

Complying with New Silica Regulations

News: OSHA fines increase more than 75 percent

The federal Occupational Safety and Health Administration [raised its maximum civil penalties](#) by 78 percent Aug. 1, and the increased fines can apply to any violation that occurred after Nov. 2, 2015, if the penalty is assessed after Aug. 1. Congress mandated the change with the Federal Civil Penalties Inflation Adjustment Act of 2015, which requires federal agencies to adjust penalties annually based on the Consumer Price Index and to institute catch-up rules to amend penalties based on the last time they increased. OSHA's rise is steep because it has not increased maximum fines since 1990. The top penalty for willful or repeated violations will rise from \$70,000 to \$124,709, while the maximum penalty for other violations will increase from \$7,000 to \$12,471. If your company works in one of the 28 states that have OSHA-approved state plans, expect those fines to go up as well because state plan penalties must be at least as effective as federal OSHA penalties.

For more information on OSHA penalties, see osha.gov/penalties.html. Increasing fines are just one of many reasons to [develop an effective safety and health program](#) and review [how to handle an OSHA jobsite inspection](#).

Key Points

- A federal OSHA rule dramatically reducing the amount of silica dust workers can be exposed to went into effect June 23, and landscape-industry companies have one to two years from that date to comply with its requirements. This is the first time since the early 1970s that regulations limiting workers' exposure to silica dust have been changed.
- Crystalline silica is a component of sand, stone, concrete, asphalt, brick, block, and mortar, and breathing silica dust can scar the lungs and cause potentially fatal health problems including [silicosis](#), lung cancer and kidney disease.
- Landscape workers can be exposed to crystalline silica when they cut brick, stone, or masonry, or mix or cut concrete. Hauling and dumping rock, sand, or masonry, and sweeping or using a leaf blower to move dust or dirt also can create silica dust.
- About 2.3 million people in the United States are exposed to respirable crystalline silica on the job, according to OSHA, which estimates the new regulation will save more than 600 lives and prevent more than 900 cases of silicosis each year.

Employers' and Supervisors' Checklist

- ✓ Be sure you are following current [federal OSHA](#) as well as state and local regulations regarding protecting employees from silica-dust exposure.
- ✓ Prepare to comply or begin complying with exposure limits in the [new rule](#).
- ✓ Know when you must comply with the new rule. The rule is comprised of two standards, one for [Construction](#) and one for [General Industry and Maritime](#). Compliance with the Construction standard must take place by June 23, 2017, and compliance with the General Industry and Maritime standard must take place by June 23, 2018.
- ✓ Understand that because both Construction and General Industry standards apply to the landscape industry, your company's compliance date and the specifics of the standard you

must follow could vary depending on the ***type of work being performed***. Construction work in landscaping includes activities such as hardscaping and irrigation-system installation. Maintenance is covered under the General Industry standard and includes activities such as mowing, leaf blowing, edging and mulching.

- ✓ Be aware the respirable-crystalline-silica exposure limit in the new rule (both the Construction and General Industry standards) is 50 micrograms per cubic meter of air, averaged over an 8-hour shift. The previous rule for Construction capped exposure at 250 micrograms of silica per cubic meter of air (averaged over an 8-hour shift), while the previous General Industry exposure limit was 100 micrograms of silica per cubic meter of air (averaged over an 8-hour shift).
- ✓ Know the new rule requires employers to: use engineering controls (such as water or ventilation) to help keep worker exposure to respirable crystalline silica at a permissible level; provide respirators when engineering controls cannot adequately limit exposure; limit worker access to high-exposure areas; develop a written exposure-control plan, offer medical exams to highly exposed workers, and train workers on silica risks and how to limit exposures.
- ✓ Provide workers with wet-cutting saws/systems or vacuum dust collection systems when they cut masonry products. These are typically the most effective engineering controls in landscape applications. Also post warning signs around worksites where crystalline silica dust may be suspended in the air and provide appropriate respirators for workers who might be exposed. For more information on how to protect workers from silica dust on landscaping jobsites, see this previous [Safety Training Article](#) and this one on [Operating Masonry Saws](#).
- ✓ Make the written silica-dust-exposure-control plan part of your company's overall [safety and health program](#) and employee training. Crystalline silica should be addressed in the written hazard-communication plan included in your overall safety and health program as well. Also develop a specific safety and health plan for each jobsite that includes recognizing when silica dust might be present and measures you will take to control or eliminate it.
- ✓ Federal OSHA is offering assistance to employers – especially small businesses – to help them protect workers from silica exposure. Visit [this page](#) for updates on compliance-assistance materials and events; also check out OSHA's [on-site consulting services for small businesses](#).

Crew Members' Dos and Don'ts

Do:

- Understand the possible consequences of inhaling silica dust: lung cancer, silicosis, chronic obstructive pulmonary disease and kidney disease. These health problems can be disabling and fatal. With silicosis, shards of silica dust embed in the lungs, and scar tissue develops over them. This decreases the lungs' ability to take in oxygen, causing many victims to suffocate.
- Know that smoking adds to the lung damage caused by silica exposures.
- Be aware of the operations and job tasks creating crystalline silica exposures in your work environment. Anytime stone, asphalt, concrete, brick, or other masonry products are dry cut, silica dust is in the air. Mixing concrete or hauling/dumping rock, sand, or masonry also can create silica dust. Sweeping or using a leaf blower to move dust or dirt can result in airborne silica dust as well.
- Wet cut masonry, concrete, and stone whenever possible.

- When using a wet-cutting system, check that hoses are securely connected and are not cracked or broken, adjust nozzles so water goes directly to the cutting area, rinse or replace water filters often, and replace basin water when it becomes gritty or silty from the dust.
- Use a vacuum dust collection system if wet cutting isn't possible.
- When using vacuum dust collection systems, keep the vacuum hose clear and free of debris, kinks, and tight bends; turn the vacuum off and on regularly to reduce dust buildup on the filter if it is not self-cleaning; and change vacuum-collection bags as needed.
- Wear a respirator when instructed to do so. Your company should provide an appropriate respirator when work practices and engineering controls cannot limit your silica-dust exposure to a safe level.
- Attend all training sessions your company provides and follow instructions regarding work practices to limit silica exposure, proper use of respirators, and circumstances under which respirators should be worn.
- Vacuum dust from your clothes before leaving the jobsite, and, if possible, shower and change into clean clothes before heading home.
- For additional guidance, see NIOSH's [Silicosis : Learn the Facts publication](#).

Don't:

- Cut stone, asphalt, concrete, brick, or other masonry products without following work practices and using controls that limit the amount of silica dust in the air.
- Use a leaf blower to move dusty materials or clean up gravel or gravel dust, construction dirt, plaster, cement, concrete dust, or dry topsoil. Use a vacuum or power broom with water instead.
- Eat, drink, or smoke in areas where silica dust is likely present.
- Wear a respirator until a doctor has determined you are healthy enough to do so. Respirators can aggravate asthma and increase susceptibility to heat exhaustion in people with certain conditions, such as diabetes.
- Neglect to shave facial hair before using a respirator. Beards, mustaches, and sideburns prevent a tight fit between the respirator and your skin.
- Alter a respirator or wear a respirator that is damaged or has dirty or clogged filters. Point out the issue to a supervisor.
- Shove a respirator into a pocket, vehicle compartment, or other compact area. Instead, store it in a hard plastic container, which should be provided by your employer.

Disclaimer: This safety sheet is provided by the National Association of Landscape Professionals (NALP) as a service to its members. Neither NALP nor its employees/contractors make any representation or warranties, express or implied, regarding the use of or reliance on the information provided herewith, regardless of its format or means of transmission. Members assume sole responsibility for compliance with safety requirements. NALP is not responsible for and expressly disclaims all liability or damages of any kind arising out of the use, reference to or reliance on any information contained within this publication.

Sponsored by:



Prepared by Olivia Grider for:



Olivia Grider has written regular health and safety articles for the landscaping and construction industries for more than 10 years. Since 2009, she has been a member of NALP's Safety and Risk Management Committee and served as the NALP safety research writer.