




**AVON**  
FIRE & RESCUE

# FIRE SAFETY ON BOATS



IN PARTNERSHIP WITH



## **Did you know...?**

**Fires on boats have killed 30 boaters in the last 20 years.**

**Most fires are preventable. This leaflet provides tips and advice on how to protect your boat and crew from fire, and what to do should a fire break out.**

# Alarms save lives

Boat fires often grow rapidly & spread quickly. Alarms can give a crew vital seconds to help them escape to safety.

## Smoke Alarms

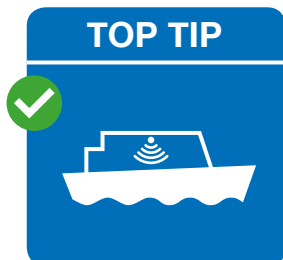
- Optical sensor alarms with hush buttons and 'sealed for life' batteries are best for boats.
- Fit alarms in places you will hear them clearly if they go off.
- Consider installing linked alarms that will go off at the same time.
- Test the alarm when you board and at least monthly. Never disconnect it or remove working batteries.
- For more information on the alarm choices & a list of industry recommended models, visit:  
[www.boatsafetyScheme.org/fire](http://www.boatsafetyScheme.org/fire)

## Gas leak indicators

- Fit a bubble type gas leak indicator in the LPG cylinder locker.
- Push the gas leak indicator test button routinely to check for leaks in the gas system.

## Carbon monoxide (CO) alarms

- Fit a CO alarm to alert you of any poisonous carbon monoxide.
- Check your CO alarm is suitable for marine use and meets the BS EN 50291- 2 standard. Visit the boat safety scheme website for more information.
- Look for one of the approval symbols below when buying smoke alarms and either the BSi or LPCB mark when choosing CO alarms.



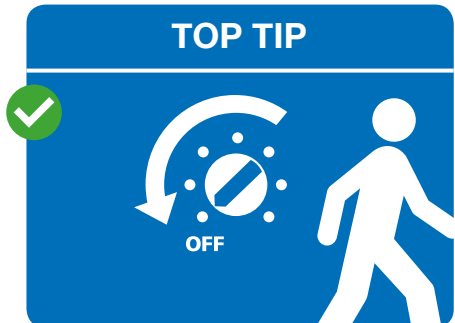
Fit a smoke alarm to stay safe



# Safe cooking & heating

Turn cooking appliances off properly after use.

- Never leave cooking unattended. Turn things off until you come back.
- Take extra care when cooking with oil – it sets alight easily.
- Avoid cooking when tired. Remember, medications and alcohol can cause drowsiness.
- Keep the cooking area clean for safety – a build-up of grease could catch light.
- Spark devices are safer than matches or lighters to light gas cookers, because they don't have a naked flame.
- Only use portable appliances onshore and don't change gas canisters inside the cabin or covered areas.
- Barbecues shouldn't be used on boats – hot charcoal gives off dangerous amounts of CO and blown embers could set your boat alight.
- Keep cabin ventilation clear to prevent a build-up of toxic CO.
- Try to keep fabrics away from cooking hobs to prevent them from catching fire.
- Damaged stoves and flues could burn too hot - check adjacent areas for heat damage. Have your chimney swept regularly.
- Dispose of embers carefully. If they're still warm they could cause a fire or build-up of CO.
- Only use the fuel recommended by the heater manufacturer. Other types may burn too hot.
- Ensure all hob burners have a flame supervision device to shut-off the gas if the flame is blown out.



Turn appliances off properly after use

# Protecting the inside of your boat

Don't smoke or use candles if you're drowsy because of medications or alcohol.

## Cigarettes

- Keep cigarettes away from anything that could catch fire, such as curtains.
- Never smoke when refuelling or changing a gas cylinder.
- Dispose of smoking materials carefully - use a proper ashtray that will stay stable on the boat. Make sure they're out, right out!
- Take extra care if you smoke when you're tired and never smoke in bed.
- Empty ashtrays regularly. A build-up of ash could catch fire.

## Furnishings

- Try to choose furniture that carries the fire-resistant label.

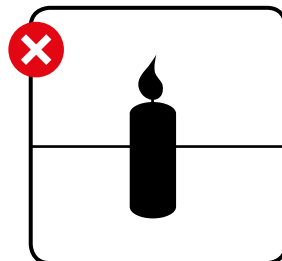
- Keep fabrics and paper away from anything hot like hobs, light bulbs, stoves and their flue pipes.
- Watch out for domed-decklights, aka bullseyes, focussing light rays and causing heat damage or fires in strong sunlight.

## Candles

- Candles have started fatal boat fires. Consider using LED alternatives for light or ambience.
- Potpourri and oil-reed diffusers are far safer alternatives to scented candles.
- If you must use lit candles, ensure they're in secure fire-proof holders and never leave them unattended.



Put them out. Right out!



Never leave the room with candles burning

## Fuel & power safety

Make sure you check and maintain your boat's fuel, gas and electrical systems on a regular basis.

### Fuel Safety

- Prevent petrol vapour from entering the boat by closing the doors, windows or hatches and closing the awning when refuelling.
- Refuel outboard engines and generators well away from the boat.
- Leaks, spills and vapour can ignite easily. Clean them up straight away and make sure filler caps are secure after refuelling.
- Only carry spare petrol if necessary and store it in a self-draining locker or on open deck.

- Petrol refuelling should only be supervised by someone familiar with both the boat and petrol vapour risks.

### Engine Maintenance

- Don't let oil or debris build-up in the bilges.
- Inspect the lagging of engine and heater exhausts for damage or deterioration; and check nearby items for heat damage or charring.
- Check exhaust systems of inboard engines for leaks.
- Check for loose fuel joints, damaged fuel tanks or deteriorating hoses.

#### TOP TIP



#### TOP TIP



Maintain your boat's engine & fuel systems regularly

## Gas Safety

- Ensure gas appliances are installed and maintained routinely by trained fitters.
- Never restrict airflow by blocking vents or air gaps.
- Make sure gas cylinders are secure after they've been changed. Test for leaks with proprietary leak detection fluid.
- Whenever possible, turn gas valves off before you go to bed or leave the boat.
- Replace gas hoses showing signs of cracking, brittleness or discolouration.
- Store gas cylinders outside, in a self-draining and fire resistant locker. Keep them upright and secured from moving.

## Electrics

- Check for the British or European safety mark when buying electrical goods.
- Use a trained marine electrician to install and service electrics.
- Don't overload adaptors. Keep to one plug per socket. Use the right fuse or circuit breaker to avoid overheating.
- Unplug appliances when they're not in use or when you leave the boat.
- Take extra care when reinstalling the boat's batteries. Check straps or restraints are secure afterwards.
- Damaged wires and connectors can overheat rapidly, so look out for scorch marks or burning smells. Don't ignore sounds like buzzing, fizzing or crackling.

Never test to see if there is a gas leak with a naked flame. If there is a leak there is also a significant risk you will cause an explosion! An electrical spark will do the same, so do not operate lights or electrical equipment, including the electronic bilge pump, if a leak is suspected, until it's been checked by a professional.

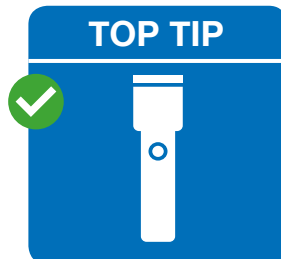
[www.rya.org.uk](http://www.rya.org.uk)

## Plan a safe escape

Make an emergency and escape plan with everyone aboard.

- Make sure people know how to close emergency valves and switches in case of fire.
- You are more at risk from a fire when asleep, so check your boat before you go to bed. Make sure cooking and heating appliances are off and candles and cigarettes are fully extinguished.
- Keep a torch easily available to help you escape at night. Make sure you have spares and test them regularly.
- Don't go to sea without a very high frequency (VHF) radio. Have a charged-up, handheld, waterproof one ready for use at any time.
- Don't rely on a mobile phone. There could be no signal and it may not be waterproof.
- Have enough life jackets for everyone on board, and keep them in good condition.
- Keep exits clear and keys to hand. Don't lock or bolt doors and hatches from the outside.
- Track your location so you can tell the emergency services where you are if needed.
- Inland boaters keep aware of road access points to your bank side if you can.
- Consider having a 'grabbag' for removing vital possessions in an emergency.

**MAKE A  
MAYDAY  
CALL**   
**AND CHECK FOR  
LANDMARKS**





## What to do if there's a fire

If in doubt, don't fight a fire yourself. Get out, stay out, call 999/ch16 for help and wait for the fire & rescue services.

- Do not enter a smoke filled space.
- If you are already in a smoke filled space, keep low down where the air is clearer.
- If you need to break glass to escape, use a blanket to prevent injury.
- Starve the fire of air. Don't open engine hatches or doors unless you have to.

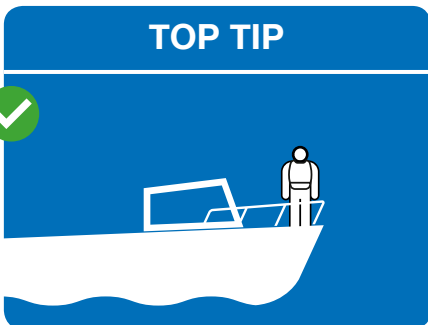
### Inland Fires

- If you are inland or moored near to land, move everybody off the boat and call 999 immediately.

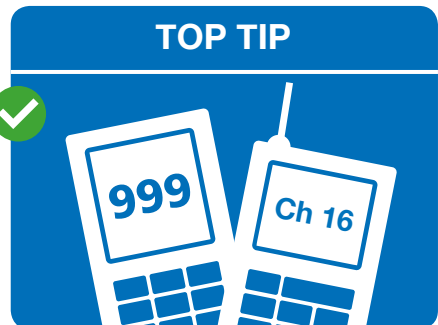
### Fires at Sea

- If you are off-shore move as far away from the fire as you can on deck. Get everybody into life jackets.
- Take a handheld VHF radio onto deck with you to call for help.
- Notify the Coastguard by radio, make a Mayday call and/or display a distress signal.

#### TOP TIP



#### TOP TIP



## Fire blankets & portable extinguishers

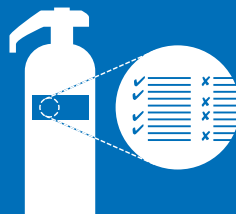
Only consider using extinguishers to extinguish a small fire, or to aid a safe escape past flames.

- Familiarise yourself with how to use any extinguishers on board.
- Keep fire blankets and extinguishers within easy reach, close to exits and risk points, such as the galley and engine area.
- Check extinguishers on a regular basis for serious dents, leaks and loss of pressure.
- Check the pin and firing mechanism for any signs of problems or weaknesses.
- Check the dates on extinguishers and fire blankets. Have extinguishers serviced by a competent person, or replace them as recommended by the instructions.
- Only choose extinguishers that carry recognised approval marks such as those shown below, and choose units marked with at least an 'A' and 'B' fire rating.



Be prepared for a dry powder extinguisher to create a dense powder-cloud, reducing visibility and impairing breathing. Don't jeopardise your escape.

### TOP TIP



Always read instructions

# Further information

- For more information on boat fire safety and routine safety checks visit [www.boatsafetyscheme.org/fire](http://www.boatsafetyscheme.org/fire)
- For more information on carbon monoxide and CO alarms visit [www.boatsafetyscheme.org/co](http://www.boatsafetyscheme.org/co)
- For information on sea regulations and emergencies at sea visit the Maritime and Coastguard Agency at [www.gov.uk/mca](http://www.gov.uk/mca)
- For more information on electrical safety visit [www.boatsafetyscheme.org/stay-safe/electrical-safety](http://www.boatsafetyscheme.org/stay-safe/electrical-safety)
- For advice, checks of emergency equipment and emergency rescue information contact Royal National Lifeboat Institute at [www.rnli.org.uk](http://www.rnli.org.uk)
- For information about past incidents with lessons learnt, and for reporting accidents see Marine Accident Investigation Branch at [www.gov.uk/maib](http://www.gov.uk/maib)

## Boating Advice

- For boat builders and service engineers contact British Marine [www.britishmarine.co.uk](http://www.britishmarine.co.uk)
- For advice on navigation, boat handling and emergency training contact the Royal Yachting Association [www.rya.org.uk](http://www.rya.org.uk)

## General Fire Safety

- Contact your local fire and rescue service for free advice.
- For more information on fire safety visit [firekills.campaign.gov.uk](http://firekills.campaign.gov.uk)

## Acknowledgements

- We acknowledge the assistance of the: Fire Industries Association; and Fire Protection Association with the writing of this booklet.



# Your fire safety checklist

Checklist	Done
Everybody aboard knows the emergency & escape plan	
Get to know how to use the fire blanket and fire extinguishers	
Test the smoke alarms this month	
Keep escape routes clear	
If the boat's occupied, ensure doors and emergency exits will open from the inside	
Make sure fire extinguishers are of an approved type	
Electric cables of adequate current carrying capacity	
Main circuits installed above bilge water level	
Is your master switch capable of disconnecting the system	
The electric cables run adjacent to gas pipes in a suitable covering	
Make sure the gas or paraffin refrigerator in a petrol-engined boat pilot light/burner completely enclosed	
Make sure the flue/draught diverter is properly fitted and maintained	
Electric cables run clear of all sources of heat	

For more information on general fire safety visit [firekills.campaign.gov.uk](http://firekills.campaign.gov.uk)



@AvonFireRescue



AvonFireRescue