

# Model Written Silica Exposure Control Plan for General Industry

This is a fillable template that the employer must complete. Instructions in red font enclosed in brackets indicate where you must enter your worksite-specific information.

Title 8 of the California Code of Regulations (T8CCR), [section 5204, Occupational Exposures to Respirable Crystalline Silica](#) applies to all occupational exposures to respirable crystalline silica in general industry except:

- Construction work covered by [section 1532.3](#).
- Agricultural operations covered under [section 3436](#).
- Exposures that result from the processing of sorptive clays.
- Where employees are engaged in work that **does not involve high-exposure trigger tasks** and their **exposure will remain below 25 micrograms per cubic meter of air (25 µg/m<sup>3</sup>)** as an 8-Hour time-weighted average (TWA) under any foreseeable conditions.

Cal/OSHA developed this model plan to assist employers with creating their own silica exposure control plan, and includes changes required by the Emergency Temporary Standard (ETS) to section 5204 that went into effect on December 29, 2023. Employers are not required to use this model plan, but if they do, the person(s) with the authority and responsibility for implementing the workplace silica exposure control plan must:

- Carefully review all the requirements of section 5204.
- Adapt this program to the specific type of workplace and the silica hazards encountered.

Employers have the option of using this or any other silica exposure control plan template, or modifying this template so that it effectively addresses the required elements as outlined in section 5204. Using this model plan will not guarantee that it will meet regulatory requirements. However, it should save some development time.

## Online Resources:

- [California Code of Regulations, Title 8 \(T8CCR\), Table of Contents](#)
- [Respirable Crystalline Silica Standards - Important Update](#)
- [Fact sheet: Emergency Silica Regulation – Information for Employers](#)
- California Department of Public Health, Occupational Health Branch. Information for Employers. [Hazard Warning: Silica Dust from Countertop Fabrication](#).



December 2023

# Silica Exposure Control Plan for [Name of Company]

**Date:** [Date of last review]

This exposure control plan addresses all materials, tasks, and conditions that are relevant to the work performed by our employees, as follows.

**Location:** [Identify your operation(s) in terms that best reflect your workplace – e.g., locations, areas, processes, and where regulated areas exist.]

## Task(s) Involving Exposure to Respirable Crystalline Silica (RCS)

There are two types of tasks that our employees engage in when it comes to working with materials that contain crystalline silica [edit accordingly if your workplace involves only one type of task]:

- (1) High-exposure trigger tasks.
- (2) Tasks involving low concentrations of crystalline silica that are not considered high exposure.

## High-Exposure Trigger Tasks

The tasks listed in Table 1 are high-exposure trigger tasks that our employees engage in. They involve machining, crushing, cutting, drilling, abrading, abrasive blasting, grinding, chiseling, carving, gouging, polishing, buffing, fracturing, intentional breaking, or intentional chipping of artificial stone that contains more than 0.1% crystalline silica, or for natural stone that contains more than 10 % crystalline silica. High-exposure trigger tasks also include clean up, disturbing, or handling of waste, dusts, residues, debris, or other materials created during these tasks. Regardless of employee exposure monitoring results, these tasks must be done:

- In regulated areas as required by section 5204(e).
- With effective flow of water over the working surface of tools to reduce dust.
- With use of wet methods or HEPA-equipped vacuums for housekeeping and cleanup.

The following information regarding the high-exposure trigger tasks is incorporated into this RCS exposure control program:

**Employee airborne respirable crystalline silica exposure results.** [Incorporate the detailed records of exposure measurements that demonstrate engineering controls continuously maintain employee exposure levels below the action level of 25 µg/m<sup>3</sup>, as well as summarize in the “high hazard” trigger task table 1]. Employee exposure monitoring is conducted at least every 12 months — more frequently as required.

**Proper use of personal protective equipment.** [Provide the written procedures for the proper donning and doffing of personal protective equipment, including work clothing and respiratory protection, to effectively prevent exposures to airborne RCS and prevent take-home exposures]

**Carcinogen report of use.** [Provide documentation that the use of crystalline silica in your workplace has been properly reported to Cal/OSHA according to section 5203, Carcinogen Report of Use Requirements.]

**Employee training.** [Provide the procedures used to ensure that employees are properly trained, in a language and literacy level they can understand, to prevent silica exposures.]

## **Exposure controls and work practices**

Effective wet methods must be used for all high-exposure trigger tasks to reduce employee exposure to airborne respirable crystalline silica to below the action level (AL) of 25 µg/m<sup>3</sup>. “Wet methods” mean water must cover the entire surface of the work object where the tool/equipment is in contact and either:

1. Applying a constant, continuous, and appropriate volume of running water directly onto the surface of the work object. When water flow is integrated with a tool, machine, or equipment, water flow rates must equal or exceed manufacturer recommendations and specifications to ensure effective dust suppression.
2. Submersing the work object underwater.
3. Water jet cutting (use of high-pressure water to cut material).

Employees engaging in high-exposure trigger tasks are prohibited from doing the following:

- Any use of compressed air:
  - On waste, dust, debris, residue, or other materials that may contain crystalline silica.
  - On any surface, clothing, or body surface that may contain crystalline silica.
  - To back flush, backwash, or clean water, air, or other type filters that may contain crystalline silica.
- Dry sweeping, shoveling, disturbing, or other dry clean-up of waste, dust, debris, or other materials that may contain crystalline silica.
- Using employee rotation as a means of reducing their exposure to respirable crystalline silica.
- Walking or moving equipment on or through dry dust, debris, residue, or other materials that may contain crystalline silica.

The above engineering and work practices must be implemented regardless of employee exposures, exposure assessments, or objective data.

## **Housekeeping and hygiene**

- Waste, dust, residue, debris, or other material generated, or that otherwise contain crystalline silica, must be promptly and properly cleaned up and placed into leak-tight containers, bags, or equivalent. At a minimum, all such waste, dust, residue, debris, or other material must be cleaned up at the end of each shift, and more frequently as needed to ensure there is no visible dust build-up in the workplace.
- Wet methods or vacuum cleaners equipped with HEPA filters must be used to collect all wastes, dusts, residues, debris, or other materials that are generated from high-exposure trigger tasks, or that otherwise contain or are contaminated with respirable crystalline silica.

- Employees engaged in housekeeping tasks must use respiratory protection in accordance with our respirator program and the respirator protection requirements outlined in this plan.
- Readily accessible washing facilities are provided in accordance with section 3366.

The above housekeeping practices must be implemented regardless of employee exposure, exposure assessments, or objective data.

## **Tasks Not Considered to be High Exposure**

The tasks listed in Table 2 are not high-exposure trigger tasks (i.e., they involve machining of artificial stone containing less than 0.1% crystalline silica or natural stone containing less than 10% crystalline silica, along with associated housekeeping and cleanup), but they do result in employee exposure to airborne RCS. These tasks must be done in regulated areas as required by section 5204(e) wherever an employee's exposure to airborne concentrations of respirable crystalline silica is, or can reasonably be expected to be, more than the permissible exposure limit (PEL) of 50 µg/m<sup>3</sup> averaged over 8 hours.

## **Housekeeping and hygiene**

- Dry sweeping or dry brushing is prohibited where it could contribute to employee exposure to respirable crystalline silica unless wet sweeping, HEPA-filtered vacuuming or other methods that minimize the likelihood of exposure are not feasible.
- Compressed air must not be used to clean clothing or surfaces if it could contribute to employee exposure to respirable crystalline silica unless either:
  - The compressed air is used in conjunction with a ventilation system that effectively captures the dust cloud created by the compressed air.
  - No alternative method is feasible.

## **Respirator Protection**

Where engineering, administrative, and work practice controls are not feasible, or during the time necessary to implement them, employees will be provided with and required to use an appropriate respirator in accordance with our respirator protection program and the requirements of section 5144.

Employees that perform high-exposure trigger tasks, or work within a regulated area where high-exposure trigger tasks are being performed, will be provided with, and required to wear the following types of respirators:

- A full face, tight-fitting powered-air purifying respirator (PAPR), or a respirator providing equal or greater protection, equipped with a HEPA, N100, R100, or P100 filter. A combination organic vapor and HEPA, N100, R100, P100 filter cartridge will be used when employees work with artificial stone, with the following two exceptions:
  1. The organic vapor cartridge may be omitted where there are no exposures over the PEL established in section 5155 for any organic compound known to be present in the artificial stone, based on information provided in the manufacturer's safety data sheet.
  2. Employees may be provided with a loose-fitting PAPR, a full facepiece air-purifying

respirator, or another respirator providing equal or greater protection when employee exposures to respirable crystalline silica are continuously maintained below the AL through representative air sampling conducted at least once every six months. This exception does not apply if there is a medical recommendation for use of a full face, tight-fitting PAPR, or other more protective respirator.

- A full face, tight-fitting supplied-air respirator in pressure-demand or other positive pressure mode for any employees known to be diagnosed with confirmed silicosis, or who meet the definition of suspected silicosis, or whenever there is a medical recommendation to use a supplied-air respirator.

## **Exposure Control Plan Review and Availability**

The effectiveness of the written exposure control plan will be evaluated at least annually and updated as necessary by [describe how this will be accomplished]

It will be made readily available for examination and copying upon request to each affected employee (or their designated representative) by [describe how this will be accomplished]

## Table 1 – High Hazard Trigger Tasks

[Each task listed below has been designated a number. Instead, consider identifying tasks via a machine name/number, process name, or other means that best suits your purposes]

TASK DESCRIPTION	EXPOSURE CONTROLS AND WORK PRACTICES	HOUSEKEEPING MEASURES	AIR MONITORING RESULTS
Include the: (1) Specific tools/equipment (other than controls) to be used. (2) Silica-containing material to be worked on/with. (3) Conditions (e.g., inside or outside; enclosed or open area; weather conditions – e.g., wet/humid or dry, windy).	Include: (1) Effective wet exposure control methods. (2) Work practices (e.g., prohibited practices and how employees' proper use of controls — via training — will be ensured, including preventive maintenance schedules). (3) Proper respiratory protection to be used (and when) to limit exposure to RCS and any other airborne contaminants of concern.	Include: (1) Prompt clean-up – at least by the end of shift. (2) Use of wet methods and/or HEPA filter vacuums. (3) Use of respirators. (4) Readily accessible washing facilities	[provide a summary of the range of employee airborne exposure levels determined for each task]
Task 1: [Describe Task]	[Describe Control Measures]	[Describe Housekeeping Measures]	[Corresponding Exposure Results]
Task 2: [Describe Task]	[Describe Control Measures]	[Describe Housekeeping Measures]	[Corresponding Exposure Results]
Task 3: [Describe Task]	[Describe Control Measures]	[Describe Housekeeping Measures]	[Corresponding Exposure Results]
Task 4: [Describe Task]	[Describe Control Measures]	[Describe Housekeeping Measures]	[Corresponding Exposure Results]
Task 5: [Describe Task]	[Describe Control Measures]	[Describe Housekeeping Measures]	[Corresponding Exposure Results]

## Table 2 – Tasks not considered to be high exposure

[Each task listed below has been designated a number. Instead, consider identifying tasks via a machine name/number, process name, or other means that best suits your purposes]

TASK DESCRIPTION	EXPOSURE CONTROLS AND WORK PRACTICES	HOUSEKEEPING MEASURES
Include the: (1) Specific tools/equipment (other than controls) to be used. (2) Silica-containing material to be worked on/with. (3) Conditions (e.g., inside or outside; enclosed or open area; weather conditions – e.g., wet/humid or dry, windy).	Include the: (1) Engineering controls (type of local exhaust system with the recommended airflow rates, method of water application and pressure/volume, etc.) (2) Work practices (e.g., how employees' proper use of controls — via training — will be ensured, routine exhaust filter or air flow checks, positioning of the exhaust ventilation in relation to the work, maintenance check schedules) (3) Proper respiratory protection to be used (and when) to limit employee exposure to RCS and any other airborne contaminants of concern.	Include: (1) Prohibit dry sweeping/brushing, where feasible. (2) Prohibit use of compressed air for cleaning unless done so in conjunction with effective ventilation or there is no feasible alternative.
Task 1: [Describe Task]	[Describe Control Measures]	[Describe Housekeeping Measures]
Task 2: [Describe Task]	[Describe Control Measures]	[Describe Housekeeping Measures]
Task 3: [Describe Task]	[Describe Control Measures]	[Describe Housekeeping Measures]
Task 4: [Describe Task]	[Describe Control Measures]	[Describe Housekeeping Measures]
Task 5: [Describe Task]	[Describe Control Measures]	[Describe Housekeeping Measures]

[Consider incorporating the detailed records of required employee exposure measurements done for tasks that are not considered to be high exposure, and summarizing in table 2 for each task, accordingly.]