

TALKING Gas

In partnership with

Gas Monitor Point
your safety first

Ammonia

Ammonia is a compound of nitrogen and hydrogen, with the formula NH_3 . It is a colourless and pungent gas.

It is the simplest stable compound of these elements and serves as a starting material for the production of many commercially important nitrogen compounds.

Ammonia occurs naturally throughout the environment, in air, soil and water and is the only common alkali gas. It has a characteristic smell, but is highly reactive with acid gases, which can mask its presence.

What are the dangers of Ammonia?

It's classified as an extremely hazardous substance and unless well-maintained, catastrophic Ammonia leaks can occur from refrigeration systems and with that, injury and even death. Serious incidents can occur when pipes are ruptured or there are leaks from shaft seals, pipe flanges or valves during maintenance.

Ammonia poses both a toxic and a flammable risk and is caustic in its concentrated form. The risks of gas escape will depend on the site and the size of leak, whether indoors or outdoors; the nature and quality of ventilation; moisture in the atmosphere or whether the leak presents an explosive or toxic risk.

What should you do if you are exposed to Ammonia?

Exposure to high concentrations of the gas can cause burning of the nose, throat and respiratory tract and in extreme cases, can be fatal. Workers exposed to high levels of Ammonia should seek medical attention immediately.

Those exposed should quickly

- ◆ Rinse eyes thoroughly with large amounts of water
- ◆ Blot or brush away excess chemicals and flush the skin with lean water, removing clothing that may have come into contact with Ammonia

Talk to Crowcon

Discover the right chlorine detector for you at crowcon.com/talking-gas

Contact Crowcon to talk to us today
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Hydrogen

Carbon Dioxide

Nitrogen Dioxide

NH_3

O_2
Oxygen

H_2S

Hydrogen Sulfide

NH_3

Ammonia

Carbon monoxide

O_3
Ozone

How do you detect, measure and report Ammonia?

Ammonia is detected with electro-chemical and catalytic sensor technology.

Portable detection, including single gas or multi-gas detectors can monitor instantaneous and time weighted average exposure to toxic levels of Ammonia.

Fixed detection systems may include a combination of toxic and flammable level detectors (depending on your application). Fixed systems can also be used for process over-rides and ventilation control.

You must consider where you place your detectors as the density of gas can accumulate at height and pose a toxic risk at breathing level.

Discover the right Ammonia detection solution for you

There are several types of sensors used for gas detection. The choice of sensor depends on:

- ◆ The gas to be detected
- ◆ The expected range of concentration
- ◆ Whether the detector is fixed or portable
- ◆ Whether the detector is point or open path
- ◆ The presence of other gases that may affect readings or damage the sensor

These systems can measure flammable and toxic gases, report their presence and activate alarms or equipment.

You should select your gas detection solution based on the number and type of gas sensors needed and your display and certification requirements. Ammonia is a sticky gas so easily absorbed into many materials. As a result, detectors need special calibration equipment and techniques.



Single or multi-gas monitors

Can be used for personal monitoring and portable safety applications.



Fixed gas detectors

Are effective as they can be integrated with ventilation control systems.



Control panels

Measure and report the presence of dangerous levels of chlorine and activate alarms/associated equipment.

Where is Ammonia used?

Ammonia can be found in refrigeration, water treatment, NOX removal (power stations), pharmaceuticals, the chemical and semi-conductor industries, industrial cleaning and in the poultry industry.

CROWCON
Detecting Gas Saving Lives