

How to Properly Store Batteries

Batteries are unsung heroes. While we turn them on to power everything from flashlights to remote controls to cars, we think about them only when they need to be replaced.

If you have batteries you are not using, you want to be sure that you know where they are and that they're in good working condition once you need them.

In order to store your batteries correctly, you should keep them in their original packaging or place them in a plastic container; never store batteries inside equipment. Keep batteries in a cool location with low humidity and make sure they are aligned in the same direction. If possible, use plastic caps to prevent corrosion. Lastly, be sure to separate old and new batteries from each other.

How to Store Batteries in a Safe Way

Whatever kind of batteries you need to store, the following guidelines should help you keep them in good condition for as long as possible. However, keep in mind all battery types have different shelf lives (<https://www.batteryuniverse.com/blog/tags/shelf-life/>), even when kept under the best conditions.

How Long Does an Unused Battery Last?

Most unused alkaline batteries will last between five and 10 years, while Ni-MH (nickel metal hydride) batteries have a shelf life of three to five years of non-use. Lithium-ion batteries, which power devices like cell phones, have a low self-discharge rate and can keep a partial charge for up to four years before being depleted.

If your battery has an expiration date, the manufacturer typically guarantees that the battery will hold on to its full charge until that time. Most expiration dates are conservative so most likely your expired batteries will still have a charge for some time after, if they are stored in optimal conditions.

The greatest threat to keeping batteries in good condition while in storage are environmental factors. High humidity increases the risk of condensation. Extreme temperatures, and direct sunlight can also drain batteries.

To maintain charge levels and keep different types of batteries from corroding, take the following precautions when storing:

1. Remove Batteries from Equipment

Any battery-operated item you're placing in storage likely won't be used for a while. Your batteries stand a better chance of lasting longer if you take them out of devices or their charger and store them separately. It will also prevent damage to your devices in the event that the batteries leak or corrode.

2. Keep the Temperature Down

“Batteries are like milk-they go bad”

However, while you may have heard that the best place to store batteries is in the refrigerator or freezer, that’s actually not the case. Not only can condensation from the refrigerator damage batteries, but prolonged exposure to extreme cold also can reduce battery life. Your best bet is to keep batteries at room temperature in a dark and dry place.

3. Make Sure Batteries Are Contained

To avoid leaking or rupturing, be sure your batteries don’t come into contact with metal objects. One of the best ways to prevent that from happening is to store them in the original packaging so they’re buffered and protected.

If you prefer, keep them in a battery storage box. They are available in a wide-variety of sizes. Try to choose a vapor-proof container, which will keep moisture from damaging your batteries.

4. Tie Up Loose Batteries

If you don’t have the original packaging, bunch together your batteries with a rubber band and place them in a plastic bag.

When you do this, pay attention to the cathodes and anodes, which are the positive and negative sides at each end of the battery. When keeping loose batteries together, make sure all of the positive ends are going in the same direction.

5. Separate Old and New Batteries

If you mix old and new batteries in a device, you could end up with battery leakage or device damage. To avoid this, store old and new batteries separately. It is also good to know which batteries have a full charge and which ones don’t, so you don’t lose power unexpectedly. A battery tester can help you sort through good and bad batteries quickly.

6. Know the Rules for Rechargeable Batteries

There are two types of batteries: those you use once and throw away, and those you can recharge. Rechargeable batteries should be stored at a 40 percent charge, allowing the battery to gradually “discharge.”

7. Take Valuables into Account

Some batteries can harm other items you’re storing. For example, car batteries can leak acid. For this reason, make sure batteries are kept away from valuables. This is especially important if you plan on storing your batteries for an extended period of time.