

# OHBA Safety Pages: Silica Safety

**What Is Silicosis?** Silicosis is lung damage caused by breathing dust containing extremely fine particles of crystalline silica. Crystalline silica is found in materials such as concrete, masonry, rock, some types of counter tops, ceramic tile, drywall joint compound, etc. When these materials are cut, drilled, ground, or sanded they can leave fine dust suspended in the air. Breathing in these fine particles can produce lung damage.



**How Do Construction Workers Get Exposed?** Silica is a basic component of soil, sand and granite. Most crystalline silica comes in the form of quartz. Common sand can be as much as 100 percent quartz, therefore there are many ways to be exposed at construction sites. Silica occurs in many commonly used building products including mortar, grout, cement, stucco, plaster, bricks/blocks, rocks/stones, ceramic tile, drywall joint compound, and fiber-cement board, as well as sandblasting materials.

**Some Activities in Which Silica Dust May Be Present In The Air:**

- Masonry work (e.g., mixing mortar, cutting brick/block, tuck pointing, etc.)
- Concrete work (e.g., sawing, grinding, drilling, jackhammering, etc.)
- Dry sweeping of concrete, mortar, and sand
- Demolition of concrete and masonry structures or plaster ceiling/walls
- Sanding/finishing drywall joints
- Loading, hauling, and dumping rock/stones as well as back fill against foundation walls, etc.
- Sawing fiber-cement board, stone, or tile

**How Can Silica Exposure Be Reduced or Eliminated?** The key to silicosis prevention is to prevent silica dust from becoming airborne. The Occupational Safety and Health Administration (OSHA) requires administrative, or engineering controls be used whenever possible. A simple control may work: Example: A water hose to wet dust down at the point of generation. Some additional steps you can take to protect yourself:

- If in construction, follow the control measures in Table 1 of the OSHA Standard that is associated with your work tasks.
- Conduct an Industrial Hygiene (IH) survey to determine this hazard in your normal work operations. An IH survey should be done to determine air concentrations of respirable crystalline silica. From this data an employer can determine the proper protection plan for their employees. These IH surveys can be conducted by your workers' compensation provider, Oregon OSHA, or a safety consulting firm.
- Always use dust control systems that are available for many types of dust generating equipment and maintain them properly.
- When sawing concrete or masonry, use saws that provide water to the blade.
- Use local exhaust ventilation or vacuum systems that meet the requirements in the OSHA Standard to prevent dust from being released into the air.
- Minimize exposure to nearby workers by using good work practices.
- Use abrasives containing less than 1 percent crystalline silica during abrasive blasting to prevent harmful quartz dust from being released in the air.

Only use respirators as directed in Table 1, or IH Survey Requirements, etc. Employees using respirators must be included in a Respiratory Protection Program that is compliant to 29 CFR 1910.134, *Respiratory Protection*, as adopted by Oregon OSHA. This program includes medical screening, fit-testing, employee training, employee exposure data, and a cartridge change-out schedule. Refer to the manufacturer to determine a filter change out schedule.



The information we provide is not intended to include all possible safety measures and controls. In addition, the safety information we provide does not relieve the Members of its own duties and obligations with regard to safety concerns, nor does Oregon Home Builders Association guarantee to the Members or others that the Member's property, job sites and/or operations are safe, healthful, or in compliance with applicable laws,

regulations or standards. The Members remain responsible for their own operations, safety practices and procedures and should consult with legal counsel as they deem appropriate.

SAFETY PAGE MEETING GUIDE

Topic: Silica Safety

Employer: \_\_\_\_\_ Project: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Shift: \_\_\_\_\_

Number in crew: \_\_\_\_\_ Number attending: \_\_\_\_\_

Safety or Health issues discussed. Include recent accident investigations and hazards involving tools, equipment, the work environment, work practices and any Safety or Health recommendations:

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Follow up on recommendations from last safety meeting:

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Record of those attending:

Name: (please print)	Signature:	Company:
1.		
2.		
3.		
4.		
5.		
6.		
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9.		
10.		
11.		
12.		

Supervisor's remarks: \_\_\_\_\_

Supervisor: \_\_\_\_\_ (Print) \_\_\_\_\_ (Signature)