

HANDHELD BATTERY RECYCLING

Guidelines for public drop off facilities

Why should we recycle?

Batteries are a risk to human health and the environment if disposed of inappropriately. They also contain valuable metals such as cadmium, zinc, manganese, cobalt and rare earth metals that may be recovered to reduce the use of finite natural resources.

What can I recycle?

There are many types of batteries used in every household and business and they all have different chemistries. Single-use batteries (non-rechargeable) can be either alkaline, zinc-carbon or lithium. These are used in products such as clocks, toys, cameras and remote controls. Rechargeable batteries, generally either lithium ion, nickel metal hydride or nickel cadmium, are found in such products as mobile phones, laptops and power tools.

Rechargeable **lead acid batteries**, typically used for cars or backup power, need to be separated from other batteries for recycling. Larger batteries (> 500g) also need to be separated as they can't be transported with general handheld batteries.

How can we recycle safely?

Used batteries are potentially hazardous so they need to be carefully managed. A risk assessment and risk management strategy should be developed for each site.

Additional safety guidelines are provided on the next page.

Dangerous Goods Classification

UN 3028: Batteries, dry, containing potassium hydroxide solid, electric storage, Class 8

UN 3090: Lithium batteries, Class 9

UN 3480: Lithium ion batteries, Class 9

Recycling batteries
**can recover
up to 90%**
of the materials used
to manufacture them

Poisons Hotline 13 11 26
Emergency 000

Where can we find a recycling provider?

Battery collection and recycling services are provided by waste management or specialised battery recycling companies, normally on a fee-for-service basis. The cost will depend on location and the types of batteries being recycled. The Australian Battery Recycling Initiative's website (www.batteryrecycling.org.au) contains contact information for member companies that can provide a battery collection and recycling service for handheld batteries.



What regulations apply?

Used batteries must be stored, handled and transported in accordance with hazardous waste, dangerous goods and workplace health and safety legislation.

NOTE: The information provided here is general in nature. Organisations must do their own research to understand their legal obligations and to ensure that they are fully compliant.

How to recycle safely

DO

- Undertake a risk assessment before you start.
- Nominate people responsible for the recycling program and document the procedure.
- Avoid manual handling. The collection container is likely to be very heavy, so use a removal trolley or forklift.
- Only use a strong plastic or metal container to collect batteries (provided by the waste/ recycling contractor). Metal containers must have an appropriate plastic liner.
- Only use collection containers⁽¹⁾ approved for Dangerous Goods (DG). Make sure the container is vented (to avoid a possible build-up of pressure).
- If transporting under the DG exemption⁽²⁾, implement a quality assurance system to ensure that the total amount of lithium batteries per transport unit does not exceed 333kg and that each container does not exceed 400kg.
- Keep the collection container locked and out of reach of children.
- Inspect the container every morning for the presence of any liquid, heat or smoke and remove any rubbish.
- Ensure that the container label is visible to all and that the information is clear.
- Arrange for the container to be emptied or sent for recycling regularly (store for a maximum of 6 months).
- Liaise regularly with the recycling provider and carry out due diligence on their processes. Check they are licensed to transport and store hazardous waste and DG.
- Wash your hands with soap after handling batteries.
- Have appropriate firefighting equipment on site.

[1] Refer to the Australian Battery Recycling Initiative's Packaging guidelines for packaging used mixed handheld batteries.

[2] A copy of the exemption order can be found on Australian Battery Recycling Initiative's website at: www.batteryrecycling.org.au.

Australian Battery Recycling Initiative

The Australian Battery Recycling Initiative is a not-for-profit association established in 2008 to promote responsible environmental management of batteries at end of life. More information on battery recycling can be found on their website at www.batteryrecycling.org.au.

DON'T

- Don't leave the collection container in an unsupervised area with uncontrolled access (to minimise the risk of contamination with unwanted waste products or materials).
- Don't use a metal container without a plastic liner (to avoid the risk of short circuits).
- Don't store batteries near corrosive chemicals.
- Don't store batteries outside or in a humid place (they need to remain dry).
- Don't store batteries near a heat source (e.g. in the sun or close to an oven or strong light).
- Don't have too many battery recycling containers onsite that are not cleared regularly.
- Don't touch used batteries without protection. Damaged or leaking batteries may cause skin irritation or burns due to the presence of potassium hydroxide, which is highly corrosive. Clean up any spilled material carefully.
- Don't move the collection container unnecessarily and place it in a stable and supervised area.