

OSHA's Proposed Crystalline Silica Rule: General Industry and Maritime

OSHA is proposing two standards to protect workers from exposure to respirable crystalline silica—one for general industry and maritime, and the other for construction—in order to allow employers to tailor solutions to the conditions in their workplaces.

About 320,000 workers are currently exposed to respirable crystalline silica in general industry and maritime workplaces. Some of the affected industries are shown below.

Number of Workers Exposed to Respirable Crystalline Silica in Selected General Industry/Maritime Sectors		
Industry sector	Number of workers currently exposed	Number of workers currently exposed above proposed PEL
Asphalt Roofing Materials	4,395	1,963
Concrete Products	54,449	19,204
Cut Stone	12,085	7,441
Dental Laboratories	41,194	1,329
Foundries	48,223	24,658
Jewelry	10,508	4,600
Porcelain Enameling	5,545	1,932
Pottery	10,148	4,777
Railroads	16,895	5,629
Ready-Mix Concrete	43,920	32,110
Shipyards	4,550	3,250
Structural Clay Products	8,435	4,377
Support Activities for Oil and Gas Operations	25,440	16,056

Source: OSHA Directorate of Standards and Guidance

The proposed rule is expected to save nearly 700 lives and prevent 1,600 new cases of silicosis per year once the full effects of the rule are realized. Of these, over 130 lives would be saved and over 540 cases of silicosis would be prevented among general industry and maritime workers.

Major Provisions of the Proposed General Industry/Maritime Standard

The proposed standard for general industry and maritime includes provisions for 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** (micrograms of silica per cubic meter of air), 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;
- 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.

Examples: Dust Control Methods

In most cases, dust controls can be used to limit workers' exposure to silica. Examples of effective dust controls are shown below. These technologies are widely available and already commonly used by many employers.

Wet methods

This worker is using a saw with a built-in system that applies water to the saw blade. Wet methods are a common way to limit the amount of dust that gets into the air.



Ventilation

This worker is grinding castings in a foundry. The work is done in a ventilated



booth that draws air away from the worker so he doesn't breathe the dust created by the grinding. This method can be used in material handling (such as bag dumping), mixing operations, rock crushing, and other dust-producing activities.

Enclosures

This worker is using an enclosure while abrasive blasting dental castings in a dental laboratory. Enclosures create a barrier between the worker and the source of exposure. This can be done by methods such as:

- Enclosing an operation in an airtight housing;
- Covering conveyors and transfer drums used to move silica-containing materials so that silica dust doesn't get in the air; or
- Separating workers from the activity, such as when workers are in enclosed cabs.



Additional Information

You can learn more about OSHA's proposed rule, including opportunities to participate in development of the rule, by visiting OSHA's Silica Rulemaking webpage at www.osha.gov/silica.

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

For assistance, contact us. We can help. It's confidential.



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