



Hydrogen sulfide is a colorless, flammable, extremely hazardous gas with a rotten egg smell. The gas occurs naturally in crude petroleum and natural gas and can be produced by the breakdown of organic matter and human/animal wastes such as sewage. The gas is heavier than air and can collect in low-lying, enclosed and poorly ventilated areas such as basements, man-holes, sewer lines and underground telephone/electrical vaults.

Detection by Smell

- Can be smelled at low levels, but with continuous low level exposure or at higher concentrations you lose your ability to smell the gas even though it is still present.
- At high concentrations, your ability to smell the gas can be lost instantly.
- DO NOT depend on your sense of smell to detect the continuing presence of this gas or for warning of hazardous concentrations.

Health Effects

Health effects vary with how long, and at what level, you are exposed. Asthmatics may be at greater risk.

- **Low concentrations**—irritation of eyes, nose, throat or respiratory system; effects can be delayed.
- **Moderate concentrations**—more severe eye and respiratory effects, headache, dizziness, nausea, coughing, vomiting and difficulty breathing.
- **High concentrations**—shock, convulsions, inability to breathe, coma, death; effects can be extremely rapid (within a few breaths).

Before Entering Areas With Possible Hydrogen Sulfide

The air needs to be tested for the presence and concentration of hydrogen sulfide by a qualified person using test equipment. This individual also determines if fire/explosion precautions are necessary.

- If gas is present, the space should be ventilated.
- If the gas cannot be removed, use appropriate respiratory protection and any other necessary personal protective equipment, rescue and communication equipment.
- Atmospheres containing high concentrations that are greater than 100 parts per million are considered immediately dangerous to life and health and a self-contained breathing apparatus is required.

Adapted from OSHA Quick Card 3300-10N-05, U.S. Department of Labor.

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