

Hydrogen Sulfide

Hydrogen Sulfide Menu

Workers' Rights

Overview

Hydrogen sulfide (also known as H₂S, sewer gas, swamp gas, stink damp, and sour damp) is a colorless gas known for its pungent "rotten egg" odor at low concentrations. It is extremely flammable and highly toxic.

Hydrogen sulfide is used or produced in a number of industries, such as

- Oil and gas refining
- Mining
- Tanning
- Pulp and paper processing
- Rayon manufacturing

Hydrogen sulfide also occurs naturally in sewers, manure pits, well water, oil and gas wells, and volcanoes. Because it is heavier than air, hydrogen sulfide can collect in low-lying and enclosed spaces, such as manholes, sewers, and underground telephone vaults. Its presence makes work in confined spaces potentially very dangerous.

The health effects of hydrogen sulfide depend on how much H₂S a worker breathes and for how long. However, many effects are seen even at low concentrations. Effects range from mild, headaches or eye irritation, to very serious, unconsciousness and death.

This web page provides information on how hydrogen sulfide can affect your health, where you might find it, and how to prevent harmful exposures.

Standards

Hydrogen sulfide exposure addressed in specific OSHA standards for general Industry, maritime, and construction.

[More »](#)

Hazards

Provides information on the safety and health effects of hydrogen sulfide.

[More »](#)

Hydrogen Sulfide in Workplaces

Discusses where hydrogen sulfide may be found.

[More »](#)

Evaluating/Controlling Exposure

Provides information on evaluating whether hydrogen sulfide gas is present and how to eliminate or control the source when possible.

[More »](#)

Additional Resources

Provides links and references to additional resources related to hydrogen sulfide.

[More »](#)

Highlights

Hydrogen sulfide is one of the leading causes of workplace gas inhalation deaths in the United States. According to the Bureau of Labor Statistics (BLS), hydrogen sulfide caused 60 worker deaths between 2001 and 2010.

Why is hydrogen sulfide so deadly?

- It is highly flammable and toxic, even at low concentrations.
- It is heavier than air and may travel along the ground.
- It can build up in low-lying areas, and in confined spaces (including enclosed, poorly ventilated areas, such as manure pits, sewers, manholes, and underground vaults).
- After a while at low or more quickly at high concentrations, you can no longer smell it to warn you it's there.
- It can quickly, almost immediately, overcome unprepared workers, including rescue workers.

UNITED STATES DEPARTMENT OF LABOR

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