

SILICA CHECKLIST for EMPLOYERS

Step 1- Determine if there is potential employee exposure to *Silica*.

Because *Silica* is so abundant in our natural resources, it's possible that you use *Silica* and don't even know it!

It is likely that *Silica* is used in the workplace and that it is airborne if you answer YES to any of the following:

Industry <i>Are you in this industry?</i>	Occupations <i>Do you employ?</i>	Materials <i>Do you use?</i>
Abrasive blasting	Brickmason/stonemason	Abrasives
Asphalt pavement manufacturing	Construction laborer	Coal Dust
Blast furnaces	Crane and tower operator	Concrete
Cement manufacturing	Crushing and grinding machine operator	Dirt
Ceramic, clay, and pottery	Furnace, kiln, non-food oven operator	Filter Aids
Concrete mixing	Grinding, abrading, buffing, and polishing machine operator	Graphite, natural
Concrete tunneling	Hand molder/shaper (not jeweler)	Mica
Construction (mainly cement, concrete work)	Heavy-equipment mechanic	Mineral Products
Demolition	Janitor or cleaner	Paints
Electronics industry	Machinist	Pavement
Foundry industry: grinding, molding, shakeout, core room	Metals/plastics machine operator	Perlite
Hand molding, casting, and forming	Molding and casting machine operator	Plant Materials
Jack hammer operations	Mining machine operator	Plastic Fillers
Manufacturing abrasives, paints, soaps, and glass	Miscellaneous material moving equipment operator	Polishing compounds
Mining	Millwright	Portland Cement
Repair or replacement of linings of rotary kilns and cupola furnaces	Operating engineer	Sands
Rolling and finishing mills	Painter who sandblasts	Silicates
Sandblasting	Production supervisor	Slag
Setting, laying, and repairing railroad track.	Rock driller	Soapstone
Steelwork	Roof bolter	Soil
Stone, brick, and concrete block cutting, blasting, chipping, grinding, and sawing	Sandblaster	
Tunneling operations	Steelworker	
	Welder/cutter	

Verify that Silica is present by:

Reading Labels:

- A product that contains Silica should have a label that says so.
- The machines used in the operations may also be labeled with warning signs indicating the silica is being used.
- Manufacturer's responsibility: attach a label to all products that contain more than 0.1% Silica that may be hazardous when used.
- Employer's responsibility: ensure that the label is not removed or defaced.

Reading Material Safety Data Sheets (MSDS)

- These sheets contain data for all materials or products containing hazardous substances that are used at a business in quantities or for durations greater or longer than what a consumer would use.
- If a material or product contains crystalline silica in quantities greater than 0.1%, there must be a material safety data sheet for it.
- Manufacturer's responsibility: shall obtain or develop an MSDS for each hazardous chemical they produce, re-package, distribute, or import.
- Employer's responsibility: ensure access to MSDS for all hazardous materials at the workplace.

In some cases, there will be no labels or MSDS, such as during demolition work or when working with existing materials such as brick, concrete, or pavement. You can either assume that there is Silica present or you need to take samples to a qualified laboratory to have the sample analyzed for the presence of crystalline silica.

Step 2 - Measure and monitor employee exposure to Silica

If you suspect that employees may be exposed to airborne silica, you need to evaluate the potential exposure.

HIOSH recommends that you hire a trained specialist, such as a certified industrial hygienist, to evaluate employee exposures to airborne silica. A trained specialist should provide you with a report detailing the employees being monitored, they work they were doing, and what the time-weighted average exposure level was for that employee. They should also be informing you of your legal responsibilities with regard to employee notification, maintaining records, and what options you have if the exposure levels exceed regulatory permissible exposure limits (PELs)

Step 3: Take Corrective Action to Protect your Employees from Silica

You must implement the best possible permanent solution to reducing or eliminating the hazard. If such a solution cannot be enacted immediately, then you are required to implement a temporary control to protect your workers until the permanent solution is put in place.

§12-60-2(a)(3), Hawai'i Administrative Rules require that employers first

eliminate the hazard through a means such as substitution. If elimination or substitution is not feasible, engineering controls, administrative or work practice controls shall be used, and when those means are not feasible personal protective equipment may be used.

- Elimination or Substitution means using a different, safer material in place of the silica-containing substance.
- Engineering Controls – means to keep silica from becoming airborne. Installing local exhaust ventilation or using wet methods to keep the silica dust down are examples.
- Administrative or Work Practice Controls may include worker rotation to minimize the duration of exposure to silica, personal hygiene such as washing hands and face before eating, drinking, or smoking.
- Personal Protective Equipment – such as respirators, goggles, and gloves should only be used if all the previous methods were unable to reduce the exposure levels sufficiently or were infeasible.

Provide a medical evaluation if employees have been exposed over the permissible exposure limits. (§12-202-1(f), Hawai'i Administrative Rules):

- Chest X-ray (classified according to the 1980 International Labour Office).
- Classification of Radiographs of Pneumoconioses.
- Pulmonary function test.
- Annual evaluation for TB (tuberculosis).

Provide training in the hazards of crystalline silica to employees who are or may be at risk – [Hazard Communication Standard](#) (§12-203.1)