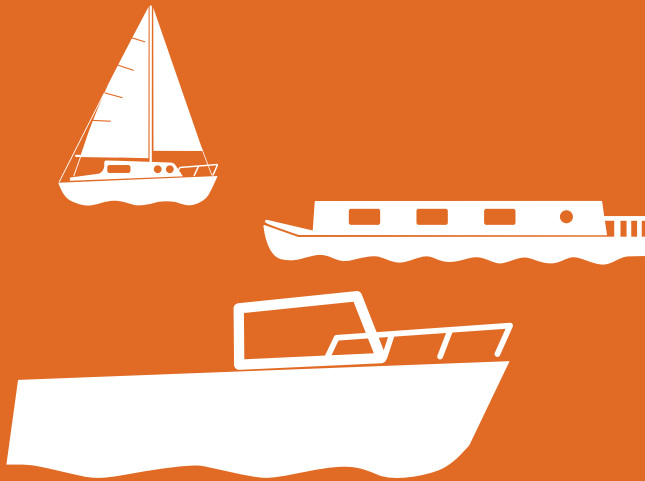


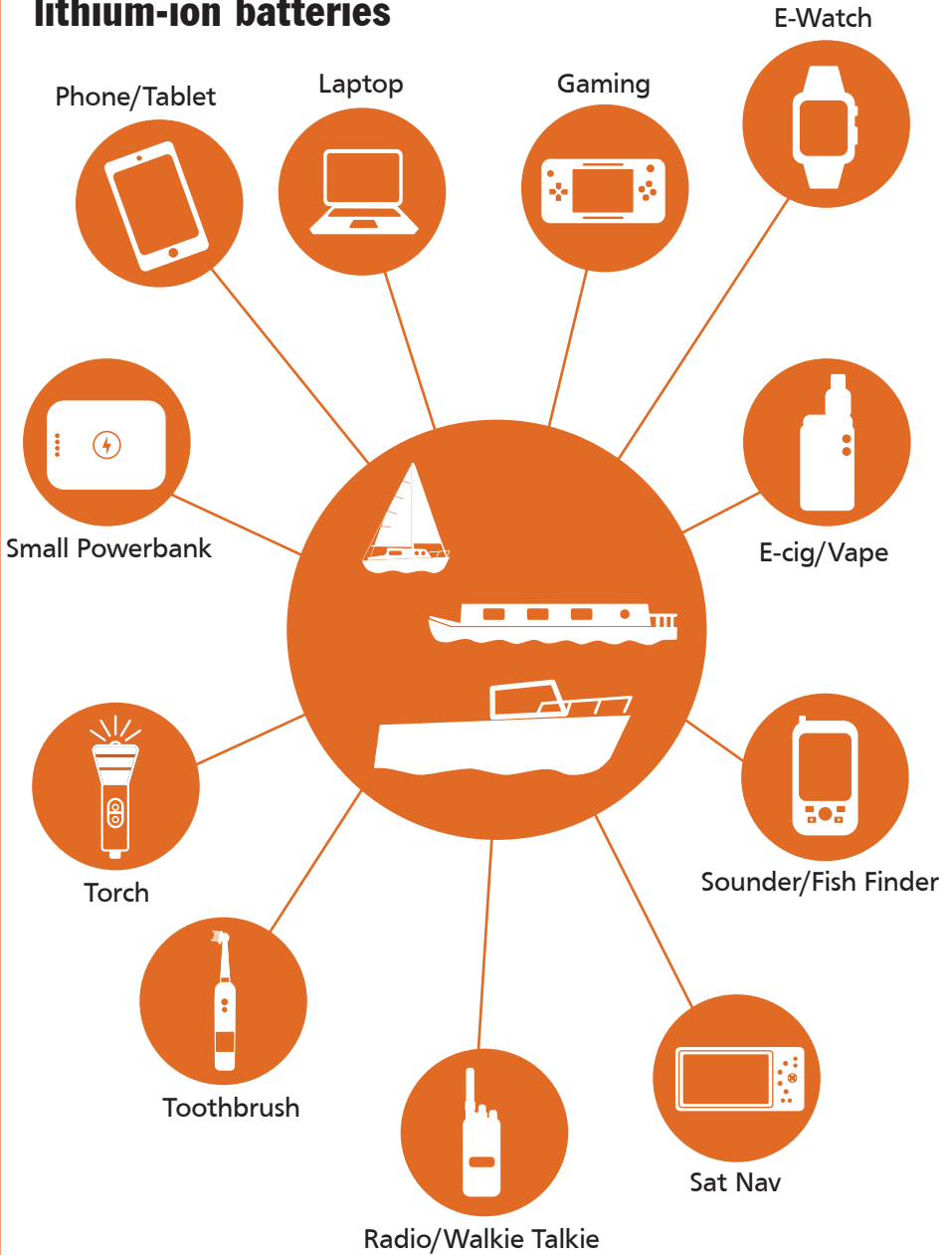
# Lithium-ion Battery Safety on Boats



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**Phones, tablets, laptops and other  
small portable devices**  
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# Everyday electrical items powered by lithium-ion batteries



# Fire safety for phone, laptop and other devices, their batteries & chargers.

Many small portable devices contain lithium-ion batteries, here's a guide to their safe use. These are lightweight, rechargeable batteries used safely by millions of people every day to power our phones, tablets, laptops, toothbrushes, watches, cameras and powerpacks. However, there are some things you need to know when it comes to fire safety, chargers and lithium-ion batteries.

When appropriately used, lithium-ion batteries in small portable devices are free of fire risks, however the fire risk increases when they are damaged, e.g. crushed, punctured or immersed in water. Safe charging is critical to protecting you and your crew.

## Basic fire safety tips

Keep all escape routes clear at all times, lithium-ion battery fires can spread rapidly and traditional fire extinguishers may not work.

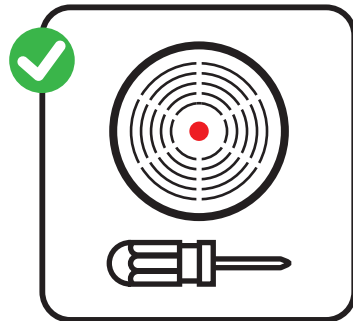
**If a device or battery starts making loud popping, hissing or screaming sounds, or emits toxic vapour/smoke, or catches fire, raise the alarm, warn others, get out, stay out and call 999/ch16 for help immediately.**

### Install/ test smoke alarms

Fit suitable, certified and working smoke alarms. Ensure they can be heard throughout the boat. Test them monthly.

### Create a safe escape plan

Everyone aboard must know and understand how to act in case of an emergency.

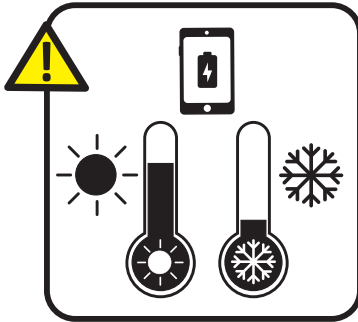


# How to stay safe – 12 golden rules for using and charging your devices safely

## Battery and devices care and protection

### 1. Avoid Extreme Temperatures

Keep batteries away from heat sources and protect them from extremely low temperatures.



### 2. Protect lithium-ion batteries

Damaged batteries, for example crushed, punctured or immersed in water, can self-combust.

### 3. Only use kit in perfect condition

Recycle all batteries, devices, chargers, or cables etc. that show any signs of damage or problems.

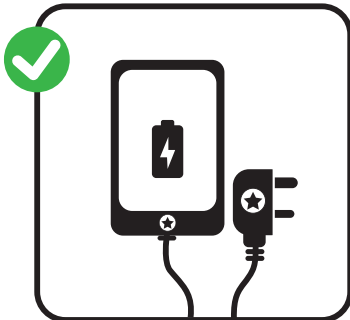
### 4. Dispose of lithium-ion batteries and devices carefully

Be thoughtful, check the relevant local authority's website for information on the safe disposal battery and devices.

## Safe charging

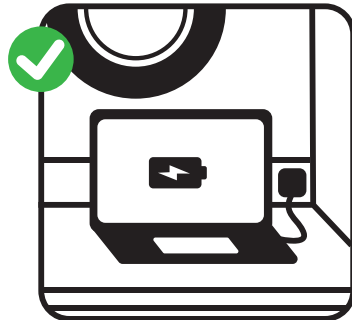
### 5. Always use the original charger

Use the charger that came with your device. Buy replacement batteries or chargers from suppliers you trust and choose a genuine, branded product.



### 6. Always charge batteries on stable surfaces,

such as a galley worktop, but away from combustible materials.



## How to stay safe – golden rules continued

### More safe charging advice

**7. Always be aboard, awake and alert, when charging your devices, and take them off charge as soon as the batteries are full.**

**8. Never cover chargers or charging devices**

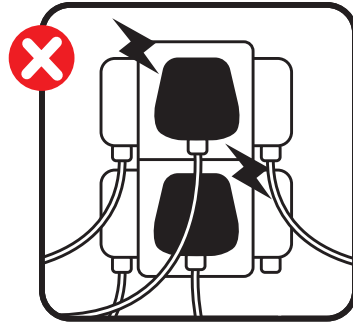
The heat build-up could cause a fire and so never fall asleep with your charging phone or laptop under your pillow or duvet.



**9. Never block your escape**  
Always charge batteries away from your planned emergency escape routes.

**10. Don't overload electrical sockets**

Ideally keep to one plug per socket.



# How to stay safe – golden rules continued

## Be alert to early warning signs

### 11. Watch Out for Warning Signs

Know the critical warning signs of battery failure. If any are happening, turn off the power. Do not use it again and seek help from the supplier or manufacturer:

- **Performance Issues:** Longer charge times, incomplete charging, or failing charge indicators
- **Excessive Heat:** Batteries that feel extremely hot to touch
- **Bulging/Leaking:** Bulging batteries or liquid/gas leaking from devices
- **Smell:** A strong or unusual smell can indicate that the battery is failing

12. If these warning signs are happening, get out and get off the boat (see page 2)



- **Noise:** Popping, hissing or screaming sounds.
- **Smoke:** Any smoke indicates an active fire.

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