

Understanding Gases

Hydrogen Sulphide



Hydrogen sulphide occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. It can also result from bacterial breakdown of organic matter.



Bacteria found in your mouth and digestive tract produce hydrogen sulphide during the digestion of food containing vegetable or animal proteins.

0.0005 to 0.3ppm

People usually can smell hydrogen sulphide at low concentrations in air ranging from 0.0005 to 0.3 parts per million (ppm).

1-42 days

It can remain in the air from 1 to 42 days, depending on the season.

What are the applications of Hydrogen sulphide?

Hydrogen sulphide is heavier than air and may travel along the ground. It collects in low-lying and enclosed, poorly-ventilated areas such as basements, manholes, sewer lines, underground telephone vaults and manure pits.

Industrial sources of hydrogen sulphide include petroleum refineries, natural gas plants, petrochemical plants, food processing plants, and tanneries.

What should you do if you are exposed?

Those exposed to H₂S gas should remove themselves from the toxic environment immediately. Respiratory protection is recommended when entering an H₂S environment, due to the toxic effects of the gas. There are no antidotes to H₂S gas poisoning, but side-effects and symptoms can be treated or managed. In serious cases, hospitalisation may be necessary.

What are the dangers?

Exposure to low concentrations of hydrogen sulphide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Respiratory distress or arrest has been observed in people exposed to very high concentrations of hydrogen sulphide.

Exposure to low concentrations of hydrogen sulphide may cause headaches, poor memory, tiredness, and balance problems. Brief exposures to high concentrations of hydrogen sulphide can cause loss of consciousness. In most cases, the person appears to regain consciousness without any other effects. However, in some individuals, there may be permanent or long-term effects such as headaches, poor attention span, poor memory, and poor motor function.



Hydrogen sulphide is a flammable, colourless gas that smells like rotten eggs.



Respiratory protection is recommended when entering an H₂S environment, due to the toxic effects of the gas.



Exposure to low concentrations of hydrogen sulphide may cause headaches, poor memory, tiredness, and balance problems.