

Ensure you're aware of different H₂S hazards!

H₂S is a hazard in a number of Canadian industries. Ensure you know what you're dealing with, so you can mitigate the risks.

What's the difference between health and safety hazards?

Health hazards affect a person's health, and their risks include illness, poisoning, sensitization, and diseases. Their onset can be sudden, or delayed.



Safety hazards, on the other hand are unsafe working conditions that can cause injury, illness and death. Safety hazards are the most common workplace hazards and may include fire and explosion.



H₂S Health Hazards

H₂S is extremely toxic to the body. It's both a chemical asphyxiant and irritant. The two main routes of entry for H₂S are inhalation and absorption.

Inhalation

- Is the primary route of entry
- Causes severe irritation of the nose and throat
- Causes headaches, dizziness, sudden collapse (knockdown) and even death

Absorption

- Direct contact chills the skin and eyes and causes frostbite
- Irritates the eyes and can cause eye damage or blindness

H₂S Safety Hazards

H₂S presents many safety hazards that need to be accounted for.

Fire and explosion hazards

- Highly flammable gas that ignites easily
- Can be explosive when mixed with air at room temperature
- Can produce other toxic vapors and gases when it burns, such as sulfur dioxide
- Highly reactive, increased risk of fire and explosion on contact. Incompatible materials include:
 - Metal oxides
 - Rust oxidizing agents such as peroxides
 - Strong bases like sodium hydroxide
 - Oxygen (H₂S mixtures are explosive between 280-360°C)

Corrosion hazards

- Corrosive to some metals in certain conditions
- Wet H₂S is corrosive to copper, bronze, cast iron, brass, lead and certain types of carbon steels and stainless steels (temperature dependent)
- Dry H₂S is corrosive to non-metals such as nylon, polyurethane, hard rubber, and silicon

Compressed Gas

- If not properly stored and transported, compressed gas cylinders can:
 - Rupture and release gas
 - Become become projectiles if subjected to heat or agitation

