SILICA EXPOSURE CONTROL PLAN

Template for Construction Employers

OSHA 29 CFR 1926.1153 Compliance

COMPANY INFORMATION

Company Name:

Address:

City, State, ZIP:

Phone:

Competent Person:

Plan Prepared By:

Date Prepared:

Plan Review Date:

1. PURPOSE AND SCOPE

This Silica Exposure Control Plan establishes procedures to protect employees from the health hazards associated with respirable crystalline silica exposure during construction activities. This plan complies with OSHA's Respirable Crystalline Silica Standard for Construction (29 CFR 1926.1153).

Crystalline silica is a common mineral found in construction materials such as sand, stone, concrete, brick, block, and mortar. When these materials are cut, ground, drilled, or disturbed, respirable silica dust can be released into the air and inhaled, causing serious health effects including silicosis, lung cancer, chronic obstructive pulmonary disease (COPD), and kidney disease.

This plan applies to:

- All employees who perform tasks that may generate respirable crystalline silica
- All worksites and job locations where silica-generating activities occur
- Supervisors responsible for implementing exposure controls
- Subcontractors performing silica-generating work on company projects

2. OSHA SILICA STANDARD REQUIREMENTS

OSHA's silica standard for construction (29 CFR 1926.1153) establishes a Permissible Exposure Limit (PEL) and an Action Level (AL) for respirable crystalline silica:

Exposure Limit	Concentration	Required Actions
Permissible Exposure Limit (PEL)	50 µg/m³ (8-hr TWA)	Must not exceed; full compliance required
Action Level (AL)	25 µg/m³ (8-hr TWA)	Triggers medical surveillance requirements

Compliance Options: Employers can comply with the silica standard using one of two methods:

- **Table 1 Compliance:** Follow the specified control measures in OSHA's Table 1 for specific tasks
- **Alternative Exposure Control Methods:** Conduct exposure assessments and implement controls to maintain exposures below the PEL

3. DESIGNATED PERSONNEL

The following individuals are responsible for implementing and maintaining this Silica Exposure Control Plan:

Role	Name	Phone	Responsibilities

Competent Person			Implement plan, inspect controls, train workers
Program Administrator			Maintain records, coordinate medical exams
Site Safety Supervisor			Daily oversight, ensure compliance
Alternate Competent Person			Backup when primary is unavailable

4. SILICA-GENERATING TASKS AND EXPOSURE CONTROLS

The following table identifies common silica-generating tasks and the corresponding control measures from OSHA Table 1. Check all tasks that apply to your operations:

[ ] **Stationary masonry saws**

Control: Use saw equipped with integrated water delivery system

[ ] **Handheld power saws (any blade diameter)**

Control: Use saw equipped with integrated water delivery system; when used outdoors

[ ] **Handheld power saws (indoors or enclosed)**

Control: Use saw with integrated water AND APF 10 respirator

[ ] **Walk-behind saws**

Control: Use saw equipped with integrated water delivery system

[ ] **Drivable saws**

Control: Use saw with integrated water; operator in enclosed cab or APF 10 respirator

[ ] **Rig-mounted core saws or drills**

Control: Use tool equipped with integrated water delivery system

[ ] **Handheld and stand-mounted drills**

Control: Use drill with HEPA-filtered vacuum OR integrated water delivery

[ ] **Dowel drilling rigs for concrete**

Control: Use dust collection system with HEPA filter and shroud around drill bit

[ ] **Jackhammers and handheld powered chipping tools**

Control: Use tool with water delivery at point of impact; APF 10 respirator when indoors

[ ] **Handheld grinders for mortar removal**

Control: Use grinder with HEPA-filtered vacuum dust collection; APF 10 respirator

[ ] **Handheld grinders for other uses**

Control: Use grinder with integrated water OR HEPA vacuum; APF 10 respirator

[ ] **Walk-behind milling machines**

Control: Use machine with integrated water delivery and APF 10 respirator

[ ] **Heavy equipment/utility vehicles (demolition)**

Control: Operator in enclosed cab; wet methods when feasible

5. ENGINEERING AND WORK PRACTICE CONTROLS

5.1 Water Suppression Systems

When using water suppression as a control method, the following procedures apply:

- Ensure adequate water flow to suppress visible dust at the point of operation
- Inspect water delivery systems before each use
- Replace or repair any damaged nozzles, hoses, or fittings
- Use water containing appropriate additives when freezing conditions exist
- Properly manage wastewater in accordance with environmental regulations

5.2 Vacuum Dust Collection Systems

When using vacuum dust collection as a control method, the following procedures apply:

- Use only vacuums equipped with HEPA filters
- Inspect vacuum systems before each use; verify proper airflow
- Empty collection containers when they reach manufacturer-specified capacity
- Replace filters according to manufacturer recommendations
- Dispose of collected dust in sealed containers
- Clean vacuum exterior with wet methods—never use compressed air

5.3 Work Practice Controls

- Position workers upwind from silica-generating activities when possible
- Prohibit dry sweeping or dry brushing of silica-containing debris
- Use wet methods or HEPA-filtered vacuuming for cleanup
- Isolate silica-generating work from other employees when possible
- Prohibit use of compressed air to clean clothing or surfaces
- Post warning signs at boundaries of regulated areas

■ WARNING: Dry sweeping and compressed air cleaning of silica dust are strictly prohibited. These methods create airborne dust that can be inhaled by workers throughout the area.

6. RESPIRATORY PROTECTION

Respiratory protection is required when engineering and work practice controls cannot reduce exposures below the PEL, or as specified in Table 1. This company maintains a Respiratory Protection Program in accordance with 29 CFR 1910.134.

Respirator Selection:

Silica Concentration	Minimum Respirator Required	APF
Up to 10x PEL (500 µg/m³)	N95 filtering facepiece or half-mask with N95	APF 10
Up to 25x PEL (1,250 µg/m³)	Powered air-purifying respirator (PAPR) with HEPA filter	APF 25
Up to 50x PEL (2,500 µg/m³)	Full facepiece with N100 or P100	APF 50
Greater than 50x PEL	Supplied air respirator (SAR) or SCBA	Per program

- All employees required to wear respirators must be medically evaluated
- All employees must be fit-tested annually for tight-fitting respirators
- Training on proper use, maintenance, and limitations is required before use
- Respirators must be inspected before each use and maintained properly

7. HOUSEKEEPING PROCEDURES

Proper housekeeping prevents secondary exposure to settled silica dust. The following procedures are mandatory:

- Clean work areas at least daily or more frequently as needed
- Use wet sweeping, HEPA-filtered vacuuming, or other methods that minimize airborne dust
- NEVER dry sweep or use compressed air for cleaning
- Dispose of silica-containing waste in sealed, labeled containers
- Keep walkways and work areas free of accumulated dust
- Clean up spills of silica-containing materials promptly using wet methods

8. MEDICAL SURVEILLANCE

Medical surveillance is required for employees who will be required to use a respirator for 30 or more days per year under this plan. The medical surveillance program includes:

- Initial medical examination within 30 days of initial assignment
- Periodic examinations every 3 years (or more frequently if recommended by physician)

- Medical examination includes: medical and work history, physical examination, chest X-ray, pulmonary function test
- Written medical opinion provided to employer and employee
- All medical examinations provided at no cost to employees during work hours

Medical Provider Information:

Medical Provider Name: _____

Address: _____

Phone: _____

Contact Person: _____

9. TRAINING REQUIREMENTS

All employees who may be exposed to respirable crystalline silica must receive training before initial assignment and at least annually thereafter. Training must be in a language and manner the employee understands.

Training Topics:

- Health hazards associated with silica exposure including cancer, silicosis, COPD, and kidney disease
- Specific tasks that could result in silica exposure
- Engineering controls, work practices, and respiratory protection used to limit exposure
- How to properly use and care for assigned respiratory protection
- The contents of OSHA's silica standard (29 CFR 1926.1153)
- The purpose and procedures for medical surveillance
- The identity of the competent person designated for silica compliance
- How to access this written Exposure Control Plan

10. TRAINING DOCUMENTATION LOG

Document all silica exposure control training below. Maintain records for the duration of employment plus 30 years.

Date	Employee Name	Topics Covered	Trainer

11. DAILY SILICA CONTROL CHECKLIST

Date: _____ Jobsite: _____ Competent Person: _____

[ ] Silica-generating tasks for today identified and controls determined

[ ] Water suppression systems inspected and functioning properly

[ ] Vacuum dust collection systems inspected; filters checked

[ ] Required respirators available and in good condition

[ ] Workers wearing respirators have been fit-tested and medically cleared

[ ] Work area isolated from other employees where required

[ ] Warning signs posted at boundaries of silica work areas

[ ] Workers trained on today's silica hazards and controls

[ ] Housekeeping equipment (wet methods/HEPA vacuum) available

[ ] Emergency eyewash/water available for decontamination

Tasks Performed Today:

Task	Control Method Used	Respirator?
		[ ] Yes [ ] No
		[ ] Yes [ ] No
		[ ] Yes [ ] No
		[ ] Yes [ ] No

Issues/Corrective Actions: _____

_____

Competent Person Signature: _____ Date: _____

12. EMPLOYEE ACKNOWLEDGMENT FORM

I acknowledge that I have received training on silica exposure hazards and controls, and I understand the following:

[ ] The health hazards of respirable crystalline silica, including silicosis, lung cancer, COPD, and kidney disease

[ ] The specific tasks in my job that may generate silica exposure

[ ] The engineering controls and work practices used to reduce my exposure

[ ] How to properly use and maintain respiratory protection when required

[ ] The importance of proper housekeeping and prohibited practices (dry sweeping, compressed air)

[ ] My right to medical surveillance if I wear a respirator 30+ days per year

[ ] The location of this written Exposure Control Plan and how to access it

[ ] The identity and role of the competent person for silica compliance

[ ] My responsibility to follow all silica control procedures and report problems

Employee Name (Print): _____

Employee Signature: _____

Date: _____

Job Title/Trade: _____

Trainer Name: _____

Trainer Signature: _____

This template is provided as a general guide for OSHA silica compliance. Employers should consult 29 CFR 1926.1153 and applicable state regulations to ensure full compliance. First Underwriters Insurance Brokers recommends reviewing this plan annually and updating whenever tasks, equipment, or controls change.