

OSHA's New Rule for Respirable Crystalline Silica

Starting June 23, 2016, a new OSHA Rule for respirable crystalline silica will be in effect. The new rule is comprised of two standards, one for Construction and one for General Industry and Maritime. Standards regarding silica have not been updated in 45 years.

Exposures to crystalline silica dust occur in common workplace operations involving cutting, sawing, drilling, and crushing of concrete, brick, block, rock, and stone products (such as construction tasks), and operations using sand products (e.g., glass manufacturing, foundries, sandblasting, and hydraulic fracturing).

Inhaled respirable crystalline silica causes lung cancer, silicosis, chronic obstructive pulmonary disease (COPD) and kidney disease. OSHA estimates that the rule will save over 600 lives and prevent more than 900 new cases of silicosis each year, once its effects are fully realized. About 295,000 workers are exposed to respirable crystalline silica in over 75,000 General Industry and Maritime workplaces.



A ready-mix concrete truck in operation.

What Does the Standard Require?

The standard for General Industry and Maritime requires employers to:

- Measure the amount of silica that workers are exposed to if it may be at or above ***an action level of 25 µg/m³***, averaged over an 8-hour day;
- Protect workers from respirable crystalline silica exposures above ***the permissible exposure limit (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;
- Restrict housekeeping practices that expose workers to silica where feasible alternatives are available;
- Establish and implement ***a written exposure control plan*** that identifies tasks that involve exposure and methods used to protect workers;
- Offer ***medical exams*** — including chest ***x-rays and lung function tests*** — every three years for workers exposed at or above the action level for 30 or more days per year;
- Train workers on work operations that result in silica exposure and ways to limit exposure; and
- Retain records of workers' silica exposure and medical exams.

Air Monitoring

One of the best ways to determine employee exposure to respirable crystalline silica (as with other air contaminants), is employee air monitoring. The sampling and analytical methods previously used have not changed; however, there are some additional specifications for laboratories within the new rule that employers should review prior to choosing a laboratory to handle their samples.

Dust Control Methods

In most cases, engineering controls such as wetting materials/work operations and local ventilation can be used to limit worker exposure. Process isolation is another common control to limit the employee

exposure. These technologies are widely available, affordable and already commonly used by many employers. Respirators are only allowed when engineering and work practice controls cannot maintain exposures at or below the PEL.

Compliance Terms

Both standards contained in the Final Rule take effect on **June 23, 2016**, after which industries have one to five years to comply with most requirements, based on the following schedule:

- **Construction** - June 23, 2017, one year after the effective date,
- **General Industry and Maritime** - June 23, 2018, two years after the effective date,
- **Hydraulic Fracturing** - June 23, 2018, two years after the effective date for all provisions except engineering controls, which have a compliance date of June 23, 2021, and
- **Medical surveillance** must be offered to employees who will be exposed **above the PEL** for 30 or more days a year starting June 23, 2018. Medical surveillance must be offered to employees who will be exposed **at or above the action level** for 30 or more days a year starting on June 23, 2020.



A worker cutting granite using a saw that applies water to the blade. The water reduces the amount of silica-containing dust that gets into the air.

For more Information visit:

<https://www.osha.gov/silica>

www.affinityconsultants.com

Affinity is here to help your company comply with the new silica rule. We have experienced staff to assist you with air monitoring, writing your exposure control plan and compliance with all the requirements of the new rule for respirable crystalline silica.