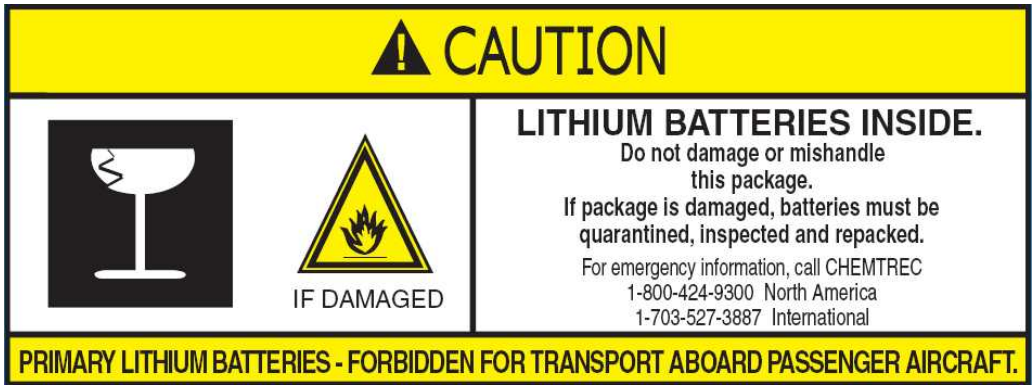
"This shipment contains Primary Lithium batteries. Do not damage or mishandle the packages. If package is damaged, flammability hazard may exist; batteries must be quarantined, inspected, and repacked."

- Effective October 1, 2009, the cell or battery must be of the type proven to meet the requirements of each test in the United Nations (UN) Manual of Tests and Criteria, Part III, Sub-Section 38.3 Lithium Batteries).

Batteries Contained In or Packed With Equipment, Surface and Air Transportation (49 CFR 172.102.188) and (49 CFR 172.102.A101)

- Batteries must be packaged in a manner to prevent short circuits and separated so that electrically active terminals cannot come into contact with each other.
- The shippable container must be marked "PRIMARY LITHIUM BATTERIES – FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT" or "LITHIUM METAL BATTERIES – FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT". This marking must be a background of contrasting color and the letters must be at least 6 mm in height.
- The shippable container must be marked to indicate lithium batteries are present and that special procedures should be followed if the package is damaged.

To meet the requirements addressed above, Energizer marks packages with the following label.



While the CHEMTREC information is not required for batteries packaged with or in equipment, Energizer uses the same label for all shipments (batteries and batteries with or in equipment.) For customers re-shipping batteries with or in equipment, this CHEMTREC information may not be used without a subscription from CHEMTREC.

- Each shipment must be accompanied by documentation that includes the following statement**:**

"This shipment contains Primary Lithium batteries. Do not damage or mishandle the packages. If package is damaged, flammability hazard may exist; batteries must be quarantined, inspected, and repacked."

- There is no maximum packaging gross weight.
- For air shipments only:
    - The package shall contain no more than the number of lithium batteries or cells necessary to power the intended piece of equipment
    - The net weight of the lithium batteries in the package does not exceed 5 kg.

International (Outside the USA)

Batteries Only, Air Only
(International Air Transport Association (IATA) Packing Instruction 968)

- Batteries must be packaged in a manner to prevent short circuits and separated so that electrically active terminals cannot come into contact with each other.
- The gross weight of the shippable container shall not exceed 2.5 kg.
- The shippable container must be capable of passing a 1.2 m. drop test in any orientation without spillage of the contents of the packaging, damage to the batteries inside or shifting of the contents that could lead to short circuit.
- The batteries must be capable of passing the UN Model Regulation T-tests (UN Manual of Tests and Criteria, Part III, Sub-Section 38.3 Lithium Batteries).
- The shippable container must be labeled with the label shown below. The minimum dimensions of the label are 120 mm x 110 mm. The red border is mandatory but the batteries, glass and fire icon can be in black and white.



For customers re-shipping batteries, the telephone numbers (CHEMTREC information) may not be used without a subscription from CHEMTREC.

- Each shipment must be accompanied by a document such as an air waybill with the following:
  - "This shipment contains Primary Lithium batteries. Do not damage or mishandle the packages. If package is damaged, flammability hazard may exist; batteries must be quarantined, inspected, and repacked."
  - A telephone number for additional information.

Batteries Only, Surface (Truck/Sea/Rail) Transportation
(International Maritime Dangerous Goods (IMDG) / Accord European Sur le Transport des Marchandises Dangereuses par Route (ADR) Regulations)

To ship lithium batteries by surface (rail, truck, sea vessel, etc) outside the United States, the shipments must meet the criteria shown below.

- Cell and batteries must meet the requirements of UN Manual of Test and Criteria, Part III, sub-section 38.3.
- Cells and batteries shall be packed in strong outer packagings and inner packagings that completely enclose the cell or battery and protect the batteries from short circuit.
- Each package shall be marked with an indication:
  - The package contains 'lithium metal' cells or batteries;
  - The package shall be handled with care and that a flammability hazard exists if the package is damaged;
  - Information that special procedures shall be followed if the package is damaged and that inspection and possible repackaging is necessary; and
  - A telephone number of more information.

While not technically required, the IATA label shown below meets the marking requirements listed above for the shippable package. The minimum dimensions of the label are 120 mm x 110 mm. The red border is mandatory but the batteries, glass and fire can be in black and white.



For customers re-shipping batteries packed in or with equipment, the telephone numbers (CHEMTREC information) may not be used without a subscription from CHEMTREC.

- Each package shall be accompanied separately by a document with:
  - "This shipment contains Primary Lithium batteries. Do not damage or mishandle the packages. If package is damaged, flammability hazard may exist, batteries must be quarantined, inspected, and repacked."
  - A telephone number for additional information

- Each package shall be capable of withstanding a 1.2 m drop test in any orientation without damage to the cells or batteries, shifting of contents so as to allow uncontrolled battery to battery or cell-to-cell contact, or release of the contents.
- The maximum weight of a shippable package is 30 kg gross mass.

Batteries Packed With or Contained In Equipment, Air Transportation (IATA Packing Instructions 969 and 970)

- The batteries must be capable of passing the UN Model Regulation T-tests (UN Manual of Tests and Criteria, Part III, Sub-Section 38.3 Lithium Batteries).
- Cells and batteries must be packed in inner packagings that completely enclose the cell or battery.
- Cells and batteries must be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit.
- The maximum number of batteries in each package must be the minimum number required to power the equipment plus two spares.
- For batteries packaged **with** equipment only, the shippable container must be capable of passing a 1.2 m. drop test in any orientation without spillage of the contents of the packaging, damage to the batteries inside or shifting of the contents that could lead to short circuit. This provision does not apply to batteries packaged **inside** equipment.
- For batteries contained **inside** equipment only, the equipment must be equipped with an effective means of preventing accidental activation.
- The shippable container must be labeled with the label shown below. The minimum dimensions of the label are 120 mm x 110 mm. The red border is mandatory but the batteries, glass and fire can be in black and white.



For customers re-shipping batteries packed in or with equipment, the telephone numbers (CHEMTREC information) may not be used without a subscription from CHEMTREC.

- Each shipment must be accompanied by a document such as an air waybill with an indication that:
  - "This shipment contains Primary Lithium batteries. Do not damage or mishandle the packages. If package is damaged, flammability hazard may exist, batteries must be quarantined, inspected, and repacked."
  - A telephone number for additional information

Batteries Contained In or Packed With Equipment
Surface (Truck/Sea/Rail) Transportation (IMDG / ADR Regulations)

To ship lithium batteries packaged with, or inside equipment by surface (rail, truck, sea vessel, etc) outside the United States, the shipments must meet the criteria shown below.

- Cell and batteries must meet the requirements of UN Manual of Test and Criteria, Part III, sub-section 38.3.
- Cells and batteries, except when installed **inside** equipment, shall be packed in strong outer packagings and inner packagings that completely enclose the cell or battery and protect the batteries from short circuit.
- Cells or batteries installed **inside** equipment shall be protected from damage and short circuit and the equipment shall be equipped with a means of preventing accidental activation.
- The shippable container must be labeled with:

- An indication the package contains 'lithium metal' cells or batteries;
- An indication the package shall be handled with care and that a flammability hazard exists if the package is damaged;
- An indication that special procedures shall be followed in the event the package is damaged, to include inspection and repacking if necessary; and
- A telephone number for additional information.

While not technically required, the IATA label shown below meets the marking requirements listed above for the shippable package. The minimum dimensions of the label are 120 mm x 110 mm. The red border is mandatory but the batteries, glass and fire can be in black and white.



For customers re-shipping batteries packed in or with equipment, the telephone numbers (CHEMTREC information) may not be used without permission and a subscription from CHEMTREC.

- Each shipment must be accompanied by a shipping document with an indication that:
  - "This shipment contains Primary Lithium batteries. Do not damage or mishandle the packages. If package is damaged, flammability hazard may exist, batteries must be quarantined, inspected, and repacked."
  - A telephone number for additional information
- Except for batteries installed **inside** equipment, each package shall be capable of withstanding a 1.2 m drop test in any orientation without damage to the cells or batteries, shifting of contents so as to allow uncontrolled battery to battery or cell-to-cell contact, or release of the contents.