

HAZARD AWARENESS FACT SHEET

Crystalline Silica

WHAT IS CRYSTALLINE SILICA?

Crystalline silica is a naturally occurring mineral found in sand, rock, concrete, glass, ceramics, and many other products. The three main forms of crystalline silica include quartz (most common), cristobalite, and tridymite.

RESPIRATORY HAZARD

Inhalation of crystalline silica in the respirable size range can cause several adverse health effects, including silicosis, lung cancer, kidney disease, Scleroderma, and respiratory system inflammation.

SILICOSIS

Silicosis is the most common health condition associated with long-term exposure to high levels of respirable crystalline silica. Silicosis is an irreversible, incurable, and sometimes fatal, lung disease caused by scarring of the lung tissue. Silicosis may also make an individual more susceptible to Tuberculosis.

CIGARETTE SMOKING ADDS TO THE LUNG DAMAGE CAUSED BY SILICA

SYMPTOMS OF SILICOSIS

- Shortness of breath
- Loss of appetite
- Fever
- Respiratory failure
- Chest Pain
- Fatigue
- Dry cough



HIGHER RISK ACTIVITIES

If you perform the following work activities involving rock, sand, masonry, or concrete, then the dust in your environment is very likely to contain crystalline silica:

- Sandblasting
- Masonry and concrete work
- Mining/tunneling and demolition work
- Cement and asphalt pavement manufacturing
- Crushing and drilling rock and concrete
- Excavation and other earth moving activities
- Soil disturbance with mechanical equipment



PREVENTING EXPOSURE

1. Wetting

Wetting the materials that contain silica can prevent silica dust from becoming airborne and reaching workers lungs during cutting, chipping, drilling, sawing, grinding, earth moving, and other operations.

2. Engineering Controls

Vacuums, blast cabinets, dust collectors, and other local exhaust ventilation systems can remove dust prior to it entering a workers breathing zone. Isolating workers from the dust (enclosures, vehicle cabins) is also an example of engineering controls.

3. Respiratory Protection

Proper use of respirators that protect against silica exposure can lower exposures to silica to varying degrees, depending on the protection factor of the respirator

4. Hygiene

Avoid eating, drinking or smoking near work areas containing crystalline silica dust. Wash hands and face before eating, drinking, or smoking away from exposure areas.

