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Battery use and contribution to waste prevention

Our vehicles, parts, accessories, and lifestyle products may include batteries, such as device batteries, starter batteries or electric vehicle batteries (high-voltage batteries and 48V batteries). These batteries are built for a long service life.

If you use batteries properly and take advantage of the opportunities to reuse, recondition or convert the use of batteries on your own responsibility, you not only reduce the demand for new batteries and the primary raw materials needed to produce them, but also the harmful effects that battery waste can have on our environment and health.

By following the manufacturer's recommendations for use, you can optimize the service life of batteries and make an important contribution to preventing waste.

Recommendations for action on the proper use of batteries for end users

General recommendations:

- Use long-lasting and, as far as possible, rechargeable device batteries.
- If you do not use a battery-operated device for a long period of time, remove the battery from the device if possible.
- Only use chargers, charging cables, adapters or charging stations classified as suitable by the manufacturer for the respective battery type or vehicle type.
- Protect the batteries from damage.
- Do not expose batteries to extreme temperatures, direct sunlight or moisture.
- If possible, store batteries in a cool and dry place.
- Do not store batteries at low states of charge and avoid total discharge.

Options for reuse, reconditioning and conversion at your own responsibility:

- Check the remaining charge of device batteries before you change and dispose of them prematurely. It might be possible to reuse them in devices with lower consumption.
- You might be able to reuse rechargeable batteries from devices that you no longer use in other suitable devices.
- Have a specialist workshop, such as your authorised BMW Service Partner, check whether battery malfunctions can be repaired to restore their original performance.
- Used batteries can be converted for other purposes on your own responsibility.

Additional recommendations for starter batteries and high-voltage batteries:

- Only use starter batteries (12V batteries) that are classified as being suitable by the vehicle manufacturer.

- In order to spare the starter battery, use the standby state and activated vehicle electrical loads only for as long as is absolutely necessary.
- Charge the high-voltage battery on a regular basis.
- Charge the high-voltage battery with low charging power at AC charging stations or wallboxes.
- If possible, operate the vehicle with a state of charge of between 10 % and 80 % in everyday life.
- If possible, charge the high-voltage battery shortly before a planned departure in the case of high charging targets.
- Reduce the load on the high-voltage battery by driving efficiently and with foresight.

Further recommendations and notes can be found in the owner's handbook for your vehicle or in the operating instructions for the battery.

For further information, please contact your authorised BMW Service Partner.

Contribution to the separate collection of old batteries

As an end user of batteries, you are obliged by law to collect and dispose of old batteries separately from other types of waste, such as household waste. This enables you to properly handle and recycle old batteries, reuse valuable raw materials and protect the environment and health.

The return and disposal of old batteries is free of charge for you as an end user.

Use the return and collection points established for this purpose in all member states of the European Economic Area (EEA), e.g. at retail outlets, at treatment plants for old electrical appliances and end-of-life vehicles, at municipal collection points or via specially set up return and collection systems.

You can find out where the nearest specially established return and collection point is on the Internet.

Returning old batteries

Manufacturers of starter batteries, industrial batteries and electric vehicle batteries are required by law to take back the batteries provided of these categories free of charge.

As an end user, you can return the corresponding old batteries free of charge to a specialist workshop, such as your authorised BMW Service Partner. This option is available without you purchasing a new battery and regardless of whether you bought the battery from that same manufacturer.

When taking back old batteries for you free of charge, the battery manufacturers bear the costs of the following:

- The costs of collecting old batteries separately, including subsequent transport and handling of the used batteries, taking any potential income into account resulting from the preparation for reuse or the preparation for conversion or from the value of secondary raw materials recovered from old batteries during recycling.
- The costs of conducting a survey on the composition of the collected mixed municipal waste to determine the share of old batteries not disposed of properly.
- The costs of providing information on waste prevention and management of old batteries to all relevant target groups.
- The costs of collecting and disclosing all the necessary information to the relevant authorities.

For further information, please contact your authorised BMW Service Partner.

Recycling end-of-life vehicles

At the end of its life cycle, return your end-of-life vehicle to a collection point designated by the manufacturer for recycling. The legally compliant handling of these vehicles is contractually guaranteed, including the professional and damage-free removal of the batteries. As the last owner, you do not need to remove the batteries separately.

Recycling high-voltage batteries

At the end of their life cycle or in the event of a malfunction, have high-voltage batteries disposed of by a specialist workshop, such as your authorised BMW Service Partner. They are recycled and the recovered secondary raw materials cobalt, nickel and lithium can be re-integrated into the value chain.

The corresponding national legal regulations apply to taking back batteries and recycling in general.

Additional information on recycling and sustainability is available on the country-specific BMW websites or is available from your authorised BMW Service Partner.

Safe handling of old batteries

For the safe handling of old batteries, it is important that you follow the safety instructions of the manufacturer.

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Safety instructions for end users and retailers

General safety instructions:

- Only have work on the vehicle and batteries, in particular maintenance work, repairs or modifications carried out by a specialist workshop, such as your authorised BMW Service Partner.
- Do not open batteries and protect them from damage. For example, avoid dropping or throwing batteries. Damaged batteries can result in dangerous situations, such as fires, explosions or the emission of hazardous substances. The chemicals contained in batteries are corrosive and poisonous. Opening batteries can cause serious injury or poisoning.
- For example, if you notice unusual heat, an unknown smell, discolouration or deformation in device batteries, remove them immediately from the device whenever possible and maintain a sufficient distance from the battery.
- Store damaged or defective batteries in separate containers and dispose of them immediately and properly.
- Only use chargers, charging cables, adapters or charging stations classified as suitable by the manufacturer for the corresponding battery type or vehicle type to avoid overcharging and excessive charging voltages.
- The vehicle key contains a button cell as a battery, for example. Batteries or button cells can be swallowed and cause serious or fatal injuries within two hours, such as internal chemical burns. There is a risk of injury and danger to life. Keep vehicle keys and batteries out of the reach of children. If you suspect that a battery or button cell has been swallowed or is in a body part, call for medical aid immediately.
- Protect old batteries from short circuits by covering the terminals with terminal caps or masking them.
- Do not expose old batteries to extreme temperatures, direct sunlight or moisture.
- If possible, store them in a cool and dry place.
- Collect and dispose of old batteries containing lithium separately from other types of batteries, in particular separately from batteries containing lead.

Additional safety instructions for starter batteries:

Symbol	Meaning
	No smoking, no naked flames, no sparks.
	Wear safety goggles.
	Keep away from children
	Risk of chemical burns: Wear gloves, do not tilt the battery.
	Rinse out acid splashes immediately with water. If it comes into contact with the eyes or if it is swallowed, seek medical aid immediately.
	No direct daylight, no frost.
	Observe the operating instructions.
	Explosive gas mixture. Do not seal any battery openings.

Example: Danger symbols and their meaning on the starter battery

- In the event of a malfunction, have the corresponding work, such as changing the starter battery, carried out by a specialist workshop, such as your authorised BMW Service Partner.
- Transport and store filled starter batteries upright and secure them against tipping over during transport.
- There are starter batteries that contain lithium and those that contain lead: Collect and dispose of old starter batteries containing lithium separately from other types of batteries, in particular separately from batteries containing lead.

Additional safety instructions for lithium-ion batteries:

Lithium-ion batteries, such as high-voltage batteries, 48V batteries and 12V lithium-ion batteries, can be recognised by the “Li” or “Li-ion” identification:

Example: “Li-ion” recycling symbol on the high-voltage battery

You must handle lithium-ion batteries with special care because they are sensitive to fire.

Improper handling or improperly performed work on lithium-ion batteries may result in electric shock. There is a risk of injury, fire or danger to life.

- If the temperature is unusually high and the lithium-ion battery is damaged, for example as a result of an accident, this can result in gas and smoke formation. If you notice any unusual smell or smoke formation, observe the following instructions on what to do in the event of a Check Control message in the vehicle.
  - While driving: 1. Stop immediately, 2. Park the vehicle safely, 3. Exit the vehicle, 4. Establish and maintain a sufficient distance from the vehicle, 5. Alert rescue workers.
  - During or shortly after the charging process: 1. If necessary, exit the vehicle, 2. Establish and maintain a sufficient distance from the vehicle, 3. Alert rescue workers.
  - Do not inhale any gas that escapes.
- Fluids in lithium-ion batteries are acidic. Do not touch any leaking fluid.
- Store lithium-ion batteries separately from hazardous substances or flammable material.
- Collect and dispose of lithium-ion batteries separately from other types of batteries, in particular separately from batteries containing lead.
- At the end of their life cycle or in the event of a malfunction, have lithium-ion batteries disposed of by a specialist workshop, such as your authorised BMW Service Partner.

Further notes and information can be found in the owner's handbook for your vehicle or in the operating instructions for the battery.

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Meaning of identification and symbols on batteries

Crossed-out dustbin symbol

Symbol for the separate collection of batteries

The crossed-out dustbin symbol on batteries informs you that batteries must be collected and disposed of separately from other types of waste, such as household waste.

Symbols for cadmium and lead

Batteries containing heavy metals are identified accordingly.

Cd Pb

“Cd” is the symbol for the chemical element cadmium. If this symbol is attached to a battery, it means that it contains more than 0.002% of the heavy metal cadmium.

“Pb” is the symbol for the chemical element lead. If this symbol is attached to a battery, it means that it contains more than 0.004% of the heavy metal lead.

Potential effects of batteries on the environment, human health or safety

Batteries contain pollutants. It is prohibited by law to dispose of them together with household waste, other unsorted municipal waste or by wild disposal in the environment.

If handled or disposed of improperly, batteries can pose health hazards, physical hazards and environmental hazards, in particular if they are damaged.

Health hazards

- **Toxicity:** Many batteries contain dangerous chemicals, such as lead, cadmium or lithium, which can be harmful if they come into contact with the skin or if vapours are inhaled.
- **Chemical burns:** Chemicals in batteries can cause skin and eye irritation, particularly if there is a leak or damage.

Physical hazards

- **Fire hazard:** Lithium-ion batteries can overheat and catch fire if they are overcharged, damaged or handled improperly. This can result in dangerous fires that are difficult to extinguish.
- **Explosion hazard:** If handled or stored improperly, batteries can explode, in particular lithium-ion batteries, if they are damaged or overheated.
- **Short circuits:** If the terminals of a battery come into contact with each other, a short circuit can occur, which can cause overheating, fire or explosion.

Environmental hazards

- **Soil and water pollution:** The improper disposal of batteries can result in hazardous chemicals entering the soil and groundwater, polluting the environment and endangering human and animal health.
- **Ecosystem damage:** The emission of toxic substances from batteries can damage the flora and fauna in the environment and impair biodiversity.
- **Air pollution:** Any improper incineration of batteries can release harmful vapours and particles, which impair the air quality and pose health risks to humans and animals.

If you have damaged a battery or notice signs of a problem with a battery, stop using it and dispose of it immediately and adequately. If you have come into contact with battery materials, call for medical aid immediately.

There are various poison centres in Europe that you can contact in case of poisoning or if poisoning is suspected.

The emergency call number 112 is intended for life-threatening emergencies across Europe, including poisoning.