

Independent Guide

What do I need to know about Carbon monoxide?



Independent workplace compliance

What is carbon monoxide?

Carbon monoxide (CO) is an odourless, colourless, tasteless and poisonous gas which interferes with the delivery of oxygen in the blood to the rest of the body. As a result of these properties, it is often referred to as the silent killer.

What are the major sources of CO?

Carbon monoxide is produced as a result of incomplete combustion of carbon fuels including coal, natural gas and fuel oil. It can be emitted by combustion sources such as gas space heaters, furnaces, water heaters, vehicle exhausts and tobacco smoke. Problems can arise from improper installation, maintenance or inadequate ventilation.

What is its significance?

Carbon monoxide interferes with the distribution of oxygen in the blood to the rest of the body. Depending on the amount inhaled, this gas can impede co-ordination, worsen cardiovascular conditions and produce fatigue, headache, weakness, confusion, disorientation, nausea and dizziness. Very high levels can cause death. The symptoms are sometimes confused with flu or food poisoning. HSE statistics show that around fifteen people per year die from exposure to carbon monoxide poisoning, from faulty or improperly installed gas appliances.

What are the exposure limits?

The Health and Safety Executive guidance note, Occupational Exposure Limits EH40, occupational exposure standard for CO is 20ppm (parts per million) over an eight hour time-weighted average reference period, and 100ppm over a fifteen minute period.

The European Commission standards outlines 10Mg/m^3 (8ppm) over 8 hours.

How can you measure CO levels?

Levels of CO and other gases, such as carbon dioxide, can be measured by Assurity Consulting as part of an indoor air quality and workplace comfort audit. Coupled with airflow velocity measurements, the results will demonstrate whether adequate ventilation rates are occurring.

This guide is of a general nature; specific advice can be obtained from Assurity Consulting. Assurity Consulting is the UK's leading independent compliance consultancy specialising in workplace health, safety and environmental solutions. We have over 30 years' experience of helping customers of all sizes, from across all sectors, manage their compliance responsibilities, making sure that their organisation is compliant, their employees are safe, their processes are cost effective and their management team is in control.



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