This fact sheet answers the most frequently asked health questions (FAQs) about phosgene oxime. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Phosgene oxime was developed as a chemical warfare agent. Only people working near where phosgene oxime has been stored are at risk of being exposed to this substance. Exposure to high levels of phosgene oxime vapors may cause severe lung damage, and even death. Contact with gaseous, liquid, or solid phosgene oxime may result in severe skin or eye damage. Phosgene oxime has been found in at least 1 of the 1,585 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is phosgene oxime?

Phosgene oxime is a manufactured chemical that was developed as a potential chemical warfare agent, but its use on the battlefield has never been documented. It has a disagreeable penetrating odor. Pure phosgene oxime is a colorless, crystalline solid; the munitions grade compound is a yellowish-brown liquid. Both the liquid and the solid can give off vapors at ambient temperatures.

What happens to phosgene oxime when it enters the environment?

- Phosgene oxime will not stick to the soil. Small amounts may evaporate into air or travel below the soil surface and contaminate groundwater. Most of the phosgene oxime in soil will be broken down upon contact with moisture or be degraded by bacteria.
- Phosgene oxime does not accumulate in the food chain.

How might I be exposed to phosgene oxime?

It is not likely that you would be exposed to phosgene oxime; it has never been known to have been used in chemical warfare.

How can phosgene oxime affect my health?

Breathing phosgene oxime vapors can cause severe bronchitis and accumulation of fluid in the lungs. Skin contact with phosgene oxime will cause swelling and itching hives that can also result in immediate and painful skin damage. Eye contact may result in severe pain and conjunctivitis. Phosgene oxime is absorbed through the
We do not know if exposure to phosgene oxime would result in birth defects or other developmental effects in people and no information exist from animal studies.

How can families reduce the risk of exposure to phosgene oxime?

☐ Most families will not be exposed to phosgene oxime.

Is there a medical test to show whether I’ve been exposed to phosgene oxime?

There are no tests to positively determine whether you have been exposed to phosgene oxime. If you suspect that you may have been exposed to phosgene oxime, a chest X-ray may be the quickest way to determine if your lungs have been damaged. This can be done in a hospital, clinic, or doctor’s office that has an X-ray machine.

Has the federal government made recommendations to protect human health?

No standards or recommendations are available for phosgene oxime.