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OSHA's Final Rule to Protect Workers From Exposure to Respirable Crystalline Silica

Loss Control Bulletin

OSHA released its long-anticipated rule reducing the permissible exposure level (PEL) for crystalline silica for general industry and construction. 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.

What is Crystalline Silica?

Crystalline silica is a common mineral found in many naturally occurring materials and used in many industrial products and at construction sites. Materials like sand,concrete, stone, and mortar contain crystalline silica. It is also used to make products such as glass, pottery, ceramics, bricks, concrete, and artificial stone. Industrial sand used in certain operations, such as foundry work, is also a source of silica exposure.

What is the Relationship Between Silica Exposure and Lung Cancer?

There is strong scientific evidence showing that exposure to respirable crystalline silica can increase a person's risk of developing lung cancer. The World Health Organization's International Agency for Research on Cancer, the leading international voice on cancer causation, has conducted extensive reviews of the scientific literature and has designated crystalline silica as a known human carcinogen. The American Cancer Society has adopted the World Health Organization and National Institutes of Health's (NIH)determinations.

Why is OSHA Issuing a New Crystalline Silica Rule?

OSHA's previous PELs for silica were outdated and did not adequately protect the health of workers. The previous PELs were based on studies from the 1960s and earlier that did not reflect more recent scientific evidence showing that low-level exposures to silica cause serious health effects, including lung cancer. Previous construction PELs were based on an old method of measuring worker exposures to silica that is not used today.

Key Provisions

- Protect workers from respirable crystalline silica exposures above the PEL of 50 µg/m3, averaged over an eight-hour day.
- Limit workers' access to areas where the exposure level is 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. Designate a competent person to implement the written exposure control plan.
- 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.
- Keep records of workers' silica exposure and medical exams.

- 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. (Medical surveillance must be offered to employees who will be exposed **above the PEL** for 30 or more days a year starting on June 23, 2018.)

Compliance Schedule

Both standards contained in the final rule took effect on June 23, 2016. After this date, industries have one to five years to comply with most requirements based on the following schedule:

Construction: September 23, 2017, one year and three months after the effective date

General Industry: June 23, 2018, two years after the effective date

Additional Information

The construction standard provides flexible alternatives, which is especially useful for small employers. Employers can either use a control method detailed in Table 1 of the construction standard, or they can measure workers' exposure to silica and independently decide which dust controls work best to limit exposures to the PEL in their workplaces.

OSHA's Table 1:

https://www.osha.gov/silica/Table1sect1926.1153.pdf