

# SILICA DUST

## Dangers of (Crystalline) Silica Dust

There has been much discussion about silica dust in the past few years. OSHA has issued a regulation to help protect workers from overexposure to this dust. It has been largely unregulated in the past, and because of this, many workers have been faced with overexposure to silica dust. The CDC reports that an estimated 1.7 million U.S. workers are exposed to silica dust on the job.

## What is Silica Dust?

Crystalline silica is an important industrial material found abundantly in the earth's crust. Quartz, the most common form of silica, is a component of sand, stone, rock, concrete, brick, block, and mortar. Materials containing quartz are found in a wide variety of workplaces.

## Health Effects and Illnesses Caused by Silica Dust

Silica dust is hazardous when very small respirable particles are inhaled. These respirable dust particles can penetrate deep into the lungs and cause disabling and sometimes fatal lung diseases, including silicosis and lung cancer, as well as kidney disease. Crystalline silica is 1 of 119 agents listed as "carcinogenic to humans" by the International Agency of Research on Cancer, also known as IARC.

## Best Practices in Reducing Exposure to Silica Dust

- Eliminate the source of the dust, whether that is through engineering controls or a change in work processes.
- Use collection or vacuum systems to collect dust at the point of operation to avoid suspending the dust in the air.
- Use wet methods when cutting or breaking any concrete or similar materials.
- Use water as a means of suppression for the dust on roadways or in work areas.
- Stay out of areas where silica dust levels are high, as well as avoid being downwind from these areas.
- Use proper respirators when engineering controls are not enough to protect you.

## Summary

It is important to understand the hazards that silica dust creates for the workers who are exposed to it. While the regulation for silica dust is new, the hazards and health consequences have been known for decades. Use engineering controls and other effective safeguards to reduce the amount of this dust in the air to reduce overexposure.

