

# NIOSH

## ALERT

### Preventing Phosphine Poisoning and Explosions during Fumigation

#### WARNING!

**Workers may be poisoned, injured, or killed by phosphine gas while working with or near phosphide fumigants.**

**Workers**, do the following if you work near phosphide fumigants:

- Observe warning signs and know which work areas have been fumigated. Do not enter them until they have been aired out and monitored to show that they are safe.
- Pay careful attention to handling procedures on phosphide fumigant labels.
- Be aware that phosphide fumigants may explode when they contact air or are mixed with water.
- Take part in any air monitoring or training programs your employer offers.
- Do not rely on odor to warn you about toxic amounts of phosphine gas.
- Use the respiratory protection and protective clothing recommended in this Alert (see back of sheet to order complete Alert).
- Change into protective clothes before handling fumigants.

- Do not eat, drink, or use tobacco in areas where phosphide fumigants are used.
- Wash your hands and face before you eat, drink, or smoke.
- If possible, shower and change into clean clothes before you leave work.



Aluminum and magnesium phosphide containers may flash on opening. Pay careful attention to handling procedures on labels.

*Please tear out and post.  
Distribute copies to workers.*

*See back of sheet for employer recommendations  
and ordering information.*

**Employers**, do the following to protect your workers from phosphide fumigants:

- Comply with all applicable OSHA and EPA regulations.
- Inform workers that phosphide fumigants may cause fatal illness or injury.
- Tell workers which materials contain phosphide fumigants or are contaminated with them.
- Make sure that phosphide fumigants are properly disposed of by trained workers.
- Pay special attention to the explosive nature of phosphide fumigants in confined spaces or mixed with water.
- Determine the potential for worker exposure.
- Do not rely on odor to warn workers about toxic amounts of phosphine gas.
- Carefully monitor air concentrations of phosphine gas in the work area and the workers' personal breathing zones.
- Post warning signs to indicate fumigated areas.
- Decide when and where respirators should be used.
- Provide the respiratory protection and personal protective equipment recommended in this Alert (see below to order complete Alert).
- Provide training programs for workers to reduce exposures to fumigants.
- Be aware of the many symptoms associated with phosphine gas exposure.
- Seek immediate medical attention for exposed workers with severe respiratory symptoms.
- Do not permit workers with symptoms such as dizziness and lightheadedness to drive or perform other complex tasks.

For additional information, see ***NIOSH Alert: Preventing Phosphine Poisoning and Explosions during Fumigation*** [DHHS (NIOSH) Publication No. 99-126]. Single copies of the Alert are available free from the following:

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