



Job Name _____

Date: _____

Subcontractor Name (If Applicable): _____

SILICA SAFETY TAILGATE TALK

What is Respirable Crystalline Silica?

Crystalline silica is a common mineral found in construction materials such as sand, stone, concrete, brick, and mortar. When workers cut, grind, drill, or crush materials that contain crystalline silica, very small dust particles are created.

These tiny particles (known as “respirable” particles) can travel deep into workers’ lungs and cause silicosis, an incurable and sometimes deadly lung disease. Respirable crystalline silica also causes lung cancer, other potentially debilitating respiratory diseases such as chronic obstructive pulmonary disease, and kidney disease. In most cases, these diseases occur after years of exposure to respirable crystalline silica.

How are Construction Workers Exposed to Respirable Crystalline Silica?

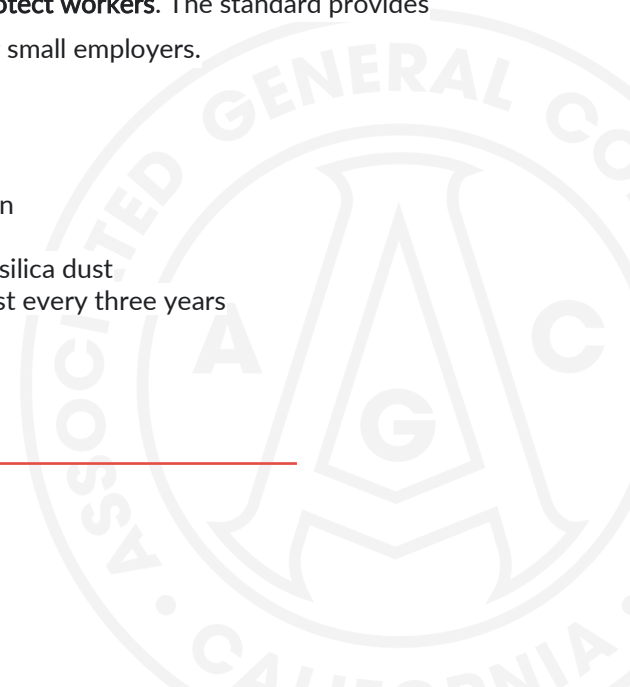
Exposure to respirable crystalline silica can occur during common construction tasks, such as using masonry saws, grinders, drills, jackhammers, and handheld powered chipping tools; operating vehicle-mounted drilling rigs; milling; operating crushing machines; using heavy equipment for demolition or certain other tasks; and during abrasive blasting and tunneling operations. About two million construction workers are exposed to respirable crystalline silica in over 600,000 workplaces.

What does the standard say?

Cal/OSHA’s Respirable Crystalline Silica [standard](#) for construction **requires employers to limit worker exposures to respirable crystalline silica and to take other steps to protect workers**. The standard provides flexible alternatives, which OSHA expects will be especially useful for small employers.

The standard also requires the following:

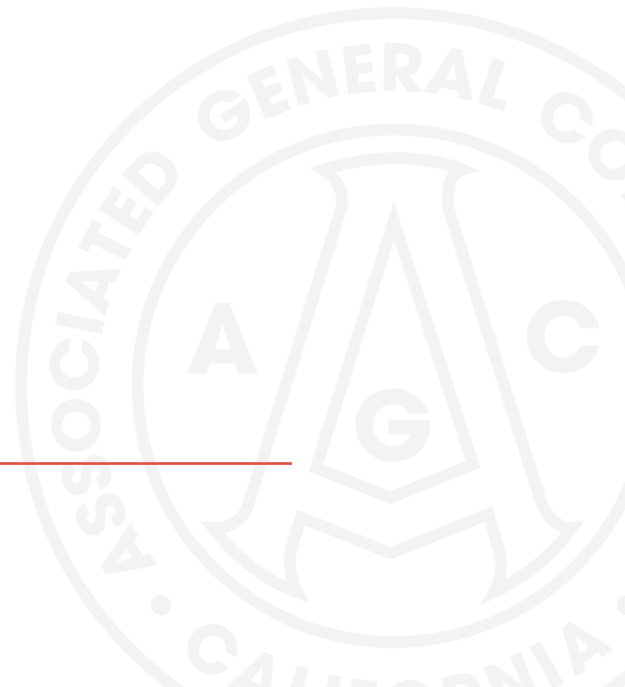
- Establishing and implementing a written exposure control plan
- Designating a competent person to implement the plan
- Restricting housekeeping practices which expose workers to silica dust
- Offering medical exams including x-rays and lung function test every three years
- Training workers
- Keeping records






OSHA SILICA Table 1

Table 1 matches 18 common construction tasks with effective dust control methods, such as using water to keep dust from getting into the air or using a vacuum dust collection system to capture dust. In some operations, respirators may also be needed. Employers who follow Table 1 correctly are not required to measure workers' exposure to silica from those tasks and are not subject to the permissible exposure limit.




See attached OSHA Silica Table 1.






1926.1153 Table 1—Specified Exposure Control Methods When Working With Materials Containing Crystalline Silica

Equipment/task	Engineering and work practice control methods	Required respiratory protection and minimum assigned protection factor (APF)	
		≤ 4 hours/shift	>4 hours/shift
(i) Stationary masonry saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions	None	None
			
(ii) Handheld power saws (any blade diameter)	Use saw equipped with integrated water delivery system that continuously feeds water to the blade Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions: -		
			
	When used outdoors	None	APF 10
	When used indoors or in an enclosed area	APF 10	APF 10
(iii) Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inches or less)	For tasks performed outdoors only: Use saw equipped with commercially available dust collection system Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency	None	None
			



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Equipment/task	Engineering and work practice control methods	Required respiratory protection and minimum assigned protection factor (APF)	
		≤ 4 hours/ shift	>4 hours/ shift
<p>(iv) Walk-behind saws</p>  <p>osha.gov</p>	<p>Use saw equipped with integrated water delivery system that continuously feeds water to the blade</p> <p>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions:</p> <p>When used outdoors</p> <p>-When used indoors or in an enclosed area</p>	<p>None</p> <p>APF 10</p>	<p>None</p> <p>APF 10</p>
<p>(v) Drivable saws</p>  <p>osha.gov</p>	<p>For tasks performed outdoors only:</p> <p>Use saw equipped with integrated water delivery system that continuously feeds water to the blade</p> <p>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions</p>	<p>None</p>	<p>None</p>
<p>(vi) Rig-mounted core saws or drills</p> 	<p>Use tool equipped with integrated water delivery system that supplies water to cutting surface</p> <p>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions</p>	<p>None</p>	<p>None</p>




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Equipment/task	Engineering and work practice control methods	Required respiratory protection and minimum assigned protection factor (APF)	
		≤ 4 hours/shift	>4 hours/shift
<p>(vii) Handheld and stand-mounted drills (including impact and rotary hammer drills)</p> 	<p>Use drill equipped with commercially available shroud or cowling with dust collection system</p> <p>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions</p> <p>Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism</p> <p>Use a HEPA-filtered vacuum when cleaning holes</p>	None	None
<p>(viii) Dowel drilling rigs for concrete</p> 	<p>For tasks performed outdoors only:</p> <p>Use shroud around drill bit with a dust collection system. Dust collector must have a filter with 99% or greater efficiency and a filter-cleaning mechanism</p>	APF 10	APF 10
<p>(ix) Vehicle-mounted drilling rigs for rock and concrete</p> 	<p>Use dust collection system with close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector</p> <p>OR</p>	None	None
<p>osha.gov</p>	<p>Operate from within an enclosed cab and use water for dust suppression on drill bit</p>	None	None



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Equipment/task	Engineering and work practice control methods	Required respiratory protection and minimum assigned protection factor (APF)	
		≤ 4 hours/ shift	>4 hours/ shift
(x) Jackhammers and handheld powered chipping tools  osha.gov	Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact: When used outdoors- When used indoors or in an enclosed area OR Use tool equipped with commercially available shroud and dust collection system Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism:	None APF 10	APF 10 APF 10
	When used outdoors -When used indoors or in an enclosed area	None APF 10	APF 10 APF 10
(xi) Handheld grinders for mortar removal (<i>i.e.</i> , tuckpointing)  eLCOSH.org	Use grinder equipped with commercially available shroud and dust collection system Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism	APF 10	APF 25


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Equipment/task	Engineering and work practice control methods	Required respiratory protection and minimum assigned protection factor (APF)	
		≤ 4 hours/ shift	>4 hours/ shift
	<p>OR</p> <p>Use machine equipped with dust collection system recommended by the manufacturer</p> <p>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions</p> <p>Dust collector must provide the air flow recommended by the manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism</p> <p>When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes</p>	None	None
<p>(xiv) Small drivable milling machines (less than half-lane)</p> 	<p>Use a machine equipped with supplemental water sprays designed to suppress dust. Water must be combined with a surfactant</p> <p>Operate and maintain machine to minimize dust emissions</p>	None	None
<p>(xv) Large drivable milling machines (half-lane and larger)</p> 	<p>For cuts of any depth on asphalt only:</p> <p>Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust</p> <p>Operate and maintain machine to minimize dust emissions</p> <p>For cuts of four inches in depth or less on any substrate:</p>	None	None

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Equipment/task	Engineering and work practice control methods	Required respiratory protection and minimum assigned protection factor (APF)	
		≤ 4 hours/shift	>4 hours/shift
	Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust	None	None
	Operate and maintain machine to minimize dust emissions		
	OR	None	None
	Use a machine equipped with supplemental water spray designed to suppress dust. Water must be combined with a surfactant		
	Operate and maintain machine to minimize dust emissions		
(xvi) Crushing machines	Use equipment designed to deliver water spray or mist for dust suppression at crusher and other points where dust is generated (e.g., hoppers, conveyers, sieves/sizing or vibrating components, and discharge points)	None	None
	Operate and maintain machine in accordance with manufacturer's instructions to minimize dust emissions		
osha.gov	Use a ventilated booth that provides fresh, climate-controlled air to the operator, or a remote control station		
(xvii) Heavy equipment and utility vehicles used to abrade or fracture silica-containing materials (e.g., hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials	Operate equipment from within an enclosed cab	None	None
	OR		
	When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions	None	None

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		≤ 4 hours/shift	>4 hours/shift
(xviii) Heavy equipment and utility vehicles for tasks such as grading and excavating but not including: Demolishing, abrading, or fracturing silica-containing materials eLCOSH.org 	Apply water and/or dust suppressants as necessary to minimize dust emissions OR	None	None
	When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab	None	None
	When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab	None	None

Suggestions:

MSDS Reviewed this week:

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#	Print Name:	Signature:	If you had an accident this week, insert date and describe below
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