



National Association of Home Builders

Overview of the OSHA Crystalline Silica (Construction); Final Rule

On March 25, 2016, the Federal Occupational Safety and Health Administration (OSHA) issued the Final Rule on Occupational Exposure to Respirable Crystalline Silica for Construction. OSHA projects that about two million construction workers who drill and cut silica-containing materials such as concrete and stone are exposed to breathable silica and the agency estimates that this new standard ([29 CFR 1926.1153](#)) will save more than 600 lives annually and prevent more than 900 new cases of silicosis each year.

The requirements of this rule will become effective **June 23, 2016**. However, construction employers have until **June 23, 2017** to comply with all requirements.

The final silica rule has a number of significant changes from the proposed rule which will apply to a wide range of employers who are involved with common residential construction tasks such as using masonry saws, grinders, drills, jackhammers, performing milling, and using heavy equipment for grading and excavating. Key provisions of the final rule, include:

Scope of the Rule

The standard applies to all occupational exposures to respirable crystalline silica in construction work, except where employee exposures will remain below 25 micrograms per cubic meter of air (25 $\mu\text{g}/\text{m}^3$) as an 8-hour time-weighted average (TWA) under any foreseeable conditions.

Examples of tasks with low exposures include, mixing mortar; pouring concrete footers, slab foundation and foundation walls; removing concrete formwork; and finishing drywall.

Permissible Exposure Limit (PEL)

Workers must be protected from respirable crystalline silica exposures above the permissible exposure limit of 50 $\mu\text{g}/\text{m}^3$ (micrograms of silica per cubic meter of air), averaged over an eight-hour day.

Specified Exposure Control Methods (Table 1)

Employers can either use: 1) a control method in Table 1 of the construction standard; or 2) they can measure workers' exposure to silica and independently decide which dust controls – if any are required – work best to limit exposures on the jobsite.

Table 1 is intended to match common construction tasks with dust control methods, so employers know exactly what they need to do to limit worker exposures to silica. The dust control measures listed in the table include OSHA identified methods known to be effective, like using water to keep dust from getting into the air or using ventilation to capture dust. For some operations or tasks, respirators may also be needed.

Employers who follow Table 1 must fully and properly implement the engineering controls, work practices, and respiratory protection specified in the table. However, if done correctly employers are **not** required to measure workers' exposure to silica (i.e., perform exposure assessments/air monitoring) and are **not** subject to the PEL.

The eighteen (18) tasks identified in Table 1 include using the following equipment:

<ol style="list-style-type: none"> 1. Stationary masonry saws 2. Handheld power saws (any blade diameter) 3. Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inches or less) 4. Walk-behind saws 5. Drivable saws 6. Rig-mounted core saws or drills 7. Handheld and stand-mounted drills (including impact and rotary hammer drills) 8. Dowel drilling rigs for concrete 9. Vehicle-mounted drilling rigs for rock and concrete 	<ol style="list-style-type: none"> 10. Jackhammers and handheld powered chipping tools 11. Handheld grinders for mortar removal (i.e., tuckpointing) 12. Handheld grinders for uses other than mortar removal 13. Walk-behind milling machines and floor grinders 14. Small drivable milling machines (less than half-lane) 15. Large drivable milling machines (half-lane and larger) 	<ol style="list-style-type: none"> 16. Crushing machines 17. Heavy equipment and utility vehicles used to abrade or fracture silica containing materials (e.g., hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials 18. Heavy equipment and utility vehicles for tasks such as grading and excavating but not including: demolishing, abrading, or fracturing silica-containing materials
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NOTE: for tasks performed using wet methods: water must be applied in sufficient quantity to minimize visible dust; for tasks performed indoors: the accumulation of visible airborne dust must be minimized; and for enclosed equipment cabs: they must be maintained free from settled dust.

Alternative Exposure Control Methods

For tasks **not** listed in Table 1 or where employers **do not** fully and properly implement the engineering controls, work practices, and respiratory protection described in the table, employers alternatively must:

1. Conduct exposure assessments to measure the amount of silica that workers are exposed to if it is reasonably expected to be at or above an action level of 25 µg/m³, averaged over an eight-hour day.
2. Protect workers from respirable crystalline silica exposure if measured above the permissible exposure limit of 50 µg/m³, averaged over an eight-hour day.
3. If silica exposures are above the PEL, protect workers using dust controls, unless controls are not feasible.
4. When dust controls cannot limit exposures to the PEL, provide workers with respirators.

Respiratory Protection

Employers must provide each employee an appropriate respirator that complies with the requirements of § 1926.1153 (e) and [29 CFR 1910.134](#). When respirators are used, a respiratory protection program must be established.

Housekeeping

Housekeeping practices that expose workers to silica must be restricted, where feasible alternatives are available. Dry sweeping is **prohibited** unless wet sweeping, HEPA-filtered vacuuming, or other methods are not feasible.

Written Exposure Control Plan

Establish and implement a written exposure control plan that identifies tasks that involve exposure and methods used to protect workers including engineering controls, work practices, and respiratory protection, as specified in §1926.1153 (g). The plan must be evaluated at least annually.

Work Area Access

The written exposure control plan must include procedures to restrict access to work areas where high exposures may occur.

Competent Person

Employers must designate a competent person to implement the written exposure control plan and make frequent and regular inspections of the jobsite, materials, and equipment. The competent person is the designated individual who is capable of identifying silica hazards on the jobsite and who possesses the authority to take corrective measures to eliminate or minimize them.

Medical Surveillance

Workers who are required by the construction standard to wear a respirator for thirty (30) or more days per year must be offered medical exams, at no cost to workers, performed by a physician or other licensed health care professional (PLHCP). Exams include chest X-rays, lung function and tuberculosis tests, and must be offered as a baseline/initial examination and at least every three years.

Hazard Communication

Respirable crystalline silica must be included in the employer's hazard communication program, in accordance with [29 CFR 1910.1200](#). Labels and Safety Data Sheets (SDS) for silica containing materials must be available to workers.

Training

Train workers on specific tasks that could result in silica exposure and measures the employer has taken to limit exposure, including engineering controls, work practices, and respiratory protection.

Recordkeeping

Keep records of workers' silica exposure (i.e., air monitoring data) and medical exams. Employers must ensure records are maintained and made available in accordance with [29 CFR 1910.1020](#).

State Plan States

State Plans must issue job safety and health standards that are "at least as effective as" comparable federal standards within 6 months of federal issuance. However, State Plans also have the option to promulgate more stringent standards or standards covering hazards not addressed by federal standards.

More information on OSHA's Final Rule on Crystalline Silica (Construction) can be found at <https://www.osha.gov/silica/>.

If you should have any questions about this OSHA rule or other construction safety issues, please feel free to contact the National Association of Home Builders (NAHB) Labor, Safety and Health Policy staff: Rob Matuga at 202-266-8507 / rmatuga@nahb.org or Chelsea Veticick at 202-266-8590 / cvetick@nahb.org.

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