SILICA SAFETY

Silica is a natural mineral found in materials like sand, stone, concrete, brick, and mortar. When these materials are cut, ground, drilled, or crushed, they release tiny silica dust particles. These particles are small enough to be inhaled deep into the lungs.

Health Hazards

Exposure to respirable crystalline silica can cause:

- Silicosis – an incurable, sometimes fatal lung disease
- Lung cancer
- Chronic obstructive pulmonary disease (COPD)
- Kidney disease

Common Construction Activities That Generate Silica Dust

- Cutting concrete or brick
- Dry sweeping concrete, rock, clay, or sand dust
- Drilling or jackhammering into concrete
- Grinding or polishing stone
- Demolition of silica-containing materials

Control Methods (Table 1 of OSHA 29 CFR 1926.1153)

OSHA provides a list of 18 common tasks with required control methods. Examples include:

- Wet cutting: Use water to suppress dust.
- Vacuum systems: Use tools with integrated dust collection.
- Respirators: Required when engineering controls alone can't reduce exposure below the PEL.

Employer Responsibilities

- Provide silica training.
- Implement engineering controls (e.g., water, ventilation).
- Provide respiratory protection and training when necessary.
- Develop and implement a written exposure control plan.
- Designate a competent person to oversee silica safety.
- Offer medical exams for workers exposed above the action level for 30+ days/year.

Worker Responsibilities

- Use provided dust controls and PPE properly.
- Attend training on silica hazards and safe work practices.
- Report any unsafe conditions or damaged equipment.
- Participate in medical surveillance if required.

Training

The employer shall ensure that each employee covered by the Respirable Crystalline Silica Standard can demonstrate knowledge and understanding of at least the following:

- The health hazards associated with exposure to respirable crystalline silica;
- Specific tasks in the workplace that could result in exposure to respirable crystalline silica;
- Specific measures the employer has implemented to protect employees from exposure to respirable crystalline silica, including engineering controls, work practices, and respirators to be used;
- The contents of the OSHA regulations;
- The identity of the competent person designated by the employer to make frequent and regular inspections of job sites, materials, and equipment to implement the written exposure control plan; and
- The purpose and a description of the medical surveillance program.

Silica dust is dangerous but exposure is preventable. Always follow safe work practices and use control measures. Protect your lungs and long-term health by staying informed and compliant.

GCSC Resources

Occupational Health Services: 6:00am – 2:00pm / Questions? ohs@mygcsc.com
Medical Clearance OSHA Questionnaire – 08RSPCLR
Fit Testing – 08RFTFF/08RFTHF/08RFTN95/08RFTSA
Pulmonary Function Test – 08PFT
Safety Training: 6:00am – 3:00pm / Questions? csr@mygcsc.com
Silica – A08SIL
Respiratory Protection – A08RSP

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