

HANDHELD BATTERY RECYCLING

Guidelines for aggregation points

What is an aggregation point?

An aggregation point is a facility where batteries from different collection points are combined and packed for transport to an intermediate processing facility, where they are sorted by chemistry and sent to the appropriate recycler.

What can we 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 for products such as clocks, toys, cameras and remote controls. Rechargeable batteries are generally either lithium ion, nickel metal hydride or nickel cadmium. These are found in such products as mobile phones, laptops and power tools.

Rechargeable **lead acid batteries**, typically used for cars and backup power, need to be separated from the smaller handheld batteries for recycling. Larger batteries (> 500g) also need to be separated for recycling. The Australian Battery Recycling Initiative's website (see below) contains contact information for companies that can collect and recycle handheld, lead acid and larger batteries.

How can I recycle safely?

A risk assessment and risk management strategy should be developed for each site. Used batteries are potentially hazardous, so they need to be stored and handled carefully. Some of the materials inside a battery are toxic and may damage skin and clothes if the battery is damaged or leaking. Batteries must be kept away from sunlight or heat.

Manual handling of the recycling container should follow workplace health and safety regulations and all procedures documented.

More detailed safety rules are provided on the next page.

Dangerous Goods Classifications

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



Poisons Hotline 13 11 26
Emergency 000

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.



What regulations apply?

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

Hazardous waste legislation is different in every state and territory and is usually managed by the local Environment Protection Authority or equivalent.

How to recycle safely

DO

- Check your site licensing requirements before accepting used batteries, including storage limits and ability to receive and transfer waste.
- Carry out a risk assessment before you start.
- Appropriate firefighting equipment must be on site in case of a battery fire.
- The site needs a satisfactory level of security to ensure that only trained people have access to the storage area.
- Battery containers should be placed in an area sheltered from the weather and excessive humidity, well ventilated and easily accessible in case of a fire.
- The storage container⁽²⁾ must be plastic or metal and approved for the storage and transport of Dangerous Goods (DG). Metal containers must have an appropriate thick plastic liner.
- The storage containers must be appropriately labelled.
- Material Safety Data Sheets (MSDS) must be readily accessible.
- Always wear thick gloves and safety glasses when handling batteries.
- Wash your hands thoroughly with water if they come into contact with leaking or damaged batteries.
- Good housekeeping minimises the risk of slips, trips and falls. Ensure no batteries roll onto the floor.
- Have a minimum of one person per work area trained in spill response, rescue equipment available on site, emergency response procedures and regular drills.
- To be transported under the DG exemption, a quality assurance system must be in place to ensure that the total amount of lithium batteries per transport unit does not exceed 333kg and that each transport unit does not exceed 400kg.

DON'T

- Don't store used batteries near any heat source (strong light, sun, oven, machinery).
- Don't store used batteries near other chemicals or food.
- 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.
- Don't store batteries too close to inhabited buildings.
- Don't attempt to lift heavy loads manually. Always seek help or put controls in place (removal trolley or forklift).
- Don't handle used batteries if you haven't been trained.
- Don't store the batteries in a high vehicle movement area (this reduces the risk of damage to the storage containers). Damage to containers might compromise their integrity and suitability for further transport. For example, it might cause vibrations that can increase the instability of certain types of batteries.
- Don't store used handheld batteries with lead acid batteries (e.g. car or back up power batteries). They need to be packaged separately for transport.
- Don't transport used handheld batteries with any batteries weighing >500g. The DG exemption for transporting used batteries is only for batteries <500g.
- Don't store batteries for more than 6 months. They should be transported to recyclers regularly.

Dangerous Goods regulations are generally managed by workplace health and safety authorities in each jurisdiction. There is an exemption from certain Dangerous Goods packaging requirements⁽¹⁾.

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.

(1) A copy of the exemption order can be found on ABRI's website available at www.batteryrecycling.org.au.

(2) Refer to ABRI's Guidelines for Packaging guidelines for used handheld batteries.