

Stored Energy Holdings, Inc.
Recycling Program



Reference Guide

Stored Energy Holdings, Inc. Recycling Program

"Stored Energy Holdings, Inc. (SEHI) is committed to being great stewards of our environment. Lead-acid batteries worldwide are the single greatest example of a circular economy and SEHI plays a critical role in ensuring that circle remains unbroken. We are committed to environmental stewardship and support our communities by providing safe battery handling processes. When you recycle your batteries with SEHI, we guarantee they will be recycled responsibly. Did you know that 98% of batteries worldwide are recycled back into new batteries? We keep our promise to ensure your spent batteries will be safely handled and transported by our knowledgeable staff.

For more information and to arrange a recycle pickup, please feel free to contact us at 800-441-8824."

Stored Energy Holdings, Inc. – Recycling Is Not Just What We do, It's Our Story

Since 1985, we at SEHI have never faltered in our commitment to deliver exceptional products through unparalleled service. Our mission has always been centered on sustainability and environmental stewardship, and there is no better way to live up to this name than through our dedication to recycling.

Long before the federal government and more and more states trended toward stricter regulations on the disposal of lead acid batteries, Northeast Battery was a leader in doing this the right way, having stepped up to the plate at its inception to ensure that your safety along with that of the environment is protected.

Our battery-recycling program is a well thought out process that is available with you, the customer, in mind. We provide a detailed and easy to follow packaging and securing guideline for you to use. Guidelines are provided for the packaging of the different types of batteries.

The recycling - and, where necessary, the safe and compliant disposal - of these batteries is as high a priority to us as is the sourcing and sale of new batteries. We never compromise on our promise to be there when you need us.

With everything you have to do to run your business, the last thing that you need is to worry about your old and/or damaged batteries and how to safely get rid of them without negatively affecting the environment.

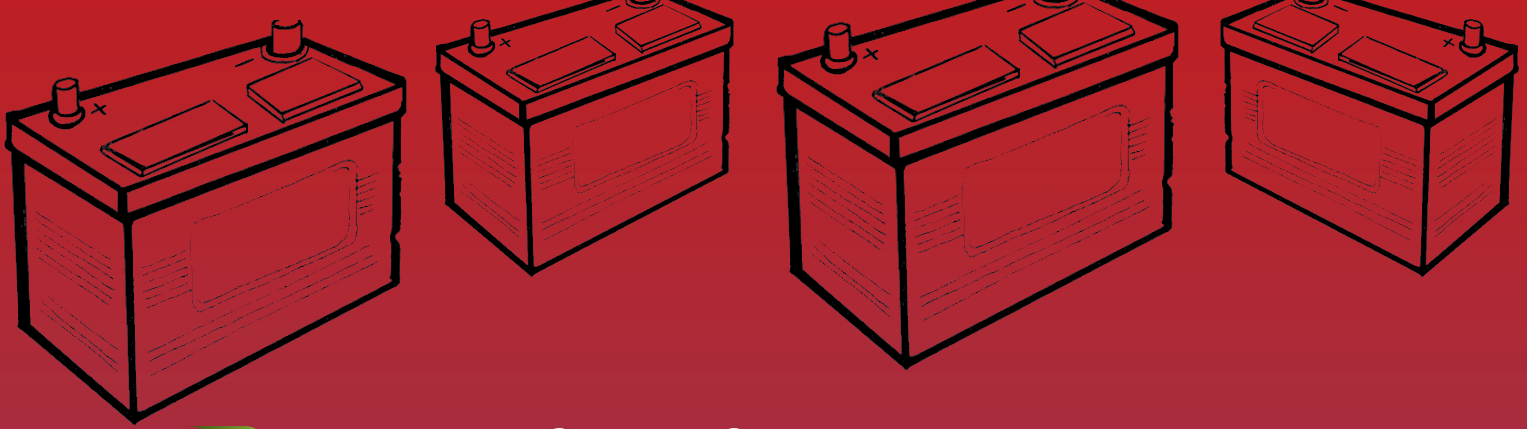
We take our duty and commitment to safe and compliant recycling seriously. That is why our team is dedicated to the task of keeping our environment green. Our Customers choose Northeast Battery because we not only care for them, but we also care for and cherish the environment. A trait we believe is second to none.

When you choose SEHI for your battery needs, you are choosing a company that is committed to excellent quality, unequivocal commitment, and continued sustainability.

SEHI Recycles



* Arrows represent where SEHI ensures the circle will not be broken at these two critical points.

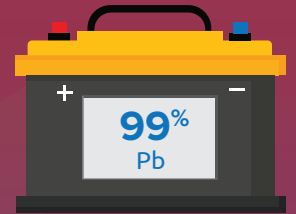


Benefits of Battery Recycling



Nearly **100%**
of spent lead batteries in
the U.S. are recycled.¹

Lead batteries have the
**Highest Collection
And Recycling
Rate** of any battery
chemistry.²



**More than
130 million lead batteries**
*are recycled every year and kept
from landfills.*¹



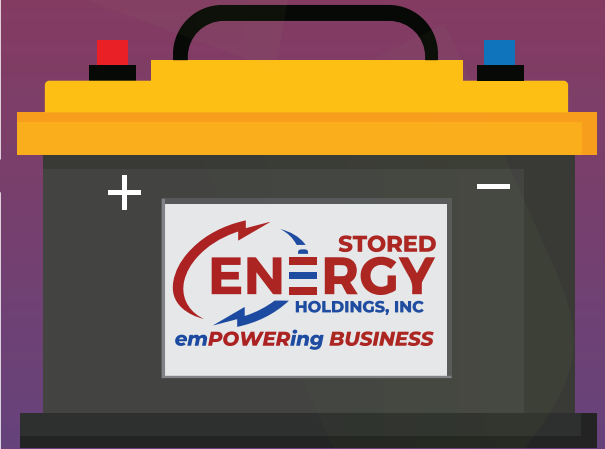
**70% of the world's
rechargeable energy
storage** needs are met by
lead batteries, which
equates to millions
at work every day.³



**More than one
billion vehicles** rely on
lead batteries for power,
and every mass-produced
hybrid and full-electric
vehicle uses one.



**Approximately 60%
of all forklifts** in the
U.S. use lead batteries to
move the materials that
fuel our economy.⁴



Diverting used batteries from landfill will **protect the environment** from pollution caused by the hazardous components of batteries.



¹ National Recycling Rate Study, Battery Council International, 2019

² Vehicle Technologies Office's Research Plan to Reduce, Recycle, and Recover Critical Materials in Lithium-Ion Batteries, U.S. Department of Energy, June 2019

³ The Rechargeable Battery Market and Main Trends 2018-2030, Avicenne Energy, May 2019

⁴ Top 20 Lift Truck Suppliers in 2019: Market Reaches New Heights, Modern Materials Handling, 2019

Helpful Materials



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The Region's Largest Independent Battery Distributor

Battery Recycling Program

The disposal of lead acid batteries is strictly regulated by state governments. Currently, most of the U.S. States have specific battery recycling legislation passed or pending. More and more, states and municipalities are restricting or have completely banned the disposal of lead-acid batteries with municipal solid waste. Government regulations deem spent batteries as hazardous waste unless they are properly reclaimed at a secondary lead smelter or battery recycler. Recent federal legislation requires that batteries sent for reclamation be managed in compliance with 40 CFR part 266, subpart C. Additionally, rigid Department of Transportation requirements exist for the transportation of batteries to the approved recycler.

As a service to our customers, Northeast Battery offers documented pickup and removal of spent lead-acid batteries sold or distributed by our company and our representatives. To return a lead-acid battery for reclamation, please contact a Customer Service Representative at (800)-441-8824, extension 2.

Upon receipt, a Battery Return Form with corresponding Claim Number will be completed on your behalf. The Northeast Battery representative will sign the completed document and present your copy. When properly returned, Northeast Battery accepts full ownership of the batteries, and ensures that they will be reclaimed and managed in full compliance with 40 CFR part 266, subpart C.

Battery Recycling - Environmental Benefits

Lead-acid batteries are the environmental success story of our time. Roughly ninety-six percent of all battery lead is recycled. When compared to household items, such as, newspapers, aluminum cans and glass bottles, lead-acid batteries top the list of the most highly recycled consumer products.

The lead-acid battery gains its environmental edge from its closed loop cycle life. The typical lead-acid battery contains sixty to eighty percent recycled lead and plastic. When a spent battery is collected, it is sent to a permitted recycler where, under strict environmental regulations, the lead and plastic are reclaimed and used to manufacture new lead-acid batteries. The recycling cycle goes on indefinitely.



Did you know? New batteries are 99% recyclable and comprised of previously recycled materials.

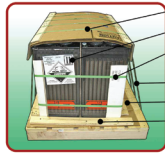


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Instructions for Packaging Flooded Cell (Wet Cell) Batteries on Pallets

Correctly Packaged Flooded Cell Batteries



- Multiple Layers of Cardboard on Top
- Proper Labeling
- Banded Together with High-Strength Banding
- Banded to Pallet
- Cardboard Below
- Wood Slats added to keep from moving on pallet
- Shrinkwrapped to pallet - MANY LAYERS OF SHRINKWRAP to avoid shifting during shipment

It is not possible to have too much shrinkwrap or banding to secure the material to the pallets. A general rule would be once you think you have it wrapped - add six more revolutions of wrap.

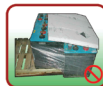
Incorrectly Packaged Flooded Cell Batteries



- Insufficient Cardboard on Top
- Exposed Terminals + Ripped Cardboard + Steel Banding = **EXPLOSION HAZARD**
- At least 3 layers of cardboard should have been used OR can also use non-conductive material such as plywood



- NOT Shrinkwrapped to Pallet to avoid shifting during shipment
- Not Banded to Pallet
- Insufficient Banding
- Missing bottom cardboard should have been used OR
- Not protected from sliding off pallet (no wooden slats)



- Not protected from sliding off pallet (no wooden slats)
- Not Banded to Pallet
- Insufficient Cardboard on top
- Missing Cardboard under batteries
- Not Labeled
- Insufficient amount of shrinkwrap

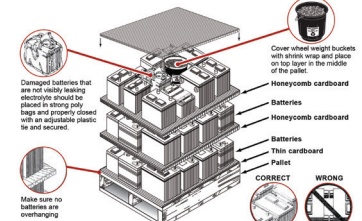


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BATTERY PREPARATION How to Properly Stack Used Batteries on Pallets

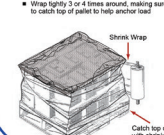


NOTE: Add top layer of batteries after shrink wrapping bottom 2 layers

WARNING: Arrange batteries so terminals do not touch. Terminals touching may cause a short and/or fire!

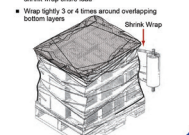
STEP 1

- Load batteries 2 layers high, then shrink wrap
- Wrap tightly 3 or 4 times around, making sure to catch top of pallet to help anchor load



STEP 2

- Load third layer, place cardboard on top, then shrink wrap entire load
- Wrap tightly 3 or 4 times around overlapping bottom layers



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Packaging and Securing Used Motive Batteries/Cells

INSTRUCTIONS FOR PREPARING USED MOTIVE BATTERIES FOR SHIPMENT

- See "Important Skid/Pallet Specifications" Section.
- Place all batteries upright and across the runners of the skid/pallet if possible.
- Batteries must be free from leaks.
- Multiple batteries can be banded together to consolidate a shipment to a standard skid/pallet size.
- Adequate wooden cleats must be firmly nailed to the skid/pallet on all sides around the base of the battery(ies) perimeter, to prevent the battery from sliding off the skid/pallet during transport.

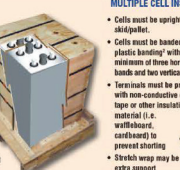


- Batteries must be banded with steel or plastic banding and adequate insulation. See "General Handling Requirements" for details.
- Metal banding CANNOT come in contact with the posts or terminals of the battery.

INSTRUCTIONS FOR PREPARING USED MOTIVE CELLS FOR SHIPMENT

SUPPORT BRACING METHOD: MULTIPLE CELL INSTRUCTION

- Cells must be palletized using a skid/pallet (See "Skid/Pallet Specifications" for details).
- Cells must be upright and secured with wooden cleats on skid/pallet.
- Adequate reinforcement (i.e. plywood) must be placed on the top and sides of the cells to prevent shifting, cutting or distortion.
- Cells must be banded with steel or plastic banding with a minimum of three horizontal bands and two vertical bands.
- Metal banding CANNOT come in contact with the posts or terminals of the cells.



ALTERNATIVE SUPPORT BRACING METHOD: MULTIPLE CELL INSTRUCTION

- Cells must be upright and secured with wooden cleats on skid/pallet.
- Cells must be banded with steel or plastic banding with a minimum of three horizontal bands and two vertical bands.
- Terminals must be protected with non-conductive caps, tape or other insulating material (i.e. wallboard, cardboard) to prevent shorting.
- Shrink wrap may be used for extra support



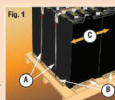
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Packaging and Securing Used Motive Batteries/Cells

THESE GUIDELINES ARE TO ASSIST IN COMPLIANCE WITH FEDERAL DEPARTMENT OF TRANSPORTATION (USDOT) REGULATIONS. PLEASE ASSIST THE DRIVER IN COMPLYING WITH THE LAW. FAILURE TO COMPLY WITH THESE GUIDELINES CAN RESULT IN FINES AND PENALTIES FROM FEDERAL, STATE, AND LOCAL AUTHORITIES.

- Each battery should be secured to the skid/pallet by:
 - Banding in one direction (See A in Fig. 1) and wooden cleats nailed to skid/pallet on all four sides of the battery (See B in Fig. 1). Banding should be placed in the same direction as the runners of the skid/pallet (See C in Fig. 1). The banding should pass through the skid/pallet as close as possible to the base of the battery to keep the load from moving during transport.
- Skid/pallets must be properly blocked, braced, or otherwise secured in the trailer to prevent shifting of the load during transport.



- NOTE: Do not pass banding around the outside edge of skid/pallet to avoid skid/pallet failure during transport.

These Guidelines were developed by a committee of industry experts and are believed to be in compliance with USDOT requirements effective as of December 2011. However, especially if a incident occurs in transit, regulatory authorities may challenge the adequacy of your packaging and load securing. Consultation with your carrier and local authorities is recommended. See page 4 for any questions about these items.



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481 North Michigan Avenue, Chicago, IL 60611
www.batterycouncil.org
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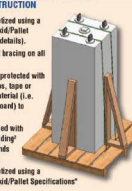
SUPPORT BRACING METHOD: SINGLE CELL INSTRUCTION

- Cells must be palletized using a skid/pallet (See "Skid/Pallet Specifications" for details).
- Cells must be upright and secured with wooden cleats on skid/pallet.
- Adequate reinforcement (i.e. plywood) must be placed on the top and sides of the cells to prevent shifting, cutting or distortion.
- Cells must be banded with steel or plastic banding with a minimum of three horizontal bands and two vertical bands.
- Metal banding CANNOT come in contact with the posts or terminals of the cells.

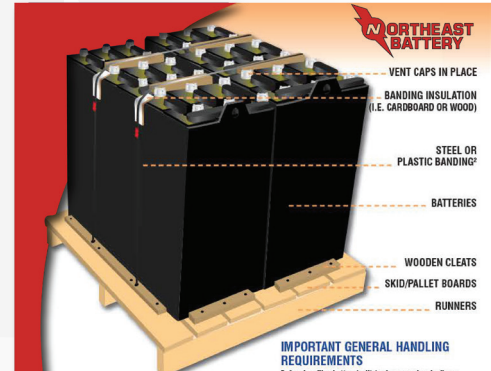


ALTERNATIVE SUPPORT BRACING METHOD: SINGLE CELL INSTRUCTION

- Cells must be palletized using a skid/pallet (See "Skid/Pallet Specifications" for details).
- Use greatest support bracing on all four sides
- Terminals must be protected with non-conductive caps, tape or other insulating material (i.e. wallboard, cardboard) to prevent shorting.
- Cells must be banded with steel or plastic banding with a minimum of three horizontal bands and two vertical bands across tops of cells.
- Cells must be palletized using a skid/pallet (See "Skid/Pallet Specifications" for details).



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- VENT CAPS IN PLACE
- BANDING INSULATION (I.E. CARDBOARD OR WOOD)
- STEEL OR PLASTIC BANDING*
- BATTERIES
- WOODEN CLEATS
- SKID/PALLET BOARDS
- RUNNERS

IMPORTANT GENERAL HANDLING REQUIREMENTS

Before handling battery(ies), please read and adhere to all of the following requirements:

- Wear the appropriate personal protective equipment
- Handle all returned batteries with the same responsible care as new batteries
- Keep batteries upright at all times. Do not tip over on side or upside down
- Do not drop batteries. Put batteries carefully down on skid/pallet
- Only lead-acid batteries may be returned
- Do not double stack cells or batteries on skid/pallet
- Terminals must be protected with non-conductive caps, tape or other insulating material (i.e. wallboard, cardboard) to prevent shorting
- Total height of package not to exceed 1 1/2 times the skid/pallet width
- Any damaged or cracked cell must be free of electrolyte and placed in a clear heavyweight polyethylene plastic bag (min. 6 mil) that is securely closed.
- All vent caps must be in place

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Lead Battery Recycling



Lead Battery Recycling Process



Battery Recycling



Lead Battery Recycling plant



Lead-acid Batteries Recycling (ULAB)

Helpful Videos



Lead acid battery recycling Plant



Lead Battery Recycling Plant



Lead recycling plant



Li-ion Battery Processing Plant



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