



Invisible threats in your workplace

A closer look into common dangerous
gases found in the workplace

LANDON
KINGSWAY
SAFETY, CONTROL & ENERGY MANAGEMENT

Common dangerous gases found in the workplace

In many workplace environments, there are invisible dangers lurking in the air that pose serious risks to the health and safety of employees. These dangers come in the form of hazardous gases, which, if not properly monitored and managed, can lead to accidents, injuries, and even fatalities. Understanding the common dangerous gases found in the workplace is essential for creating a safe working environment for all employees.



CO

**Carbon
Monoxide**



H₂S

**Hydrogen
Sulphide**



CH₄

Methane



NH₃

Ammonia



Cl₂

Chlorine



CO₂

**Carbon
Dioxide**



SO₂

**Sulphur
Dioxide**



Carbon Monoxide

Carbon monoxide is a colourless, odourless gas produced by the incomplete combustion of fossil fuels such as natural gas, gasoline, and wood. It is one of the most common and deadly gases found in the workplace.

Exposure to high levels of carbon monoxide can cause dizziness, headaches, nausea, and, in severe cases, death. Industries such as manufacturing, automotive repair, and construction are particularly at risk due to the use of combustion engines and equipment.

Common symptoms:



Dizziness



Headaches



Nausea



Hydrogen Sulphide

Hydrogen sulphide is a highly toxic and flammable gas with a distinct “rotten egg” odour. It is commonly found in industries such as oil and gas, wastewater treatment, and agriculture.

Hydrogen sulphide can cause respiratory irritation, loss of consciousness, and even death at high concentrations. Workers in these industries must be equipped with proper personal protective equipment (PPE) and trained in the safe handling and detection of hydrogen sulphide.

Common symptoms:



Respiratory
irritation



Loss of
consciousness



Methane

Methane is a colourless, odourless gas that is highly flammable and commonly found in industries such as oil and gas production, mining, and agriculture.

While methane itself is not toxic, it can displace oxygen in the air, leading to oxygen deficiency and asphyxiation in confined spaces where it accumulates. Proper ventilation and gas detection equipment are essential for detecting methane leaks and ensuring worker safety.

Common symptoms:



Oxygen deficiency



Asphyxiation



Ammonia

Ammonia is a pungent, colourless gas commonly used in refrigeration systems, agriculture, and manufacturing processes.

Exposure to high concentrations of ammonia can cause respiratory irritation, burns to the skin and eyes, and even death. Industries that handle or store ammonia, such as food processing plants and refrigerated warehouses, must have robust safety protocols in place to prevent leaks and protect workers.

Common symptoms:



Respiratory irritation



Burns to the skin and eyes



Chlorine

Chlorine is a highly reactive and toxic gas commonly used in water treatment, chemical manufacturing, and the production of disinfectants.

Inhalation of chlorine gas can cause respiratory distress, coughing, chest tightness, and pulmonary edema. Proper ventilation, PPE, and gas detection systems are critical for preventing exposure to chlorine in the workplace.

Common symptoms:



Respiratory
distress



Chest tightness/
pulmonary edema



Carbon Dioxide

Carbon dioxide is a colourless, odourless gas that is naturally produced by human respiration and combustion processes.

While carbon dioxide is not toxic at low concentrations, high levels of CO₂ can displace oxygen in the air, leading to dizziness, confusion, and loss of consciousness. Industries such as breweries, wineries, and food processing facilities must monitor CO₂ levels to prevent accidents in confined spaces.

Common symptoms:



Dizziness



Confusion



Loss of
consciousness



Sulphur Dioxide

Sulphur dioxide is a toxic gas with a pungent odour, commonly found in industries such as metal refining, pulp and paper manufacturing, and power generation.

Exposure to sulphur dioxide can cause respiratory irritation, coughing, and shortness of breath. Proper ventilation and gas detection equipment are essential for protecting workers from sulphur dioxide exposure.

Common symptoms:



Respiratory
irritation



Coughing/ shortness
of breath

Prevent and Protect

The presence of dangerous gases in the workplace poses serious risks to the health and safety of employees. As a result, employers must prioritise safety by implementing robust protocols, providing proper training and PPE, and installing reliable gas detection systems to monitor gas levels and prevent accidents. By identifying and mitigating the risks associated with common dangerous gases, workplaces can create a safe environment for all employees.

Landon Kingsway's solution for invisible threats is our range of fixed gas detectors, which put safety first.

For indoor environments, our comprehensive gas monitoring systems are designed to be robust and reliable in demanding conditions. With gas sensor technology, accurate measurement, and reliability, we support safe operation of sites and processes.

Our gas detectors are available for methane, carbon dioxide, carbon monoxide, sulphur dioxide, hydrogen sulphide, sulphur dioxide and chlorine.



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