

1. RESPIRABLE CRYSTALLINE SILICA EXPOSURE CONTROL PLAN

A. Purpose

The purpose of this written silica exposure control plan is to protect Russell Hinton workers from overexposure to respirable crystalline silica. Overexposure can lead to serious health problems such as silicosis, lung cancer, chronic bronchitis, kidney disease, and autoimmune diseases. Therefore, Russell Hinton will ensure that:

- No worker is exposed to respirable crystalline silica above the Permissible Exposure Limit (PEL) of 50 ug/m³;
- An exposure assessment is performed for each task which could expose Russell Hinton workers to respirable crystalline silica at or above the Action Level (AL) 25 ug/m³.
- Worker exposure will be reassessed whenever a change in production, process, control equipment, personnel, work practices, or any other reason that becomes apparent could change exposures to measure at or above the AL.
- Whenever they are feasible, engineering and work practice controls will be established and implemented to reduce and maintain exposures at or below the PEL.

This plan and Russell Hinton operations shall meet the requirements of Federal OSHA Standard 29 CFR 1926.1153 Respirable Crystalline Silica as well as any silica related Standards of Cal-OSHA.

B. General

Silica is the second most common mineral on earth and makes up nearly all of what we call “sand” and “rock.” Silica exists in many forms—one of these, “crystalline” silica (including quartz), is the most abundant and poses the greatest concern for human health in dust form. Some common materials that contain silica include:

- Rock and sand
- Topsoil and fill
- Concrete, cement, and mortar
- Masonry, brick, and tile
- Granite, sandstone, and slate
- Asphalt (containing rock and stone)
- Fibrous-cement board containing silica

Silica is a primary component of many common construction materials, and silica-containing dust can be generated during many construction activities, including:

- Abrasive blasting (e.g., of concrete structures)
- Jackhammering, chipping, or drilling rock or concrete
- Cutting brick or tiles
- Sawing or grinding concrete
- Tuck point grinding
- Road construction
- Loading, hauling, and dumping gravel
- Demolition of structures containing concrete
- Sweeping concrete dust

Unprotected workers performing these activities, or working in the vicinity, can be exposed to harmful levels of airborne silica. Per the OSHA Standard workers shall not be exposed to Crystalline Silica Dust

more than 50 ug/m³ (50 micrograms of respirable crystalline silica per cubic meter of air space) based on an 8-hour time weighted average (TWA). This level of exposure is the Permissible Exposure Limit. In order to limit Worker's exposure OSHA has set an Action Limit of 0.025 mg/m³ over an 8-hour period. Employees must not be exposed or expected to be exposed to airborne concentrations of silica more than 0.025 mg/m³ over an 8-hour period without Russell Hinton taking measures to control the silica exposure.

C. Assessment of Silica Dust Producing Tasks

Russell Hinton has reviewed the tasks that are performed by Russell Hinton's workers in the normal course of operations. Russell Hinton has reviewed manufacturers' SDS information and recommendations and has determined that the only silica dust producing task normally performed by Russell Hinton is sanding small amounts of fast drying drywall sealing compound that contains less than 5% silica and that is required to bear a Health Hazard warning label.

When pre-job and pre-task hazard assessments required in the Injury and Illness Program or when other information indicates that some new task may produce silica dust in excess of the Action Level, the Russell Hinton shall stop work on such tasks until an effective control procedure is established.

D. Controls and Procedures

Effective control options must be used to eliminate or reduce the risk to workers from the hazards of silica dust exposure. When standard procedures or a site-specific assessment requires protection from silica dust, follow the Exposure Control Plan below for standard sanding of silica containing material or develop a similar procedure for other task exposures

1) Engineering Controls

Where feasible, silica dust exposure must be controlled through engineering controls and work practices in preference to respiratory protection. Russell Hinton provides commercially available dust collection attachment devices as available for sanding devices for use whenever feasible when sanding any silica containing substance. See below for instructions on use of dust collection devices.

However, when sanding silica containing drywall compound Russell Hinton requires the use of respirators along with engineering and administrative controls.

2) Administrative Controls

Russell Hinton requires that when sanding any silica containing material when it is not feasible to use a dust collection device, no employee shall work more than 1 hour per day at that task.

3) Personal Protective Equipment

Russell Hinton requires that appropriate respirators be used whenever employees are exposed to dust from sanding silica containing materials. Safety glasses are also required when sanding.

⚠ Respirators alone are not sufficient protection from silica dust hazards.

4) Dust Collection Device Usage

Set Up: Prior to the use of the dust collection device, or any tool, the employee shall perform a visual inspection of the equipment to ensure it is safe for use. As required by manufacturer's instructions, the dust collection device shall be properly attached to the tool.

Cleaning: The dust collection device is equipped with a HEPA filter and collection tray. Per the manufacturer's recommendation the filter is disposable and should be discarded as directed. If the collection tray becomes full of dust and restricts use, the tray shall be cleaned in the following manner on the worksite:

Disconnect power source from the device then remove the collection tray.

If needed discard the filter. If the filter is still usable place it to the side.

Place the collection tray in a sealable plastic bag and shake the dust from the tray. Allow the dust to settle before opening the bag and removing the tray. Any residual dust can be cleaned from the tray with only a damp cloth. Allow the tray to dry before reinstalling. Reinsert the filter into the tray and replace it onto the device. A thorough cleaning of the collection tray shall be performed when the device is returned to the shop. A thorough cleaning consist of clearing dust with a HEPA vacuum and washing with water or damp cloth.

5) Housekeeping Practices

To further reduce the exposure of crystalline silica dust in the worksite, use the following housekeeping practices:

- Dry sweeping, and dry brushing of in affected work areas are not permitted by Russell Hinton employees.
- Use of compressed air to clean clothing or surfaces in affected work areas are not permitted by Russell Hinton employees.
- A HEPA vacuum or wet method will be used for all silica containing dust cleanup.

E. Site or Task Specific Procedures – Exposure Control Plan

 This Code of Safe Practice, specifically including Section D, serves as the Exposure Control Plan for standard operations when sanding silica containing drywall compound.

When by assessment or through other information, we determine that a Russell Hinton work activity puts our employees at risk of silica dust exposure above the Action Level of 25 μm^3 Time Weighted Average, an effective control procedure must be developed and implemented. The procedure must include a written plan to reduce that exposure. This plan will be provided and explained to the exposed employees, the job Foreman, and the Superintendent. The Safety Director is responsible for developing the plan.

Consideration for such plan should include:

- Exposure monitoring If needed to determine hazards or controls. the Safety Director will engage experts to perform monitoring and analysis.
 - ✧ Monitoring and analysis methods must comply with the requirements of Federal OSHA Standards 1926.1153 (d)(2) and 1926.1153 Appendix A.
- A description of the tasks in the workplace that involve respirable crystalline silica;
- A description of engineering controls, work practice controls, and respiratory protection used to limit worker exposure for each task;
- A description of the housekeeping measures used to limit worker exposure; and
- A description of the procedures used to restrict access to work areas, when necessary, to minimize the number of workers exposed and their level of exposure, including exposures generated by others on the jobsite.
- Conducting a periodic review of the effectiveness of the ECP. This would include a review of the available dust-control technologies to ensure these are selected and when practical.
- Ensuring that all required tools, equipment, and personal protective equipment and readily available and used as required by the ECP.
- Ensuring supervisors and employees are educated and trained to an acceptable level of competency.
- Following the Russell Hinton Respiratory Protection Program including maintaining records of training, fit-test results, safety huddles, and inspections.

F. Responsibilities

1) Superintendents and Safety

Ensuring that the materials (e.g., tools, equipment, and personal protective equipment) and other resources (i.e., employee training materials) required to fully implement and maintain this Exposure Control Program are readily available where and when they are required.

2) Foremen:

Obtain a copy of the ECP and make it available at the worksite

Selecting, implementing, and documenting the appropriate site-specific control measures

Provide adequate instruction to workers on the hazards of working with silica-containing materials and on the precautions specified in the job-specific plan covering hazards at the location

Direct the work in a manner that ensures the risk to workers is minimized and adequately controlled

Communication with the prime contractor and other sub-contractors to ensure a safe work environment

3) Employee:

Knowing the hazards of silica dust exposure

Using the assigned protective equipment in an effective and safe manner

Following established work procedures as directed by the Foreman

4) Safety

In addition to his responsibilities for specific jobs and exposures, The Safety Director is designated as the competent person for all Russell Hinton silica related activities. The Safety Director is responsible for implementation of this exposure control program, and will perform frequent and regular inspections of applicable areas of worksites, materials, and equipment to ensure that it is being properly implemented. The Russell Hinton Safety Director also will evaluate the effectiveness of this written silica exposure control plan at least annually, and update it as necessary to keep affected workers from overexposure to respirable crystalline silica.

G. Affected Area Access Restrictions

Russell Hinton restricts access by all others to areas where workers are performing silica dust producing tasks, and restricts access by its own affected workers who must perform work in areas where other trades are producing silica containing dust.

Prior to starting work on any project where respirable crystalline silica exposure is a concern the Safety Director will meet with all other affected employers to determine whether Russell Hinton workers could be exposed to respirable crystalline silica from the work of other trades on the project. Where potential exposures are identified, the Safety Manager will document the operations, their locations on the project, and when they will be performed.

Prior to starting work on any project where respirable crystalline silica exposure is a concern the Safety Director or Superintendent will meet with all Russell Hinton workers to inform them about the silica exposures on the project and the necessary affected area restrictions.

When Russell Hinton employees are performing tasks that Generate Respirable Crystalline Silica:

- The affected work area will be barricaded with stanchions and caution tape. The barricaded area will be large enough to prevent other trades outside of the barricades from overexposure to respirable crystalline silica.
- Signs stating, "Caution – Silica" will be posted around the perimeter of the barricaded areas

so that other trades will know why they should not to breach the barricade.

- The Russell Hinton Safety Director or Superintendent will inform all other affected employers on the project about the silica generating tasks that will be performed by Russell Hinton Co, their locations on the project, and when they will be performed.

When Russell Hinton workers must work in close proximity to other trades that are Generating Silica containing dust:

- Affected Russell Hinton workers will not enter the work area, but will report the issue to their site Foreman, Superintendent, or the Safety Director
- The Russell Hinton Foreman will reschedule the mechanical construction work in the affected area to another time when exposure to respirable crystalline silica is not a concern.
- When work in the affected area can't be rescheduled, access to affected Russell Hinton workers will not be restricted, but the Safety Manager or site Foreman will ensure that they are implementing the necessary safe work practices and protective measures to prevent overexposure to respirable crystalline silica in those work areas.

H. Communication to Employees

Training is required prior to using silica-containing materials or working in an environment known to contain airborne concentrations of silica. Periodic refresher training may also be required. An employee who may be exposed to silica is to be informed of the health hazards associated with exposure to silica, of measurements made of airborne concentrations of harmful substances at the worksite, and of procedures developed by Russell Hinton to minimize the employee's exposure.

Training will consist of the following:

- The hazards of exposure to silica including
 - o Cancer;
 - o Lung effects;
 - o Immune system effects; and
 - o Kidney effects.
- ☞ See Section I for detailed information on health hazards
- Specific tasks in the workplace that could result in exposure to respirable crystalline silica
 - Specific measures implemented by the employer to protect workers from exposure to respirable crystalline silica, including engineering controls, work practices, and respirators to be used
 - Safe work procedures to be followed (e.g., setup and use of equipment, disposal of silica waste, personal protective equipment, personal decontamination)
 - Responsibilities of various Russell Hinton employees including the identity of the designated competent person (see Section F)
 - The contents of the Safe Practice Code. Make a written copy available at no cost to each affected worker.

I. Health Hazards

Exposure to silica has been shown to cause silicosis, lung cancer, pulmonary tuberculosis and other airway diseases. Crystalline silica dust can cause a disabling, sometimes fatal disease called silicosis. The fine particles are deposited in the lungs, causing thickening and scarring of the lung tissue. The scar tissue restricts the lungs' ability to extract oxygen from the air. This damage is permanent, but symptoms of the disease may not appear for many years.

A worker may develop any of three types of silicosis, depending on the concentrations of silica dust and the duration of exposure:

- Chronic silicosis—develops after 10 or more years of exposure to crystalline silica at relatively low concentrations
- Accelerated silicosis—develops 5 to 10 years after initial exposure to crystalline silica at high concentrations
- Acute silicosis—develops within a few weeks, or 4 to 5 years, after exposure to very high concentrations of crystalline silica

Initially, workers with silicosis may have no symptoms; however, as the disease progresses, a worker may experience:

- Shortness of breath
- Severe cough
- Weakness

These symptoms can worsen over time and lead to death. Exposure to silica has also been linked to other diseases, including bronchitis, tuberculosis, and lung cancer.

J. Medical Surveillance

It is unlikely that any Russell Hinton employee will be required to use a respirator for more than 30 days per year. In such cases Russell Hinton provide Medical Surveillance Services in accordance with Cal-OSHA Standard 5192 (f). Surveillance Services shall be made available at no cost to each affected worker who will be required to use a respirator for all or part of a day more than 30 days per year.

K. Record Keeping

The Safety Director is responsible for obtaining and maintaining documents and records as required in this Code of Safe Practice and Federal OSHA Standard 1926.1153.

- Medical Surveillance Records shall be maintained and made available to affected workers in accordance with Federal OSHA Standard 1910.1020.
- Assessment, Monitoring, and Analysis records shall be maintained in accordance with Federal OSHA Standard 1926.1153 (j) and made available to affected workers in accordance with Federal OSHA Standard 1910.1020
- Records of all employee training shall be maintained in accordance with the Russell Hinton IIPP.