Battery Identification Chart with storage/handling directions

Certain batteries that can create sparks or generate dangerous heat are forbidden from transportation unless packaged in a manner to preclude such an occurrence. The phrase "packaged in a manner to preclude" sparks and heat can include terminal protection via taping with electrical or duct tape .

Many persons on USA Main Campus will used plastic coffee containers to store batteries. The container must be marked with : "Universal Waste—[Class of battery]. When container is 3/4 full, call Safety 251-460-7070 for pickup. Large lead acid batteries can be recycled by the generator thru many local battery supply stores.

BATTERIES THAT MUST BE TAPED INCLUDE:

- ALL Alkaline, carbon zinc): greater than 12V
- ALL Lithium, button, coin cell):
- ALL Rechargeable (Nickel Cadmium, Nickel Metal Hydride, Nickel Zinc): greater than 9V
- ALL Rechargeable: (Lithium-Ion or SSLA/PB):



Pictures showing how battery terminal are to be taped for safety.







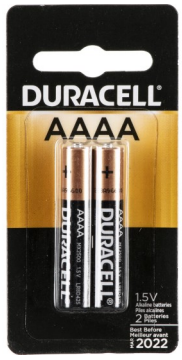




Reviewed: June 2026

Alkaline Batteries

- Alkaline batteries are one of the most basic types of primary battery that gets its energy from the chemical reaction between zinc metal and manganese dioxide. As compared to other batteries like a zinc-carbon battery of the zinc chloride, alkaline batteries possess a greater energy density and longer lifespan.
- Alkaline batteries are identified by the words "Alkaline" or the letters "ALK"
- All types of Alkaline batteries can be stored in the same storage container
- The terminal on AAA, AA, C, and D-cell batteries **are not** required to be taped











The terminals on all 6 & 9-volt batteries **are** required to be taped

Example of alkaline batteries that the terminal **MUST BE** taped:





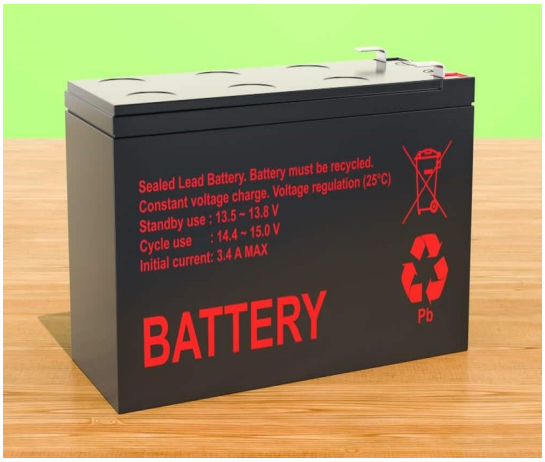




Reviewed: March, 2023

Lead Acid Batteries/ Voltage Regulated Sealed Lead Batteries (VRLA)

- The lead-acid battery, is one of the oldest (1859) yet the most widely used battery in the world. It is the kind of automotive vehicle that uses sponge lead and lead peroxide for converting the chemical energy into electrical power.
- VRLA batteries are a medium to large, maintenance-free batteries that are sometimes called sealed lead-acid battery
- All types of small lead acid batteries can be storied in the same storage container
- Large batteries (,motor cycle, automotive, etc.) should be recycled thru local vendors
- Lead Acid/ VRLA batteries can be identified by the terms "Sealed Lead-Acid Batteries or the letters "Pb".
- Terminals on all lead acid batteries must be taped if stored prior to recycling.











Reviewed: March, 2023

Nickel-Cadmium batteries

- This is the type of rechargeable battery that uses metallic cadmium and nickel oxide hydroxide as their source of electrodes. To make these cells work, they need to be kept within +60 degrees centigrade all the way down to minus 20 degrees centigrade.
- The best advantage of nickel cadmium cells is that they remain durable for a really long time .
- This type battery can be identified by the term Nickel Cadmium batteries or the letters "Ni-Cd"

- All types of Nickel-Cadmium batteries can be stored in the same drum
- Terminals on all Nickel-Cadmium (Ni-Cad) Batteries must be taped

Examples of Ni-cad batteries:









Nickel Metal Hydride Battery

- With an abbreviation NiMH or Ni-MH, a nickel metal hydride battery offers many advantages over other rechargeable batteries. First of all, nickel metal hydride batteries are a fast-working battery that can work for a really long time without wearing out.







Lithium /Lithium Ion Batteries

- A lithium-ion battery or Li-ion battery (Li) is a type of rechargeable battery composed of cells in which lithium ions move from the negative electrode through an electrolyte to the positive electrode during discharge and back when charging. Li-ion cells use an intercalated lithium compound as the material at the positive electrode and typically graphite at the negative electrode.
- Li-ion batteries have a high energy density, no memory effect (other than LFP cells)[10] and low self-discharge.
- They can however be a safety hazard since they contain flammable electrolytes and if damaged or incorrectly charged can lead to explosions and fires.
- However, lithium batteries should not be confused with lithium-ion batteries as they are rechargeable, storage battery used in devices like laptops, cell phones, PDAs, and iPods.
- All types of Lithium batteries can be stored in the same drum
- Terminals on ALL Lithium Batteries must be taped

Examples of Lithium Batteries:







Mercury Batteries

- Also known as mercuric oxide battery or mercury cell, the mercury battery is a non-rechargeable electrochemical battery that can be used up to 10 years.
- Owing to their long lifespan and steady voltage output, these batteries are the most common type of battery. They are popularly used in portable electronic devices such as watches, calculators, toys, cameras, digital thermometer etc.
- All types of Mercury batteries can be stored in the same drum
- Terminals on ALL Mercury Batteries must be taped

Examples of Mercury Batteries:







Zinc Batteries

- Referred to as zinc-air fuel cells, zinc air batteries are metal air devices that function with the combination of oxygen and oxidizing zinc. These batteries possess high energy density and aren't costly to produce. You can get these batteries, in various sizes, at quite an affordable price range.
- The common applications of zinc air fuel cells include watches, torch lights, remote control, film cameras, hearing aids etc. Depending on the size of the device, you can choose the zinc air battery accordingly.









Vehicle Batteries

Should be recycled through the vendor when purchasing a new battery

- Electric Automotive Batteries
  - The main types of batteries used in electric cars include:
  - Lithium-ion batteries
  - Nickel-metal hydride batteries
  - Lead-acid batteries
  - Solid state batteries
  - Na – β alumina batteries (Na-S and Na-NiCl2)

