



TOOLBOX TALK



SILICA STANDARD REVIEW

Silica is found in many minerals and materials common on construction sites, including sand, granite, concrete, brick, terracotta and most other types of rock. When workers cut, grind, abrasive blast, jackhammer or perform other high energy tasks that disturb these materials, respirable dust containing crystalline silica can be released into the air. Workers who inhale this dust are at risk.

The Occupational Safety and Health Administration (OSHA) has issued a Final Rule (29 CFR 1926.1153) to help combat diseases associated with crystalline silica exposure, including lung cancer, silicosis, chronic obstructive pulmonary disease, and kidney disease.

As of June 23, 2017, construction employers must comply with all requirements of the standard, except requirements for laboratory evaluation of exposure samples, which had a June 23, 2018 compliance date.

Standard Requirements:

The OSHA standard for crystalline silica dust requires employers to limit worker exposure and take further steps to ensure the safety of their workforce. Due to the new updates, employers can either use a control method listed in Table 1 of the construction standard, or they can measure workers exposure independently and further determine which safety measures will be taken.

Whichever method is chosen, all construction employers are required to:

- Establish and implement a written exposure control plan that identifies tasks that involve silica exposure and methods used to protect workers, including procedures to restrict access to work areas where high exposures may occur.
- Designate a competent person to implement the written exposure control plan.
- Restrict housekeeping practices that expose workers to silica where feasible alternatives are available.
- Offer medical exams – including chest X-rays and lung function tests – every three years for workers who are required by the standard to wear a respirator for 30 or more days per year.
- Train workers on work operations that result in silica exposure and ways to limit exposure. For example, use wet methods when feasible and if conditions permit.
- Keep records of workers' silica exposure and medical exams.



What is Table 1?

Table 1 describes certain construction equipment/tasks and matches them with dust control methods so that employers know what steps need to be taken to limit employee exposure to respirable crystalline silica dust. The dust control measures listed in the table include methods known to be effective, like using water to keep dust from getting into the air or using ventilation to capture the dust. In some operations, respirators may also be needed. Employers who comply with Table 1 are not required to measure workers' silica exposure and are not subject to the permissible exposure level (PEL).

Alternative Control Measures to Table 1:












Employers that do not utilize Table 1 are required to:

- Measure the amount of silica exposure. The permissible exposure limit (PEL) is 25 micrograms per cubic meter (25 µg/m³) of air as an eight-hour time-weighted average.
- Protect workers from respirable crystalline silica exposures above the permissible exposure limit (PEL) of 50 µg/m³, averaged over an eight-hour day.
- Use dust controls to protect workers from silica exposures above the PEL.
- Provide respirators to workers when dust controls cannot limit exposures to the PEL.

See Table 1 example on the back of this sheet.

Table 1 Example

CONTROLLING SILICA EXPOSURE USING TABLE 1

Equipment / Task	Engineering and Work Practice Control Methods	Respirator Requirements and Minimum Assigned Protection Factor (APF) for <u>Less</u> Than 4 Hours	Respirator Requirements and Minimum Assigned Protection Factor (APF) for <u>More</u> Than 4 Hours
<p>1 Stationary Masonry Saws</p> 	<ul style="list-style-type: none"> 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 Required)	(None Required)
<p>2 Handhelp Power Saws (any blade diameter)</p> 	<ul style="list-style-type: none"> 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: <p>When used Indoors or in an enclosed area:</p>	<p>When used Outdoors: (None Required)</p>	  (APF 10 Required)   (APF 10 Required)
<p>3 Dowel Drilling Rigs for Concrete</p> 	<p>For tasks performed outdoors only:</p> <ul style="list-style-type: none"> 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. Use a HEPA-filtered vacuum when cleaning holes. 	  (APF 10 Required)	  (APF 10 Required)

Talk Given By:	Date:
Company Name:	Location:
Printed Name	Signature

Under the Occupational Safety and Health Act, employers are responsible for providing a safe and healthy workplace and workers have rights. OSHA can help answer questions or concerns from employers and workers. OSHA's On-site Consultation Program offers free and confidential advice to small and medium-sized businesses, with priority given to high-hazard worksites. For more information, contact your regional or area OSHA office, call 1-800-321-OSHA (6742), or visit www.osha.gov.

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