

SAFETY BULLETIN



Safety news, laws and issues affecting the concrete contractor

AMERICAN SOCIETY OF
CONCRETE CONTRACTORS

OSHA's New Final Rule on Crystalline Silica Dust

As concrete contractors, we must be aware of the hazards and health risks related to crystalline silica. Exposure to crystalline silica is a danger we face nearly every day in our industry. Long term, unprotected exposure can lead to silicosis, a disabling, non-reversible and sometimes fatal illness resulting from scarring of lung tissue when crystalline silica is inhaled. Since this illness and its risks to long term health have been identified, the construction industry has been held to the general industry standards pertaining to silica (29 CFR 1910.94 Ventilation, 1910.1000 air contaminants, Table Z-3 Mineral Dusts). That recently changed when OSHA's new final rule, specifically for the construction industry, went into effect June 23, 2016, with a one year leeway for the industry to fully comply. The ruling cuts the Permissible Exposure Level (PEL) by half, to 50 micrograms per cubic meter of air measured over an 8 hour day; a significant change that all concrete-related trades need to prepare for. It also establishes several new provisions that employers must implement and uphold.

The new standard outlines two methods of approach. Option 1: Implement a monitoring program or any combination of objective data to prove employees have exposure levels below the PEL. If over the action limit (lower than the PEL), control and monitoring are required. The company is required to perform monitoring and baseline testing to sample and verify the exact level of exposure, while performing tasks which may expose an employee to a potentially unsafe level of silica. Option 2: Utilizing Table 1, select from a list of tool type control methods for protecting workers. In choosing this option, additional air monitor testing is not required. Although this Table encompasses some work tasks and tools that help mitigate the exposure, it does not cover every task or tool.

Table 1 Sample

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

For more information review Table 1 at <https://www.osha.gov/silica/SilicaConstructionRegText.pdf>

As stated above, the new standard was officially effective as of June 23, 2016, however the construction industry has exactly one year (June 23, 2017) to fully comply. Major provisions of the new construction standard include:

- Establish and implement a Written Exposure Control plan that specifically identifies tasks that involve silica exposure and methods to protect workers. A designated Competent Person shall be tasked to implement this plan.
- Measure the amount of silica that workers are exposed to if it may be at or above an action level of 25 µg/m³ (micrograms of silica per cubic meter of air), averaged over an 8-hour day;
- Protect workers from respirable crystalline silica exposures above the PEL of 50 µg/m³, averaged over an 8-hour day;
- Limit workers' access to areas where they could be exposed above the PEL;
- 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;

- Offer medical exams — including chest X-rays and lung function tests — every three years, for workers exposed above the PEL for 30 or more days per year;
- Train workers on work operations that result in silica exposure and ways to limit exposure; and
- Keep records of workers' silica exposure and medical exams.

It is important that we educate ourselves thoroughly and seek out resources for assistance. These might include your insurance carrier, brokers, and/or third party consultants. You may want to retain a Certified Industrial Hygienist (CIH) to evaluate your operations and help develop policies, procedures and control measures that best fit your scope of work. It will require a big effort as an industry to properly comply with this new standard.

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