

Understanding Gases

Chlorine



In 1774, Swedish pharmacist Carl Wilhelm Scheele released a few drops of hydrochloric acid onto a piece of manganese dioxide, after a few seconds a dense, greenish-yellow gas was produced which was Chlorine.



Used in industry and found in some household products.



Chlorine gas appears to be yellow-green in colour.



What should you do if exposed?

Those exposed should quickly

- Remove clothing
- Wash their entire body with large amounts of soap and water
- Eyes should be rinsed with plain water for 10 to 15 minutes

What are the dangers of chlorine?

Chlorine is toxic and if inhaled or drunk in concentrated quantities can prove fatal. If chlorine gas is released into the air, people may be exposed through their skin, eyes or through inhalation. Chlorine is not combustible however can react with most combustibles which poses a fire and explosion risk. It also reacts violently with organic compounds such as ammonia and hydrogen, causing potential fire and explosion.

What are the applications?

Chlorine is used to sterilise drinking water and commonly known as a method of sterilising swimming pool water. However, most chlorine is used in the chemical industry with typical applications including bleaching, paper mills (bleaching pulp), disinfection, water treatment as well as within the plastics and chemical industry.

How do you know if you have been exposed?

Acute chlorine gas poisoning will cause difficulty breathing and a cough, as well as sneezing, nose and throat irritation. There may also be skin irritation or chemical burns and eye irritation or conjunctivitis. A person with chlorine gas poisoning may also have nausea, vomiting, or a headache.

It should be very clear indeed that you have been exposed.



Chlorine itself is not flammable, but it can react explosively or form explosive compounds with other chemicals such as turpentine and ammonia.



Chlorine gas can be recognised by its pungent, irritating odour, which is like the odour of bleach. The strong smell may provide adequate warning to people that they are exposed.



Chlorine is sometimes in the form of a poisonous gas.