

Silica—Installing and finishing drywall

Explain dangers

Some drywall tasks can release dust with high concentrations of silica particles into the air. These tasks include

- Cutting drywall (e.g., making holes for light fixtures, plugs, switches, etc.)
- Sanding drywall joint compound
- Cutting cement board
- Disturbing settled dust

When inhaled, silica particles travel deep into the lungs. Over time, these particles can cause the following health issues:

- Respiratory problems
- Silicosis
- Lung cancer
- Scleroderma

Respiratory problems—Inhaling silica particles can cause the following:

- Irritation to the throat and airway
- Persistent coughing
- Breathing difficulties
- Chronic obstructive pulmonary disorder (COPD)—a combination of chronic bronchitis and emphysema that is often fatal.

Silicosis—This is caused by an inflammation and buildup of scars on the lungs, which makes breathing extremely difficult. Once silicosis starts to develop, it continues to get worse even if exposure to silica stops.

The disease is often fatal. Many people who have silicosis develop other health problems, such as heart disease, tuberculosis, and lung cancer.

Lung cancer—Many scientific organizations have confirmed that exposure to silica causes lung cancer, a debilitating disease that is often fatal.

Scleroderma—This is a disorder of the connective tissue that holds various body parts together. The skin becomes tight and thick, making it difficult for a person to move.

The disorder can cause serious problems, such as damage to the kidneys, lungs, digestive system, and heart.

Identify controls

- Workers need to know the health effects of silica exposure and the controls for preventing exposure during drywall cutting and sanding tasks. They must be trained on WHMIS and know where to find safety data sheets (SDSs) for hazardous products.
- Turn off heating and air-conditioning units to reduce the spread of dust to other parts of the workplace.
- Warn other trades about the risk of silica exposure, and limit entry into the work area.
- Ventilate the area when cutting and sanding.
- Open windows and doors and use mechanical fans to dilute contaminated air.
- Always wash your face and hands before eating, drinking, smoking, and going home.
- Use an electric shrouded ventilated rotary sander (SVRS). It can reduce silica dust levels by about 96%. This type of sander draws air through the rotating pad into a shroud and passes it through a vacuum collection system with a HEPA filter.
- Vacuum the workspace with a HEPA vacuum attached to either a manual sander or an electric SVRS. Because silica particles are extremely small, a conventional vacuum will blow the dust back into the air.
- Use respiratory protection whenever you are working with materials containing silica. Silica particles are so small that you may not even see the hazardous dust in the air.
- For most drywall sanding and cutting applications, use an elastomeric half-mask air-purifying respirator with a P100 filter.

Demonstrate

Show your crew an elastomeric half-mask air-purifying respirator. Arrange for them to have a fit test and show them how to select, use, and care for the respirator.

Ask the crew if they have had WHMIS training. If not, arrange for training. Show them where the SDSs for hazardous products are kept on site.