

Packing and Shipping Instructions

Thank you for purchasing the GoRecycle battery and electronics recycling box. With your help, we are keeping used batteries out of landfills and reclaiming precious commodities for reuse in new products.

We have provided these instructions for your benefit and to ensure the safe storage and transportation of used batteries inside the GoRecycle box. Please Read and follow all instructions carefully.

If you have any questions, please email gorecycle@catalytic-innovations.com, or call 1-573-263-5111.

We are always eager to help!

Accumulation Start Date

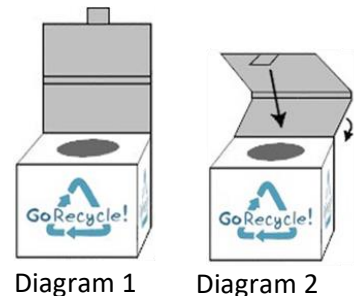
Find the section on the back (small box) or bottom (large box) of your GoRecycle box marked "Accumulation Starting Date" and record the date when the first battery is placed in the container.

EPA regulations require that the GoRecycle box is shipped within 1 year of the Accumulation Starting Date.

Setting Up the GoRecycle Box

Take the following steps to setup the box as an attractive collection display.

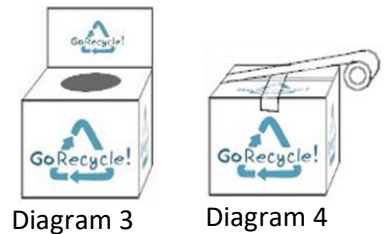
1. Remove all contents from inside the box
2. Close top of box, but leave header flap open. (Diagram 1)
3. Bend header section back and fold at middle of the header. (Diagram 2)
4. Tuck header tab into base of header flap. (Diagram 3)



Closing and Sealing the GoRecycle Box

When the box is filled and ready to be shipped, the following steps should be taken to seal the box before shipping back to our facility.

1. Pull Header back to lift tab. (Box should now resemble Diagram 2)
2. Close box with header tab secured into slot for tab.
3. Use **Packing tape** (Not included) to secure lid (Diagram 4)



Maximum Box Weight

The GoRecycle box is a safety tested container that has been certified to ship up to its maximum weight capacity. (6" x 6" x 6" = 15 lbs.; 10" x 10" x 10" = 50 lbs.) Boxes should never exceed maximum capacity, otherwise this certification will be invalidated. Catalytic Innovations reserves the right to charge an overweight shipping fee for those who ship boxes weighing more than the stated maximum. The gross weight of any box should never exceed 66 lbs.!

Returning the GoRecycle Box

To return the GoRecycle box, go to <https://returns.catalytic-innovations.com/> or scan the QR code on the back or bottom of the box with your phone camera.

Fill out the form on the website, and we'll send you a return shipping label as soon as we can. If your box did not have a serial number attached to it, or you wish to manually request a shipping label, please email gorecycle@catalytic-innovations.com to get a shipping label made for you.

Fold or cut shipping label to size, and affix the label to the designated area (pictured), covering the QR code and serial number if your box had one.

Double check that your box does not exceed the maximum weight capacity, properly close and tape for shipment, and drop off at any UPS shipping Location!

Serial Number Example



Size Limitations

When transported in the GoRecycle box, batteries listed below are limited to the following sizes and smaller:

- Lithium Metal (Non-Rechargeable) – 25 grams of lithium content per battery
- Lithium Ion (Rechargeable) – A rated capacity of 300Wh (watt-hours) per battery
- Lead-Acid (Non-Spillable) – A gross weight of 25 lbs. per battery

NOTE: Most consumer-style lithium metal and li-ion batteries fall within the size limitation above (e.g., laptop, power tool, etc.).

Batteries That Require Insulation:

Lithium Metal (non-rechargeable)
Lithium Ion (rechargeable)
Lead-Acid (Non-Spillable)
Any Other Battery Over 9 Volts

No Insulation Required:

AA, AAA, C, & D alkaline batteries
will always be under 9 volts

Battery Insulation

Batteries that require insulation (listed to the left) must be protected against short circuits. Further, the means of protection used to prevent short circuits must remain in place while the GoRecycle box is in transit.

Suitable methods of protecting all of the batteries against short circuits and the dangerous evolution of heat include, but not limited to, placing the batteries in individual plastic bags or covering the exposed terminals with clear tape (provided with your box).

Prohibited Batteries

The following batteries are prohibited from being shipped in the GoRecycle box:

1. Batteries containing free-flowing electrolyte (e.g., automotive/motorcycle batteries)
2. Low production run and prototype batteries
3. Damaged, defective, or recalled batteries

Markings Visible

The person offering this package to a motor carrier must notify the operator of the motor vehicle of the presence of batteries by ensuring all markings on bottom of the GoRecycle box are visible.

USED BATTERIES FOR RECYCLING OR
DISPOSAL: MAY CONTAIN LITHIUM (ION AND/
OR METAL) AND NONSPILLABLE BATTERIES.
FOR HIGHWAY OR RAIL FREIGHT ONLY -
FORBIDDEN FOR TRANSPORTATION
BY VESSEL OR AIRCRAFT



Miscellaneous Requirements

- Devices containing batteries must be protected against short circuits and unintentional activation.
- Packages must be stored away from heat.
- The gross weight of the package must not exceed 66 lbs.
- Packages must be securely closed prior to being offered for transportation.
- This package is only authorized to ship batteries and battery-containing devices for recycling.

Battery Packaging Requirements

The Department of Transportation has authorized the shipment of batteries using the GoRecycle box pursuant to D.O.T Special Permit 20928. The safety requirements of SP-20928 are summarized below. The complete Special Permit can be found at <https://www.gorecycleusa.com/uploads/2/9/3/5/29356121/dotsp20928.pdf>

For more information on the above requirements, email gorecycle@catalytic-innovations.com, or call 1-573-263-5111

Lithium Battery Information

The Department of Transportation has authorized the shipment of Lithium Metal (Non-Rechargeable) and Lithium Ion (Rechargeable) batteries using the GoRecycle box, that is in accordance with our D.O.T. Special Permit 20928.

Special Permit 20928 limits Lithium Metal and Lithium Ion batteries transported to the following sizes:

- Lithium Metal (Non-rechargeable) – 25 grams of lithium content or less per battery
- Lithium Ion (Rechargeable) – A rated capacity of 300Wh (Watt-hours) or less per battery

Most consumer-style lithium metal and li-ion batteries (see below) will fall within these size limitations.

Acceptable Lithium Batteries

- Li-Ion Laptop Battery (Dia. 5)
- Li-Ion Cell Phone Battery (Dia. 5)
- Li-Ion Power Tool Battery (Dia. 5)
- Lithium Primary Button Cell (Dia. 6)
- Lithium Primary AA, AAA, (Dia. 6)

UN3481 is used to designate a battery listed as a UN3480 battery, that is inside a piece of equipment. (Diagram 7)

UN3091 is used to designate a battery listed as a UN3090 battery, that is inside a piece of equipment. (Diagram 8)

UN numbers are further explained on page 4.

UN3480



Diagram 5

UN3090



Diagram 6

UN3481



Diagram 7

UN3091



Diagram 8

For batteries larger than the common consumer types shown above, customer should verify whether batteries can be shipped, according to Special Permit 20928.

SEE PAGE 5 FOR INSTRUCTIONS TO DETERMINE BATTERY SIZE OR CONTACT CATALYTIC INNOVATIONS FOR ASSISTANCE AT **1-573-263-5111**, OR EMAIL **GORECYCLE@CATALYTIC-INNOVATIONS.COM**

Disclaimer: This Document is provided for your convenience. Customer remains responsible for complying with all shipping regulations, including the proper determination of battery size. Catalytic Innovations LLC assumes no liability by providing the information herein.

Handling Mark Instructions

IMPORTANT: Read and follow these instructions to comply with D.O.T. safety regulations for shipping batteries.

-Affix included handling mark (Diagram 10) to the designated area on the bottom of the box **ONLY** if package includes lithium metal or, lithium ion, batteries.

-Cross out UN numbers on handling mark that don't apply (As in example 1: Diagram 11). The UN number definitions can be found in 49 CFR § 173.185. Simplified explanations are outlined below.

Rechargeable Lithium

1. UN3480 – Lithium Ion Batteries. This includes rechargeable lithium batteries usually taken from cell phones and laptops. (Diagram 5)
2. UN3481 – Lithium Ion Batteries contained **in equipment**. This includes electronics with rechargeable batteries within them, such as cell phones and tablets (Diagram 7)

Single-Use Lithium

3. UN3090 – Lithium Metal Batteries. This includes single use lithium batteries such as digital camera batteries, hearing aid batteries, and non-rechargeable lithium AA/AAA batteries. (Diagram 6)
4. UN3091 – Lithium Metal Batteries contained **in equipment**. This includes small non-rechargeable electronics that include lithium button cell batteries, such as children's watches, thermometers, or key fobs. (Diagram 8)



Diagram 10



Diagram 11

Example 1: You mostly fill the box with alkaline batteries, but include a couple of old cell phones (UN3481) and some lithium batteries for flashlights (UN3090). You place the handling mark on the **designated area on the bottom of the box** and cross out the two numbers that don't apply (UN3480, UN3091). (Diagram 11)

Example 2: You fill the GoRecycle box with alkaline batteries and rechargeable nickel batteries (Ni-Cad, NiMH), which do not require the handling mark, so you do not affix the handling mark sticker.

To Calculate Lithium Metal, or Lithium Ion, Battery Size

The formula used to determine **Lithium Metal** content per cell is:

$$Ah \text{ per battery} \times 0.3 \text{ grams}$$

- NOTE: Most batteries are not rated in Ampere hours (Ah), but instead milliamperes hours (mAh). To determine the Ah, divide the mAh by 1,000.

The formula used to determine **Lithium Ion** rated capacity is:

$$Volts \times \text{ampere hour (Ah)} = \text{watt-hours (Wh)}$$

- NOTE: Most batteries are not rated in Ampere hours (Ah), but instead milliamperes hours (mAh). To determine the Ah, divide the mAh by 1,000.

Single-Use (Lithium Metal) Battery Example Calculation:

The battery you wish to ship is a Non-rechargeable AA Lithium battery, rated at 3000mAh:

1. Divide 3,000mAh by 1,000 to get the rating in Ah:

$$3000mAh \div 1,000 = 3Ah$$

2. Multiply the Ah by 0.3 gm to determine the amount of Lithium:

$$3Ah \times 0.3g = 0.9 \text{ grams of lithium in each cell}$$

AA batteries only have one cell; therefore, you multiply 0.9 by 1 to get your total amount of lithium in the battery:

$$0.9g \times 1 = 0.9 \text{ grams of lithium per battery}$$

Conclusion: 0.9 grams is less than the limit of 25 grams, and therefore can be shipped in the GoRecycle box.

Rechargeable (Lithium Ion) Battery Example Calculation:

You wish to ship your used laptop battery that is rated at 14.8V and 2200mAh:

1. Divide 2200mAh by 1,000 to get the rating in Ah

$$2200mAh \div 1,000 = 2.2Ah$$

2. Determine the watt hours (Wh) by multiplying your 2.2Ah by your 14.8V:

$$2.2Ah \times 14.8V = 32.56Wh$$

Conclusion: 32.56Wh is less than the limit of 300Wh, and therefore can be shipped in the GoRecycle box.

Disclaimer: This Document is provided for your convenience. Customer remains responsible for complying with all shipping regulations, including the proper determination of battery size. Catalytic Innovations LLC assumes no liability by providing the information herein.