

FACT SHEET

Crystalline Silica

Crystalline Silica is a naturally occurring mineral that is commonly found in many construction materials and industrial products. Some materials that commonly contain silica are sand, rock, concrete, marble, brick, mortar, and glass. This sheet describes the inherent hazards associated with respirable silica and how to determine if a hazardous exposure is present

Common Causes of Silica Exposure

Respirable crystalline silica exposure can occur in construction workplace operations that involve manufacturing, cutting, crushing, drilling, and sawing of materials such as concrete, brick, block, rock, mortar, and stone. Exposure can also occur in operations that use sand products such as foundries, sand blasting, ceramic manufacturing, glass manufacturing, and hydraulic fracturing.

How Can Exposure to Crystalline Silica Affect My Health?

When very small (“respirable”) particles of silica are inhaled they can cause multiple diseases. Silicosis is among the most common which is an incurable lung disease that can lead to disability and death. Crystalline Silica also causes chronic obstructive pulmonary disease (COPD), kidney disease, and lung cancer.

How Can I Reduce Exposure?

- Enclose any operation or perform experiments in a fume hood where feasible.
- Use dust containment by use of a wet method or local ventilation (HEPA vacuum).
- Eliminate the use of materials that contain crystalline silica.
- Respirators are only allowed when engineering methods are not feasible or fail to keep exposures below the PEL.

OSHA Crystalline Silica Standard

As of June 23rd, 2016 OSHA issued a new rule on the silica permissible exposure limit (PEL), reducing the limit to 50 $\mu\text{g}/\text{m}^3$ for an eight-hour work day. As such, any processes with the potential to generate silica dust must be assessed to determine if they exceed the limit. If it is suspect that there is silica exposure, contact OEHS and schedule an appointment for assessment.