

# Rotten Egg Smell?

## Could be Hydrogen Sulphide (H<sub>2</sub>S)

### WHAT IS HYDROGEN SULPHIDE?

Hydrogen sulphide is a colourless, flammable gas with a “rotten egg” smell. At high levels, it is known to be harmful to health.

#### Where does hydrogen sulphide come from?



- It may occur naturally from rotting organic materials, farms and animal waste, dirty or standing water, swamps and wetlands
- It may also come from human activities such as:
  - Sewers and drains
  - Wastewater plants
  - Landfills and dumpsites
  - Pulp and paper factories
  - Industrial activities that can produce the gas include petroleum/ natural gas drilling and refining

#### Exposure to H<sub>2</sub>S can have serious health effects



You are unlikely to experience health effects if you are exposed to typical environmental concentrations of hydrogen sulphide; however, once it exceeds the recommended levels, breathing this gas can make you sick. At very high concentrations, hydrogen sulphide may reduce your ability to smell it. The rotten egg smell may disappear even though the gas is still present. Its health effects can vary depending on the amount you have been exposed to and the duration of exposure.

#### Low-level exposure may cause:



- Burning or watery eyes
- Headaches
- Coughing
- Sore throat
- Nausea
- Shortness of breath

#### Higher levels may have:

- Severe breathing problems
- Dizziness or confusion
- Fainting
- Vomiting
- Loss of consciousness
- People with asthma or breathing problems may be more sensitive and start to experience symptoms








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# Hydrogen Sulphide (H<sub>2</sub>S)

## Concentrations & Health Effects in South Africa

South African workplace limits: 2ppm (8-hour limit) - 10ppm (Short-term limit)

 <b>0.01-2 ppm</b> SAFE LEVEL	 <b>2-10 ppm</b> CAUTION	 <b>10-100 ppm</b> DANGER	 <b>100-300 ppm</b> SEVERE	 <b>300+ ppm</b> DEADLY
<ul style="list-style-type: none"><li>• Rotten egg smell</li><li>• Minor irritation</li></ul>	<ul style="list-style-type: none"><li>• Headaches, nausea</li><li>• Irritated eyes</li></ul>	<ul style="list-style-type: none"><li>• Strong irritation</li><li>• Loss of smell</li></ul>	<ul style="list-style-type: none"><li>• Breathing problems</li><li>• Confusion</li></ul>	<ul style="list-style-type: none"><li>• Collapse, unconscious</li><li>• Possible death</li></ul>

At 100-150 ppm: Loss of smell - Danger not noticed!

**High levels can be fatal!**

### What should you do if you experience a rotten egg smell in your surroundings?

- Go indoors and close windows and doors, if possible
- Do not enter closed or underground spaces, e.g., manholes
- Avoid outdoor activities in the affected area
- People with breathing problems should take precautions
- Seek fresh air immediately if you feel unwell

### When to seek medical help? If you have any of the following systems:

- Difficulty breathing
- Severe dizziness
- Chest tightness
- Fainting or confusion

If the rotten egg smell continues in your area, report it to your local Environmental Health Department or Municipality.



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