

ARSINE FACT SHEET

What is Arsine?

It is a colorless, nonirritating toxic gas with a mild garlic odor. The odor can only be detected only at levels greater than those necessary to cause poisoning. Arsine is formed when arsenic comes in contact with an acid. It is most commonly used in the semiconductor and metals refining industries.

How you can be exposed to arsine?

Most common reports of exposure to arsine have been after accidental formation of arsine in the workplace. The most likely route of exposure is breathing in the gas after arsine is released into the air.

What are the immediate symptoms of exposure to arsine?

At lower doses, people may not know they have been exposed to arsine, because it has no odor. At higher doses, a mild garlic odor has been reported. People exposed to a low or moderate dose of arsine by inhalation may experience some or all of the following symptoms within 2 to 24 hours of exposure:

- Weakness
- Fatigue
- Headache
- Drowsiness
- Confusion
- Shortness of breath
- Rapid breathing
- Nausea, vomiting, and/or abdominal pain
- Red or dark urine
- Yellow skin and eyes (jaundice)
- Muscle cramps
- Frostbite (when exposed to the liquid or compressed gas)
- Shivering
- Thirst

Exposure to a large dose of arsine by any route may result in these additional health effects:

- Loss of consciousness
- Convulsions
- Paralysis
- Respiratory failure, possibly leading to death

What are the long-term health effects of exposure to arsine?

Severely exposed people are not likely to survive. If people survive the initial exposure, long-term effects may include kidney damage, numbness and pain in the extremities, and behavior disorder symptoms such as memory loss, confusion, and irritability.

What should I do if I think I have been exposed?

There is no antidote available for arsine exposure. The best thing to do is avoid it. If you are exposed to arsine outside, leave the area and get fresh air. If arsine was released indoors, leave the building as soon as possible. If you are near an area where arsine was released, the local authorities may tell you to either evacuate the area or to “shelter in place” inside a building to avoid being exposed to the chemical. If you think you have been exposed to arsine, remove your clothing and quickly wash your entire body with soap and water. If your eyes are burning or vision is blurred, rinse your eyes with plain water for 10 to 15 minutes. If you wear contact lenses, remove them and place them with the contaminated clothing inside a plastic bag and seal. Place the plastic bag inside another bag and seal. **Call 911 for medical attention right away and removal of the contaminated items. Do not drive yourself to the hospital as you may become very ill on your way.**

Where can I get more information on arsine?

Regional poison control center (800) 222-1222

www.bt.cdc.gov

www.dshs.state.tx.us

www.state.nj.us/health/eoh/rtkweb/rtkhsfs.htm

Source of Information

Centers for Disease Control and Prevention (CDC)

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