

CONTROL OF SILICA DUST IN CONSTRUCTION

Drivable Saws

Using a drivable saw to cut masonry, concrete, stone, or other silica-containing materials can generate *respirable crystalline silica* dust. When inhaled, the small particles of silica can irreversibly damage the lungs. This fact sheet describes dust controls that can be used to minimize the amount of airborne dust when using drivable saws as listed in Table 1 of the Respirable Crystalline Silica Standard for Construction, [29 CFR 1926.1153](#).

Engineering Control Method: Water continuously fed to saw blade

Wet Cutting

Wet cutting is an effective method to reduce exposure to silica dust when outdoors using drivable saws equipped with an integrated water delivery system. This system directs a continuous stream of water onto the blade where it wets the materials being cut and reduces the amount of dust generated. These saws have built-in water tanks, or water is supplied to the saw from a source such as a hose connected to a faucet or portable tank. Water flow rates must be sufficient to minimize the release of visible dust.



Photo courtesy of Husqvarna

A construction worker cutting pavement using a drivable saw with an integrated water delivery system.

The saw must be operated and maintained in accordance with manufacturers' instructions to minimize dust emissions. Focus on the following areas:

- **Check** that hoses are securely connected and are not cracked or broken.
- **Adjust** nozzles so that water goes to the blade and wets the cutting area.
- **Inspect** the saw blade before use to be sure it is in good condition and does not show excessive wear.

Clean up any slurry produced during wet cutting to prevent the slurry from drying and releasing silica dust into the air. Wet slurry can be cleaned up using shovels or a wet vacuum equipped with a HEPA filter.

If employers operate drivable saws indoors or in an enclosed area, they must conduct an exposure assessment and may need to take additional action.

Electrical Safety. Where water is used to control dust, electrical safety is a particular concern. Use ground-fault circuit interrupters (GFCIs) and watertight, sealable electrical connectors for electric tools and equipment on construction sites.

Respiratory Protection

When properly used outdoors, wet methods can effectively control silica dust. Therefore, Table 1 in the silica standard does not require use of respiratory protection when using wet methods

for outdoor operation of drivable saws. Table 1 does not apply to drivable saws used indoors or in enclosed areas. Therefore, if drivable saws are operated indoors or in an enclosed area, employers must conduct an exposure assessment and may need to take additional action including the use of respiratory protection.

When respirators are required, employers must put in place a written respiratory protection program in accordance with OSHA's Respiratory Protection standard [29 CFR 1910.134](#).

Additional Information

For more information, visit www.osha.gov/silica and see the OSHA Fact Sheet on the [Crystalline Silica Rule for Construction](#), and the [Small Entity Compliance Guide for the Respirable Crystalline Silica Standard for Construction](#).

OSHA can provide compliance assistance through a variety of programs, including technical assistance about effective safety and health programs, workplace consultations, and training and education. OSHA's On-Site Consultation Program offers free, confidential occupational safety and health services to small and medium-sized businesses in all states and several territories across the country, with priority given to high-hazard worksites. On-Site consultation services are separate from enforcement and do not result in penalties or citations. To locate the OSHA On-Site Consultation Program nearest you, visit www.osha.gov/consultation.

Workers' Rights

Workers have the right to:

- Working conditions that do not pose a risk of serious harm.
- Receive information and training (in a language and vocabulary the worker understands) about workplace hazards, methods to prevent them, and the OSHA standards that apply to their workplace.
- Review records of work-related injuries and illnesses.
- File a complaint asking OSHA to inspect their workplace if they believe there is a serious hazard or that their employer is not following OSHA's rules. OSHA will keep all identities confidential.
- Exercise their rights under the law without retaliation, including reporting an injury or raising health and safety concerns with their employer or OSHA. If a worker has been retaliated against for using their rights, they must file a complaint with OSHA as soon as possible, but no later than 30 days.

For additional information, see [OSHA's Workers page](#).

How to Contact OSHA

Under the Occupational Safety and Health Act of 1970, employers are responsible for providing safe and healthful workplaces for their employees. OSHA's role is to ensure these conditions for America's working men and women by setting and enforcing standards, and providing training, education and assistance. For more information, visit www.osha.gov or call OSHA at 1-800-321-OSHA (6742), TTY 1-877-889-5627.

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.



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