

# Carbon Monoxide Detectors

## Advice & Information on the use of Carbon Monoxide Detectors.



### What is carbon monoxide and why is it a problem?

Carbon monoxide (CO) is a colourless, odourless, tasteless, poisonous gas produced by incomplete burning of carbon-based fuels, including gas, oil, wood and coal. Carbon-based fuels and appliances are safe to use if correctly installed and maintained. It is only when the fuel does not burn properly that excess CO is produced, which is poisonous. When CO enters the body, it prevents the blood from bringing oxygen to cells, tissues, and organs.

You can't see it, taste it or smell it but CO can kill quickly without warning. HSE Statistics\* show every year around 14 people in the UK die from CO poisoning caused by gas appliances and flues that have not been properly installed, maintained or that are poorly ventilated. Levels that do not kill can cause serious harm to health if breathed in over a long period. In extreme cases paralysis and brain damage can be caused as a result of prolonged exposure to CO. Increasing public understanding of the risks of CO poisoning and taking sensible precautions could dramatically reduce this risk.

\*HSE Statistics also show a yearly average in the UK of 134 Carbon Monoxide poisoning incidents per year figures 2004 to 2009 Source: RIDDOR (The Reporting of Injuries, Diseases and Dangerous Occurrences)

### Which Carbon Monoxide detector should I buy and where should I purchase one from?

Audible\* Carbon Monoxide detectors come in many varieties and are manufactured by a wide range of companies. They are also sold in many retail outlets including DIY/Hardware stores, online sales, supermarkets and trade retail stores. The prices can range from £20 to £30 each.

\*Audible detectors give an instant warning of dangerous Carbon Monoxide levels the use of "Black Spot Labels/Cards" is not recommended.

### Do I need a detector and is it a legal requirement?

Carbon Monoxide Detectors are not a regulatory requirement but the HSENI strongly recommends the use of audible Carbon Monoxide (CO) alarms as a useful back-up precaution. They must not be regarded as a substitute for proper installation and maintenance of gas appliances by a Gas Safe Registered engineer. You can be particularly at risk from CO poisoning when you are asleep, because you may not be aware of early CO symptoms until it is too late. Having an audible CO alarm could wake you and save your life.

### What should I look for when buying a detector?

Before purchasing a CO alarm, always ensure it complies with British Standard EN 50291 and carries a British or European approval mark, such as a CE or Kitemark. CO alarms should be installed, checked and serviced in line with the manufacturer's instructions. Particular attention should be made of the life span of the unit which can range from 3 to 5 years dependant on the manufacturer and the expected life span of the batteries, some have replaceable/removable units others are sealed in for the life of the unit.

### Where should I fit the detector?

Always read the manufacturers instructions for the correct and safe location for installation of the detector.

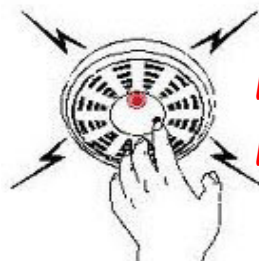
It is not possible to give specific guidance in this document on the exact location of a detector/s which suits all types of premises and their usage. Further guidance can be found in the British Standard EN 50292 CO Alarm Location.

It should also be noted that Carbon Monoxide is slightly lighter than air therefore fitting CO detectors at low level is not recommended.

### What should I do once the detector is fitted?

Routine procedures recommended by the manufacturer (including testing) should be in the instructions supplied with the unit and should always be followed. Any detectors failing a routine test should be returned to the installer or supplier, or be replaced.

**Never cover or paint over detectors once installed.**



**Always Test Your Carbon Monoxide Alarm to the manufacturers instructions!**

## What preventative measures can I take against carbon monoxide exposure?

- Ensure that any work carried out in relation to gas appliances in domestic or commercial premises is to be undertaken by a Gas Safe Registered engineer, competent in that area of work.
- HSENI strongly advises that gas appliances and/or flues are installed and serviced regularly for safety by a Gas Safe Registered engineer. If you live in rented accommodation, your landlord has a legal duty to carry out an annual gas safety check and maintain gas appliances. They must provide you with a copy of the completed gas safety check certificate.
- Always make sure there is enough fresh air in the room containing your gas appliance. If you have a chimney or a flue, ensure it is not blocked up and also ensure that vents are not covered.
- If you plan to install a gas fire in a bedroom, use a Gas Safe Registered engineer as there are legal requirements for installations in this area; do not use unflued appliances like gas cabinet heaters.
- Get your chimney swept from top to bottom at least once a year by a qualified sweep.
- If you have appliances that use other fossil fuels such as paraffin, seek advice from and make sure they are serviced and maintained by a competent person.

## What are the symptoms of carbon monoxide poisoning?

Early symptoms of Carbon Monoxide (CO) poisoning can mimic many common ailments and may easily be confused with food poisoning, viral infections, flu or simple tiredness. Symptoms to look out for include:

! Headaches	breathlessness
! Nausea	dizziness
! Collapse	loss of consciousness
! Tiredness	drowsiness
! Vomiting	pains in the chest
! stomach pains	erratic behaviour
! visual problems	(Blurred or impaired vision)

If you or your family experience any of the above symptoms and you believe CO may be involved, you must seek urgent medical advice from either your GP or an accident and emergency department. You should ask for a blood or breath test to confirm the presence of CO. Be aware, CO quickly leaves the blood and tests may be inaccurate if taken more than four hours after exposure has ceased.

## How do I know if I am at risk from carbon monoxide?

Although carbon monoxide (CO) is a colourless, odourless and tasteless gas, some of the signs that may indicate incomplete combustion is occurring, resulting in the production of CO, include:

- Yellow or orange rather than blue flames (apart from fuel effect fires or flueless appliances which are designed to display this colour flame check your manufacturers instructions for these units to ensure safe operation).
- Soot or yellow/brown staining around or on appliances.
- Pilot lights that frequently blow out.
- Increased condensation inside windows.

## What should I do if I think my appliance is leaking or spilling carbon monoxide?

- Switch off the appliance and do not reuse until remedial action has been taken.
- Shut off the gas supply at the meter control valve (if you know where it is). If you have a Natural Gas supply contact Northern Ireland Gas Emergency Freephone Number: 0800 002 001.
- If you have a Liquefied Petroleum Gas (LPG) supply then call your gas providers emergency number. You must discuss emergency arrangements with your LPG supplier and agree what action to take in case of a gas escape or emission of carbon monoxide from any LPG appliance.
- Open all doors and windows to ventilate the room - do not sleep in it.
- Visit your GP urgently and tell him/her that you believe your symptoms may be related to carbon monoxide poisoning and request either a blood and/or breath sample.
- Contact a Gas Safe Registered engineer to carry out a safety check and make repairs.

## Further information

For more advice on using a Gas Safe Registered Installer you can go to the Gas Safe Register website at:

[www.gassaferegister.co.uk](http://www.gassaferegister.co.uk)

Or by ringing: **0800 408 5500**.

Free leaflets giving further advice on gas safety can be downloaded from HSENI website:

[www.hсени.gov.uk](http://www.hсени.gov.uk)

select Gas from the drop down topics at our home page and follow the link "Resources for this topic can be downloaded here".

For further information contact:

HSENI - Gas Safety Unit;  
83 Ladas Drive Belfast BT6 9FR  
Tel: 028 9024 3249  
Fax: 028 9023 5383  
Email: [hсени@detini.gov.uk](mailto:hсени@detini.gov.uk)

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