



## CLEAN HARBORS EXT BATTERY PACKAGING PROTOCOL (August, 2013)

When batteries are improperly packaged, the potential for damage or injury related to reactions and/or explosion greatly increases. In addition to safety, batteries have specific packing requirements enforced by the US DOT and Canadian TDG. Clean Harbors has recognized the inherent dangers and liability associated with batteries and has implemented the following packing protocols to protect Clean Harbors and its customers. For shipments of batteries to Clean Harbors, these protocols must be followed in order to ensure safe and compliant handling and transportation of batteries. For additional guidance or assistance contact a Clean Harbors Technical Service Representative by calling (781) 792 5398.

### INTACT LEAD ACID BATTERIES

#### Shipping instructions:

##### **Palletized**

1. Place batteries on pallet.
2. Palletized batteries limited to a single layer only – do not stack batteries.
3. Shrink wrap batteries to pallet.
4. Band batteries to pallet. (Poly-strapping is recommended)
5. All terminals must be covered with duct tape or other insulator to prevent short circuiting per 49 CFR 173.159. Use Hazardous Waste Manifest or B.O.L. as the shipping document.
6. Shipping Information:
  - a. **UN2794, Batteries, wet, filled with acid, 8, PGIII or**
  - b. **UN2794, Waste Batteries, wet, filled with acid, 8, PGIII (D002, D008)\***
7. Use Non-RCRA Regulated (blue) label on opposing sides of the pallet. Two (2) labels per pallet.
8. If the gross weight of the entire unit exceeds 2000lbs, please contact your customer service representative for approval.

*\*Universal waste rules may be utilized where applicable.*

#### **Examples:**



### LEAKING LEAD ACID BATTERIES OR SINGLE BATTERY SHIPMENTS

Clean Harbors is a full service environmental company which can handle your battery disposal needs. Occasionally, single lead acid batteries or leaking lead acid batteries may need to be removed from your location. For additional information on leaking or single batteries for shipment or to schedule Clean Harbors' Chemists for on-site assistance, please contact your Clean Harbors Technical Service Representative by calling (781) 792 5398.



## CLEAN HARBORS EXT BATTERY PACKAGING PROTOCOL (August, 2013)

### GEL CELL BATTERIES

#### Shipping instructions:

1. Use poly drums only (**No Metal Drums with Poly-Liners**).
  2. In order for a battery to be shipped under this section it must be marked "NONSPILLABLE" or "NONSPILLABLE BATTERY" by the manufacturer. Otherwise it must ship as a standard lead acid battery subject to the above protocols.
  3. The outer packaging must be plainly and durably marked "NONSPILLABLE" or "NONSPILLABLE BATTERY."
  4. Place two inches of speedy-dry on the bottom of each drum.
  5. Stack gel cells providing 3 inches of vermiculite between layers of batteries.
  6. Fill any void head-space in the drum with vermiculite.
  7. Batteries limited to 50 pounds each. Total gross weight of drum not to exceed 300 pounds.
  8. All terminals must be covered with duct tape or other insulator to prevent short circuiting per 49 CFR 173.159.
  9. Shipping Information:
    - a. **UN2800, Batteries, wet, non-spillable, 8, PGIII or**
    - b. **UN2800, Waste Batteries, wet, non-spillable, 8, PGIII (D002, D008)\***
- \*Universal waste rules may be utilized where applicable.*
10. Affix appropriate label to the container.
  11. DOT corrosive (8) diamond is required.
  12. Packing slips are required.
  13. When drums are pre-packed, top MUST be left off the drum and do not add vermiculite until material is reviewed by the Clean Harbors Chemists/Driver prior to shipment. If not packed according to guidelines, the drum must be repacked. **Drums cannot be shipped if not packaged to this protocol.**
  14. Larger Gel Cell batteries may also be palletized as outlined above for intact lead acid batteries.

#### Examples:





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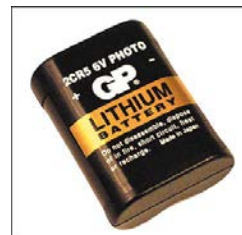
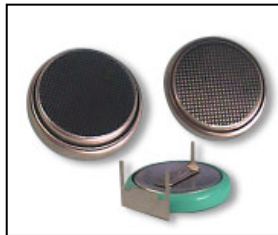
### INTACT LITHIUM AND LITHIUM ION BATTERIES

***Lithium batteries cannot be commingled with other material.***

#### **Shipping instructions:**

- Clean Harbors has adopted the policy of prohibiting the acceptance of all types of Lithium Batteries for disposal at our internal Facilities.
  - Broken lithium batteries will be accepted on a case by case basis for disposal through LITHL program with approval by Technical services or Clean Harbors High Hazard Review Group.
- Lithium Batteries will be disposed of through “Mail Back” recycling programs.
- **Large bulk quantities** will need to be disposed of through third party direct shipments.
- Clean Harbors Technical Services to be contacted for all questions and issues regarding lithium batteries.
  - If utilizing direct ship battery recycle mail in program, please follow instructions included with packaging.

#### **Examples:**



*\* Universal waste rules may be utilized where applicable.*



## CLEAN HARBORS EXT BATTERY PACKAGING PROTOCOL (August, 2013)

### NICKEL COMPOUND BATTERIES

#### Shipping Instructions:

1. Full 55G drums must be steel for dry cells. Poly acceptable for 5 thru 30G drums and full 55G drums of wet cells only.
2. Except for dry cell batteries  $\leq 9V$ , batteries must be insulated from each other & have terminals protected to prevent short circuit per 49 CFR 172.102 Special Provision 130 and 173.159.
  - a. Spent dry cell batteries  $\leq 9V$  are exempt from the insulating/taping requirements provided they are shipped separately from other battery sizes and types. These batteries must fall under the description "Batteries, dry, sealed, n.o.s."
    - Note this exemption does not apply to those battery chemistries specifically covered by another proper shipping name.
3. Batteries may not be connected in series to one another (No two batteries may be connected by a common terminal or wire)
4. Acceptable battery types included:
  - a. Nickel Cadmium, Wet cells (D002, D006)\*
  - b. Nickel Hydroxide Batteries (D002)\*
  - c. Nickel Cadmium Batteries (D006)\*
  - d. Nickel Iron Batteries
  - e. Rechargeable Ni-Cad Batteries (D006)\*
  - f. Non-Mercury Alkaline Batteries
  - g. Nickel Metal Hydride
  - h. Nickel Zinc
  - i. Non-Mercury Alkaline Dry-cell

*\*Universal waste rules may be utilized where applicable.*

5. Shipping Information:

Proper shipping name will vary based on specific battery type. If assistance is required contact your Clean Harbors Technical Service Representative by calling (781) 792 5398.
6. When drums are pre-packed, top MUST be left off the drum and do not add vermiculite until material is reviewed by the Clean Harbors Chemists/Driver prior to shipment. If not packed according to guidelines, the drum must be repacked. **Drums cannot be shipped if not packaged to this protocol.**

#### Examples:





## CLEAN HARBORS EXT BATTERY PACKAGING PROTOCOL (August, 2013)

### ALKALINE MERCURY BATTERIES

#### Shipping Instructions:

1. Batteries must be intact
2. Full 55G drums must be steel, Poly acceptable for 5 thru 30G drums only
3. Batteries may not be connected in series to one another (No two batteries may be connected by a common terminal or wire)
4. Except for dry cell batteries  $\leq 9V$ , batteries must be insulated from each other & have terminals protected to prevent short circuit per 49 CFR 172.102 Special Provision 130 and 173.159.
  - a. Spent dry cell batteries  $\leq 9V$  are exempt from the insulating/taping requirements provided they are shipped separately from other battery sizes and types. These batteries must fall under the description "Batteries, dry, sealed, n.o.s."
    - Note this exemption does not apply to those battery chemistries specifically covered by another proper shipping name.
5. Acceptable battery types:
  - a. Alkaline Batteries
  - b. Mercury Batteries
  - c. Mercury Oxide Batteries
  - d. Zinc-Air Battery
  - e. Silver Oxide
6. Shipping Information:
  - a. Proper shipping name will vary based on specific battery type. If assistance is required contact your Clean Harbors Technical Service Representative by calling (781) 792 5398.\*

*\*Universal waste rules may be utilized where applicable.*
7. When drums are pre-packed, top MUST be left off the drum and do not add vermiculite until material is reviewed by the Clean Harbors Chemists/Driver prior to shipment. If not packed according to guidelines, the drum must be repacked. **Drums cannot be shipped if not packaged to this protocol.**

#### Examples:





## CLEAN HARBORS EXT BATTERY PACKAGING PROTOCOL (August, 2013)

### ALKALINE BATTERIES

#### Shipping Instructions:

1. Material must be Non-RCRA/Non-EPA regulated
2. Batteries must be intact
3. Except for dry cell batteries  $\leq 9V$ , batteries must be insulated from each other & have terminals protected to prevent short circuit per 49 CFR 172.102 Special Provision 130 and 173.159.
  - a. Spent dry cell batteries  $\leq 9V$  are exempt from the insulating/taping requirements provided they are shipped separately from other battery sizes and types. These batteries must fall under the description "Batteries, dry, sealed, n.o.s."
    - Note this exemption does not apply to those battery chemistries specifically covered by another proper shipping name.
  - b. Alkaline batteries in Canada are currently exempt from the insulating/taping requirement provided they are not intended for export to the US.
4. Full 55G drums must be steel, Poly acceptable for 5 thru 30G drums only
5. Batteries may not be connected in series to one another (No two batteries may be connected by a common terminal or wire)
6. Shipping Information:
  - a. Spent 1.5 volt alkalines- **Non DOT Regulated Material (spent alkaline batteries)**
  - b. All other alkalines- **Batteries, dry, sealed, n.o.s. (alkaline batteries)**
7. When drums are pre-packed, top MUST be left off the drum and do not add vermiculite until material is reviewed by the Clean Harbors Chemists/Driver prior to shipment. If not packed according to guidelines, the drum must be repacked. **Drums cannot be shipped if not packaged to this protocol.**

#### Examples:

