

PHOSPHINE FACT SHEET

What is phosphine?

Phosphine is a colorless, flammable and explosive gas that smells like garlic or decaying fish. Small amounts occur naturally from the break down of organic matter. Phosphine is used in semiconductor and plastic industries, in the production of a flame retardant, and as a pesticide in stored grain.

How you can be exposed to phosphine?

- Phosphine breaks down quickly in the environment, so you are only exposed to small amounts by inhaling air, eating food and drinking water.
- During the physical and mechanical processes of phosphine, such as heating, pouring, spraying, spills or evaporation from large surface areas such as open containers and confined space exposures (i.e., working inside reactors, boilers, small rooms, etc.).

What are the immediate symptoms of exposure to phosphine? (Acute)

- Breathing phosphine can irritate the nose, throat and lungs causing coughing or shortness of breath.
- Odor of garlic or decaying fish smell on the breath
- Headache
- Dizziness
- Irregular heartbeat
- Pain in the diaphragm
- Nausea and vomiting
- Restlessness
- Increased levels of exposure may cause weakness, fluid in the lungs with severe shortness of breath, convulsions or death.

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

Long-term health effects can occur at anytime after exposure to phosphine and may last for months or years:

- Long-term exposure to very low levels of phosphine may result in anemia, stomach, visual, speech and motor problems.
- Repeated exposure may cause bronchitis to develop with cough, mucus, and /or shortness of breath
- Possible liver and kidney damage

How you can reduce exposure to phosphine?

If you work around or with phosphine, use the following precautions:

- Wear protective clothing, such as suits, headwear, gloves, footwear, and etc.
- All protective clothing should be clean, available each day, and put on before work
- Wear a face mask along with non-vented, impact resistant goggles when working with corrosive or toxic substances
- Quickly wash after exposure to phosphine and at the end of the workshift

What should you do if you think you have been exposed to phosphine?

There are no specific blood or urine tests to detect phosphine. If you think that you have been exposed, especially for a long period of time, there may be tests that can show whether the lungs and heart have been damaged.

If you think you have been exposed, move quickly to an area where fresh air is available. Remove your clothing by cutting them off the body; if possible do not pull the clothes over your head. Quickly wash your entire body with large amounts of soap and water. If your eyes are burning or your vision is blurred, rinse them with plain water for 10 to 15 minutes. If you wear contacts, wash your hands after removing contaminated clothes and then remove the contacts before rinsing your eyes.

If you wear glasses, remove and wash them with soap and water. You can put your eyeglasses back on after you wash them. Place your contaminated clothes and contact lenses into a plastic bag and seal. Place the bag into a second plastic bag and seal. If phosphine has been ingested, do not drink fluids or induce vomiting. **Call 911 right away for medical attention and removal of the contaminated items. Do not drive yourself to the hospital as you may become very ill on your way.**

Where can you get more information on phosphine?

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)