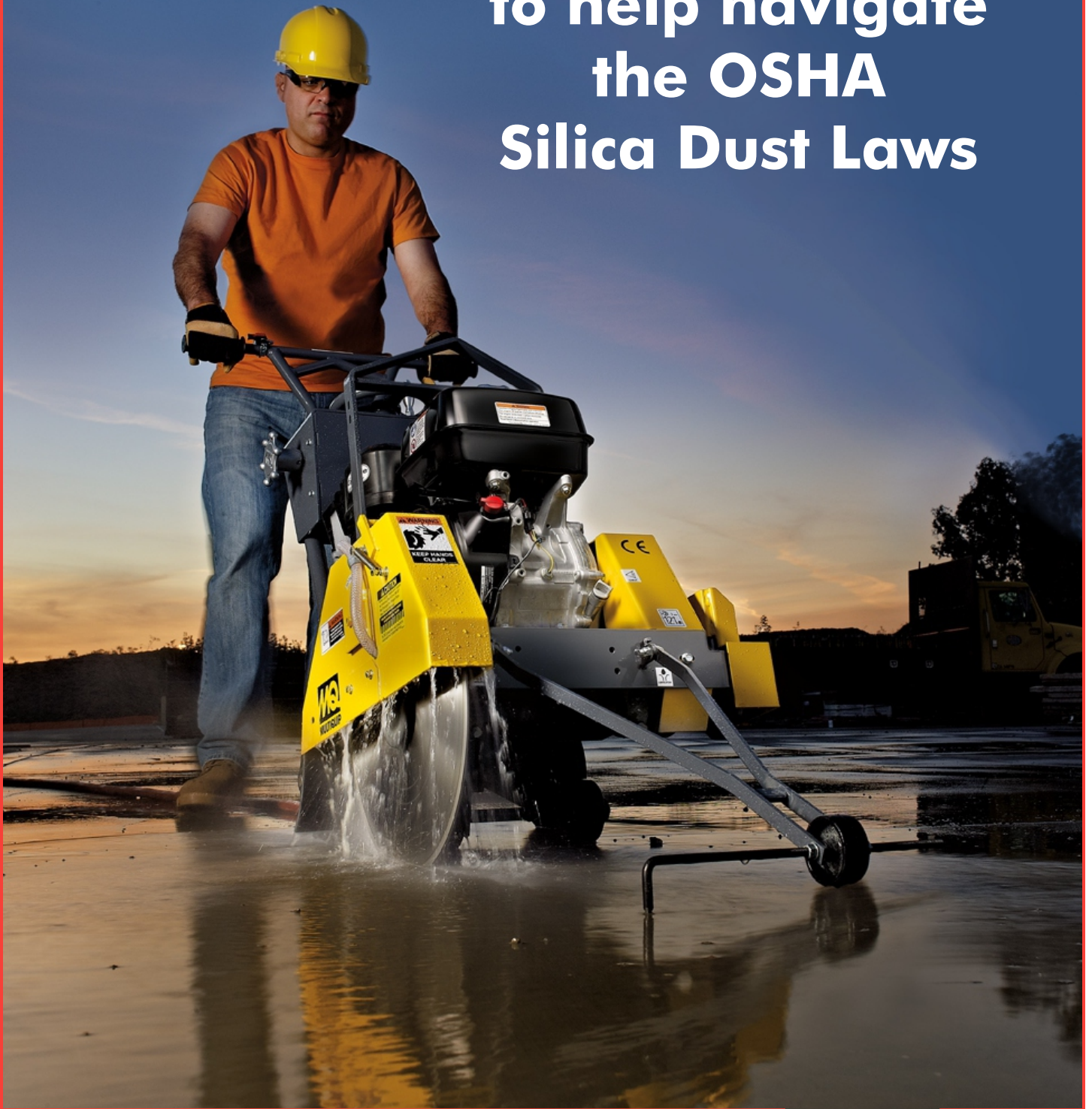


General Guidelines to help navigate the OSHA Silica Dust Laws





WHAT IS NEW?: The Occupational Safety and Health Administration (OSHA) has issued a final ruling to help curb lung cancer, silicosis, chronic obstructive pulmonary disease and kidney disease in America's workers as related to silica dust by limiting their exposure to respirable crystalline silica. This OSHA law reduces the permissible exposure limit (PEL) for respirable crystalline silica to 50 micrograms per cubic meter of air, averaged over an 8 hour shift. **This ruling took effect: 23 SEPT 2017.**

WHAT IS CRYSTALLINE SILICA?: "Crystalline Silica" is found in the earth's crust and is the basic component of sand & granite. The breathing of dust containing crystalline silica particles can damage your lungs by causing fibrosis or scar tissue formations in the lungs. Operating in silica environments unprotected can cause "**Silicosis**" that is a disease of the lungs caused by the exposure and breathing of dust containing crystalline silica.

WHAT ARE THE KEY PROVISIONS OF THE RULING?:

- Reduce the permissible exposure limit (PEL) for respirable crystalline silica to 50 micrograms per cubic meter of air, averaged over an 8 hour shift.
- Requires employees to: use engineering controls (such as water or ventilation) to limit worker exposure to the PEL; 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.
- Provides medical exams to monitor highly exposed workers and gives them information about their lung health.
- Provides flexibility to help employers; especially small businesses to protect workers from silica exposure.





WHAT MQ CUSTOMERS ARE EFFECTED BY THE OSHA RULING?:

- All Dealers, Distributors and Operators of equipment that create crystalline silica signatures. As it applies to MQ products, this would include: Flat (street) Saws, Masonry Saws, Tile Saws, and Core Drilling equipment.

*MQ no longer manufactures Diamond Sawing & Drilling Equipment, however legacy units and Diamond Tool options to support these power tools, still need to be properly addressed..

WHAT DOES THE OSHA RULING REQUIRE?:

- To reduce the permissible exposure limit (PEL) for respirable crystalline silica to 50 micrograms per cubic meter of air, averaged over an 8 hour shift, and to take other steps to protect workers utilizing engineering controls and specific work practices.

To achieve this requirement, Employers (MQ customers) can either use the control methods laid out in the **EQUIPMENT TABLES** of this document, 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 (Section (d) (2) (ii) [See **PG 15 - RULING REQUIREMENTS**]

Regardless of which exposure control method is used, all construction employers covered by the standard are required to:

- Establish and implement a written exposure control plan that identifies tasks that involve exposure and methods used to protect workers, including procedures to restrict access to work areas where high exposures may occur.
- Restrict housekeeping practices that expose workers to silica where feasible alternatives are available.
- Offer medical exams every three years for workers who wear a respirator 30 or more days per year.
- Train workers on operations that result in silica exposure.
- Keep records of workers' silica exposure and medical exams.

The following pages detail how this OSHA Ruling applies to MQ products





WHAT MQ PRODUCTS ARE EFFECTED?

- any equipment that utilizes **Diamond Blades, Diamond Core Bits, Tuck Point Wheels, & Grinding Wheels**

• **Flat (Street) Saws** • **Tile Saws** • **Masonry Saws** • **Core Drills**

◆ MQ does not offer Grinders or Cut-Off Saws but we do provide the diamond blades and diamond wheels to these power tools that apply to the flavor of the OSHA ruling.

EQUIPMENT TABLES

	TABLE 1 Engineering and Work Practice Control Methods	Required Respirator Protection & Minimum Assigned Protection Factor (APF)	
		≤ 4 Hours/Shift	> 4 Hours/Shift
Stationary Masonry Saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions.	* NONE	* NONE

Stationary Masonry Saws must be equipped with an integrated water delivery system (commercially developed specifically for the type of tool in use) that continuously feeds water to the blade. The water delivery system usually includes a nozzle for spraying water attached near the blade that is connected to a water basin by a hose and pump. The tool must be operated and maintained in accordance with manufacturer’s instructions to minimize dust emissions. Stationary masonry saws equipped with an integrated system for blade cooling also suppress dust and meet the requirements of **TABLE 1**.

Full and proper implementation of water controls on stationary masonry saws requires the employer that:

- An adequate supply of water for dust suppression is used;
- The spray nozzle is working properly to apply water at the point of dust generation;
- The spray nozzle is not clogged or damaged; and
- All hoses and connections are intact.

When using a Stationary Masonry Saw indoors or in an enclosed space (areas where airborne dust buildup; such as a structure with a roof and three walls), employers must provide additional exhaust as needed to minimize the accumulation of visible airborne dust.

See Indoors or Enclosed Areas Section for more information (PG 16).

Respiratory protection is not required for work with stationary Masonry saws regardless of task duration.



TABLE 1 does not specify a minimum flow rate; however, water must be applied at flow rates specified by the manufacturer.



EQUIPMENT TABLES

	TABLE 1 Engineering and Work Practice Control Methods	Required Respirator Protection & Minimum Assigned Protection Factor (APF)	
		≤ 4 Hours/Shift	> 4 Hours/Shift
Hand-Held Power Saws (any blade diameter)	<p>Use saw equipped with integrated water delivery system that continuously feeds water to the blade.</p> <p>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</p> <p style="text-align: center;">* When used outdoors.</p> <p style="text-align: center;">* When used indoors or in an enclosed area.</p>	<p>* NONE</p> <p>* APF 10</p>	<p>* APF 10</p> <p>* APF 10</p>

Hand-Held Power Saws with any blade diameter must be equipped with an integrated water delivery system (commercially developed specifically for the type of tool in use) that continuously feeds water to the blade. The water delivery system usually includes a nozzle for spraying water attached near the blade that is connected to a water basin via a hose and pump. The tool must be operated and maintained in accordance with manufacturer's instructions to minimize dust emissions. Hand-held power saws equipped with an integrated water delivery system for blade cooling also suppress dusts and meet the requirements of **TABLE 1**.

Full and proper implementation of water controls on walk-behind saws requires employer to ensure that:

- An adequate supply of water for dust suppression is used;
- The spray nozzle is working properly to apply water at the point of dust generation;
- The spray nozzle is not clogged or damaged; and
- All hoses and connections are intact.

TABLE 1 does not specify a minimum flow rate; however, water must be applied at flow rates specified by the manufacturer.

When working with hand-held power saws of any blade diameter, respiratory protection with a minimum APF of 10 is required for work done outdoors for more than four hours per shift and for work done indoors, or in an enclosed location regardless of dust duration.

When using a hand-held saw indoors or in enclosed spaces (areas where airborne dust can build-up, such as a structure with a roof and three walls), employers must provide additional exhaust, as needed to minimize the accumulation of visible airborne dust.

See Indoors or Enclosed Areas Section for more information (PG 16).



* APF 10 - an APF of 10 means that type respirator (if used properly) can safely be used in in atmosphere that has hazardous concentration of up to 10 times the Permissible Exposure Limits (PEL) for that hazard.



EQUIPMENT TABLES

	TABLE 1 Engineering and Work Practice Control Methods	Required Respirator Protection & Minimum Assigned Protection Factor (APF)	
		≤ 4 Hours/Shift	> 4 Hours/Shift
Hand-Held Power Saws for Cutting Fiber-Cement Board (with blade Diameter of 8" or less) any blade	<p>For tasks performed outdoors only:</p> <ul style="list-style-type: none"> ● Use saw equipped with commercially available dust collection system. ● Operate and maintain tool in accordance with the manufacturer's instructions to minimize dust emissions. ● Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency. 	* NONE	* NONE

Specialty Hand-Held Power Saws for Cutting Fiber-Cement Board (with blade diameter of 8" or less) must be equipped with commercially available dust collection systems and a filter with a 99% or greater efficiency. The saws must be operated and maintained in accordance with manufacturer's instructions to minimize dust emissions, and provide the air flow rate recommended by the manufacturer or greater. When employers are complying with **TABLE 1**, the saws must only be used outdoors.

Full and proper implementation of dust collection systems on hand-held power saws for cutting fiber-cement board requires employer to ensure that:

- The shroud or cowling is intact and installed in accordance with the manufacturer's instructions;
- The hose connecting the tool to the vacuum is intact and without kinks or tight bends;
- The filter(s) on the vacuum are clean or changed in accordance with the manufacturer's instructions to prevent clogging; and
- The dust collection bags are emptied to avoid overfilling.

Respiratory protection is not required for work outdoors with specialty hand-held power saws while cutting fiber-cement board regardless of task duration.



EQUIPMENT TABLES

	TABLE 1 Engineering and Work Practice Control Methods	Required Respirator Protection & Minimum Assigned Protection Factor (APF)	
		≤ 4 Hours/Shift	> 4 Hours/Shift
Walk-Behind Saws (Street/Flat Saws)	<p>Use saw equipped with integrated water delivery system that continuously feeds water to the blade.</p> <p>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</p> <p style="text-align: center;">* When used outdoors.</p> <p style="text-align: center;">* When used indoors or in an enclosed area.</p>	<p>* NONE</p> <p>* APF 10</p>	<p>* NONE</p> <p>* APF 10</p>

Walk-Behind Saws must be equipped with an integrated water delivery system (commercially developed specifically for the type of tool in use) that continuously feeds water to the blade. The tool must be operated and maintained in accordance with manufacturer's instructions to minimize dust emissions. Full and proper implementation of water controls on walk-behind saws requires employer to ensure that:

- An adequate supply of water for dust suppression is used;
- The spray nozzle is working properly to apply water at the point of dust generation;
- The spray nozzle is not clogged or damaged; and
- All hoses and connections are intact.

TABLE 1 does not specify a minimum flow rate; however, water must be applied at flow rates specified by the manufacturer.

Walk-Behind Saws used to cut roads and cut pavement are most commonly used outdoors, though they can also be used indoors to cut concrete floors. When using walk-behind saws indoors or in an enclosed area (areas where airborne dust can buildup, such as a structure with a roof and three walls), employers must provide additional exhaust, as needed to minimize the accumulation of visible airborne dust.

See Indoors or Enclosed Areas Section for more information (PG 16).

When working outdoors, respiratory protection is not required for work with walk-behind saws regardless of task duration. When working indoors, or in an enclosed location, respiratory protect with a minimum of APF 10 is required regardless of task duration.



* APF 10 - an APF of 10 means that type respirator (if used properly) can safely be used in in atmosphere that has hazardous concentration of up to 10 times the Permissible Exposure Limits (PEL) for that hazard.



EQUIPMENT TABLES

	TABLE 1 Engineering and Work Practice Control Methods	Required Respirator Protection & Minimum Assigned Protection Factor (APF)	
		≤ 4 Hours/Shift	> 4 Hours/Shift
Rig-Mounted Core Saws or Drills	<p>Use tool equipped with integrated water delivery system that supplies water to the cutting surface.</p> <p>Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions.</p>	* NONE	* NONE

Rig-Mounted Core Saws or Drills must be equipped with an integrated water delivery system (commercially developed specifically for the type of tool in use) that supplies water to the cutting surface, and must be operated and maintained in accordance with manufacturer’s instructions to minimize dust emissions.

See Indoors or Enclosed Areas Section for more information (PG 16).

Respiratory protection is not required for work with Rig-Mounted Core Saws or Drills regardless of task duration.

Full and proper implementation of water controls on Rig-Mounted Core Saws or Drills requires employer to ensure that:

- An adequate supply of water for dust suppression is used;
- The spray nozzles produce a pattern that applies water at the point of dust generation;
- The spray nozzles are not clogged or damaged and;
- All hoses and connections are intact.

When using Rig-Mounted Core Saws or Drills indoors or in an enclosed space (areas where airborne dust buildup; such as a structure with a roof and three walls), employers must provide additional exhaust as needed to minimize the accumulation of visible airborne dust.



EQUIPMENT TABLES

	TABLE 1 Engineering and Work Practice Control Methods	Required Respirator Protection & Minimum Assigned Protection Factor (APF)	
		≤ 4 Hours/Shift	> 4 Hours/Shift
Hand-Held and Stand Mounted Drills (including Impact and Rotary Hammer Drills)	<p>Use drill equipped with commercially available shroud or cowling with dust collection system.</p> <p>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions (see NOTE 1).</p> <p>Dust collector must provide the airflow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.</p> <p>Use #HEPA-filtered vacuum when cleaning holes.</p>	* NONE	* NONE

Hand-Held and Stand Mounted Drills (including impact and Rotary Hammer Drills) must be equipped with a commercially available shroud or cowling with a dust collection system that provides at least the minimum air flow recommended by the manufacturer. The dust collection system must include a filter cleaning mechanism and be equipped with a filter with 99% or greater efficiency. In addition, the tool must be operated and maintained in accordance with manufacturer's instructions to minimize dust emissions. Full and proper implementation of dust collection systems on hand-held drills requires the employer to ensure that:

- The shroud or cowling is intact and installed in accordance with the manufacturer's instructions;
- The hose connecting the tool to the vacuum is intact and without kinks or tight bends;
- The filter(s) on the vacuum are clean or changed in accordance with the manufacturer's instructions to prevent clogging; and
- The dust collection bags are emptied to avoid overfilling.

A HEPA-filtered vacuum must be used when cleaning holes. Compressed air can be used to clean holes when used in conjunction with a HEPA-filtered vacuum to capture the dust or a hole cleaning kit designed for use with compressed air.

When using hand-held and stand-mounted drills indoors or enclosed areas (areas where airborne dust can build-up, such as a structure with a roof and three walls), employers must provide additional exhaust, as needed to minimize the accumulation of visible airborne dust.

See Indoors or Enclosed Areas Section for more information (PG 16).

Respiratory protection is not required when using hand-held or stand-mounted drills equipped with a dust collection system, including for overhead drilling, regardless of task duration.



#HEPA - High Efficiency Particulate Air



EQUIPMENT TABLES

	TABLE 1 Engineering and Work Practice Control Methods	Required Respirator Protection & Minimum Assigned Protection Factor (APF)	
		≤ 4 Hours/Shift	> 4 Hours/Shift
Hand-Held Grinders for Mortar Removal (i.e. Tuck Point Wheels)	<p>Use grinder equipped with commercially available shroud and dust collection system.</p> <p>Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions.</p> <p>Dust collector must provide 25 cubic feet per minute (cfm) or greater of air flow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.</p>	* APF 10	* APF 25

Hand-Held Grinders for Mortar Removal (i.e. Tuck-Point Wheels) Tuck-Pointing involves removing deteriorating mortar between bricks using a hand-held grinder and replacing it with fresh mortar.

The hand-held grinders must be equipped with a commercially available shroud and dust collection system and operated and maintained in accordance with manufacturer’s instructions to minimize dust emissions. The dust collection system must provide at least 25 cfm of air flow per inch of wheel diameter and have a filter that has 99% or greater efficiency and either a cyclonic pre-separator or a filter cleaning mechanism. Cyclonic pre-separators and filter cleaning mechanisms improve the suction of dust collection systems by preventing debris from building up on the filter.

Full and proper implementation of dust collection systems on hand-held drills requires the employer to ensure that:

- The shroud is intact; encloses most of the grinding blade, and is installed in accordance with the manufacturer’s instructions;
- The hose connecting the tool to the vacuum is intact and without kinks or tight bends;
- The filter(s) on the vacuum are clean or changed in accordance with the manufacturer’s instructions;
- The dust collection bags are emptied to avoid overfilling;

- The blade is kept flush against the surface whenever possible; and;
- The tool is operated against the direction of blade rotation, whenever practical.

When using hand-held grinders for mortar removal indoors or in enclosed areas (areas where airborne dust can build-up, such as a structure with a roof and three walls), employers must provide additional exhaust, if needed to minimize the accumulation of visible airborne dust.

See Indoors or Enclosed Areas Section for more information (PG 16).

Respirator protection with a minimum APF of 10 is required for work with hand-held grinders for mortar removal lasting four hours or less in a shift.

Respiratory protection with a minimum APF of 25 is required for work lasting more than 4 hours per shift.



* APF 10 - an APF of 10 means that type respirator (if used properly) can safely be used in in atmosphere that has hazardous concentration of up to 10 times the Permissible Exposure Limits (PEL) for that hazard.

* APF 25 - an APF of 10 means that type respirator (if used properly) can safely be used in an atmosphere that has hazardous concentration of up to 25 times the Permissible Exposure Limits (PEL) for that hazard.



EQUIPMENT TABLES

Hand-Held Grinders for uses other than Mortar Removal	TABLE 1 Engineering and Work Practice Control Methods

...CONTINUED...

The integrated water delivery system can be a free-flowing water system designed for blade cooling as well as manufacturer’s systems designed for dust suppression alone. This option applies only when grinders are used outdoors.

Full and proper implementation of water controls on grinders requires the employer to ensure that:

- An adequate supply of water for dust suppression is used;
- The spray nozzles are working properly and produce a pattern that applies water at the point of dust generation;
- The spray nozzles are not clogged or damaged, and;
- All hoses and connections are intact.

Hand-held grinders for mortar removal indoors or in enclosed areas (areas where airborne dust can build-up, such as a structure with a roof and three walls), employers must provide additional exhaust, if needed to minimize the accumulation of visible airborne dust.

- The shroud is intact and installed in accordance with the manufacturer’s instructions;
- The hose connecting the tool to the vacuum is intact and without kinks or tight bends;
- The filter(s) on the vacuum are clean or changed in accordance with the manufacturer’s instructions; and
- The dust collection bags are emptied to avoid overfilling.

Respirator protection is not required when water-based dust suppression systems are used regardless of task duration. When dust collection systems are used, respiratory protection with a minimum APF of 10 is required only when engaged in tasks indoors or in an enclosed location for more than 4 hours per shift.

When using hand-held grinders indoors or in enclosed areas (areas where airborne dust can build-up, such as a structure with a roof and three walls), employers must provide additional exhaust, as needed to minimize the accumulation of visible airborne dust.

See Indoors or Enclosed Areas Section for more information (PG 16).



* APF 10 - an APF of 10 means that type respirator (if used properly) can safely be used in atmosphere that has hazardous concentration of up to 10 times the Permissible Exposure Limits (PEL) for that hazard.

* APF 25 - an APF of 25 means that type respirator (if used properly) can safely be used in an atmosphere that has hazardous concentration of up to 25 times the Permissible Exposure Limits (PEL) for that hazard.



EQUIPMENT TABLES

	TABLE 1 Engineering and Work Practice Control Methods	Required Respirator Protection & Minimum Assigned Protection Factor (APF)	
		≤ 4 Hours/Shift	> 4 Hours/Shift
Stationary Tile Saws	<p>Use saw equipped with integrated water delivery system that continuously feeds water to the blade.</p> <p>Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions.</p>	* NONE	* NONE

Stationary Tile Saws must be equipped with an integrated water delivery system (commercially developed specifically for the type of tool in use) that continuously feeds water to the blade. The water delivery system usually includes a nozzle for spraying water attached near the blade that is connected to a water basin by a hose and pump. The tool must be operated and maintained in accordance with manufacturer’s instructions to minimize dust emissions. Stationary masonry saws equipped with an integrated system for blade cooling also suppress dust and meet the requirements of TABLE 1.

Full and proper implementation of water controls on stationary masonry saws requires the employer that:

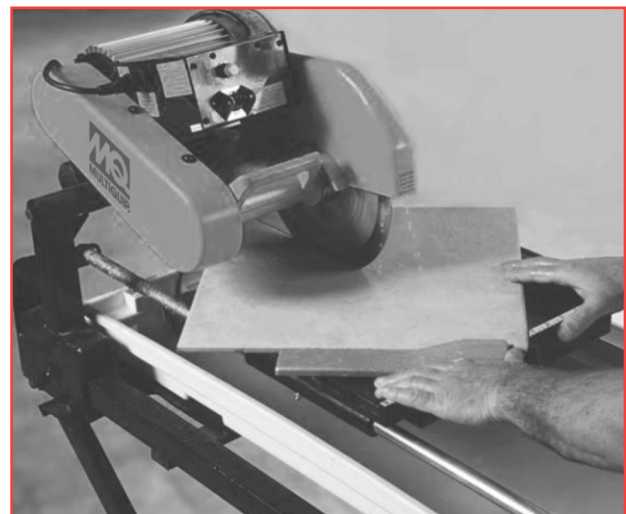
- An adequate supply of water for dust suppression is used;
- The spray nozzle is working properly to apply water at the point of dust generation;
- The spray nozzle is not clogged or damaged; and
- All hoses and connections are intact.

TABLE 1 does not specify a minimum flow rate; however, water must be applied at flow rates specified by the manufacturer.

When using a Stationary Masonry Saw indoors or in an enclosed space (areas where airborne dust buildup; such as a structure with a roof and three walls), employers must provide additional exhaust as needed to minimize the accumulation of visible airborne dust.

See Indoors or Enclosed Areas Section for more information (PG 16).

Respiratory protection is not required for work with stationary Masonry saws regardless of task duration.



EQUIPMENT TABLES

	TABLE 1 Engineering and Work Practice Control Methods	Required Respirator Protection & Minimum Assigned Protection Factor (APF)	
		≤ 4 Hours/Shift	> 4 Hours/Shift
Walk Behind Milling Machines and Floor Grinding Machines [See NOTE]	<p>Use machine equipped with integrated water delivery system that continuously feeds water to the cutting surface.</p> <p>Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions.</p> <p>OR....</p> <p>Use machine equipped with dust collection system recommended by the manufacturer.</p> <p>Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions.</p> <p>Dust collector must provide the air flow recommended by the manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.</p> <p>When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes..</p>	* NONE	* NONE

Two Control Options may be used when using **Walk-Behind Milling Machines and Floor Grinders**. Regardless of control option used, the tool must also be operated and maintained in accordance with manufacturer’s instructions for minimizing dust emissions.

Option one is to use an integrated water delivery system (commercially developed specifically for the type of tool in use) that continuously feeds water to the cutting surface. **TABLE 1** does not specify a minimum flow rate; however, water must be applied at flow rates specified by the manufacturer.

Full and proper implementation of water controls on walk-behind milling machines and floor grinders requires the employer to ensure that:

- An adequate supply of water for dust suppression is used;
- The spray nozzles are working properly and produce a pattern that applies water at the point of dust generation;
- The spray nozzles are not clogged or damaged, and;
- All hoses and connections are intact.

...CONTINUED.....



EQUIPMENT TABLES

Walk Behind Milling Machines and Floor Grinding Machines [See NOTE]	TABLE 1 Engineering and Work Practice Control Methods

...CONTINUED...

Option two is to use a dust collection system recommended by the manufacturer of the milling machine or floor grinder and a filter with 99% or greater efficiency and a filter-cleaning mechanism. The dust collection system used must be capable of maintaining the air flow recommended by the manufacturer.

Full and proper implementation of dust collection systems on walk-behind milling and floor grinders requires the employer to ensure that:

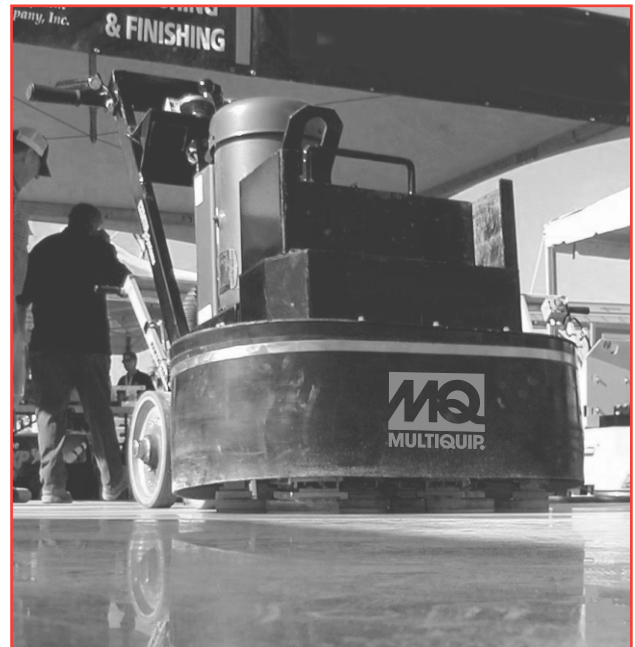
- The hose connecting the tool to the vacuum is intact and without kinks or tight bends;
- The filter(s) on the vacuum are clean or changed in accordance with the manufacturer's instructions to prevent clogging; and
- The dust collection bags are emptied to avoid overfilling

When using a dust collection system indoors or in enclosed areas (areas where airborne dust can build-up, such as a structure with a roof and three walls), loose dust must be cleaned with a HEPA-filtered vacuum in between passes of the milling machine or floor grinder to prevent that loose dust from being re-suspended. Removing loose dust with a HEPA vacuum also maximizes vacuum suction by improving the seal between the machine and the floor.

For indoor and enclosed spaces, employers must provide additional ventilation as needed to minimize the accumulation of visible airborne dust.

See Indoors or Enclosed Areas Section for more information (PG 16).

Respirator protection is not required for work with walk-behind milling machines and floor grinders regardless of task duration.



RULING REQUIREMENTS



In short, OSHA requirements can be achieved by MQ customers by either using the control methods expressed in the **EQUIPMENT TABLES** of this document, **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. See Reference 1926.1153 Respirable Crystalline Silica [Section (d) (2) (ii)] below:



(d) Alternative exposure control methods.

For tasks not listed in **TABLE 1**, or where the employer does not fully and properly implement the engineering controls, work practices, and respiratory protection in **TABLE 1**:

- (1) Permissible exposure limit (PEL).** The employer shall ensure that no employee is exposed to an airborne concentration of respirable crystalline silica in excess of 50 micrograms per cubic meter calculated as an 8-hour time-weighted average (TWA).
- (2) Exposure assessment - (I) General.** The employer shall assess the exposure of each employee who is or may reasonably be expected to be exposed to respirable crystalline silica at or above the action level in accordance with either the performance option in paragraph (d)(2)(ii) or the scheduled monitoring option in paragraph (d)(2)(iii) of this section.
 - (ii) Performance option.** The employer shall assess the 8-hour TWA exposure for each employee of the basis of any combination of air monitoring data or objective data sufficient to accurately characterize employee exposures to respirable crystalline silica.
 - (iii) Scheduled monitoring option.** The employer shall perform initial monitoring to assess 8-hour TWA exposure for each employee on the basis of one or more personal breathing zone air samples that reflect the exposures of employees on each shift, for each job classification, in each work area. Where several employees perform the same task on the same shift and in the same work area, the employer may sample a representative fraction of these employees in order to meet this requirement. In representative sampling, the employer shall sample the employee(s) who are expected to have the highest exposure to respirable crystalline silica.



FOLLOW ON REFERENCES



- **FULL SILICA RULE INFORMATION:**
www.osha.gov/silica
- **OSHA COMPLIANCE ASSISTANCE:**
www.osha.gov/dcsp/compliance_assistance/cas.html
- **OSHA PUBLICATIONS:**
www.osha.gov/pls/publications.html
- **OSHA CRYSTALLINE SILICA RULE-MAKING:**
www.osha.gov/silca/index.html
- **OSHA ON-SITE CONSULTATION PROGRAM:**
www.osha.gov/dcsp/smallbusiness/consult.html

Indoors or Enclosed Areas:

Several aforementioned **TABLE 1** entries refer to tasks performed “outdoors” or “indoors in an enclosed area”. Indoors or in an enclosed area means where airborne dust can build up unless additional exhaust is used. For example, a work area with only a roof that does not affect the dispersal of dust would not be considered enclosed; however, an open-top structure with three walls and limited air movement or a roof that does not limit dispersal would be considered enclosed.

Sufficient air circulation in enclosed or indoor environments is important to ensure the effectiveness of the control strategies and to prevent the accumulation of airborne dust. Employers following **TABLE 1** directions are required to provide a means of exhaust as needed to minimize the accumulation of visibly airborne dust for tasks performed indoors or in enclosed areas. The means of exhaust necessary could include:

- * the use of portable fans
- * box fans
- * floor fans
- * axial fans
- * portable ventilation systems

or other systems that increase air movement and assist in the removal and dispersion of airborne dust. To be effective, the ventilation must be set up so that the movements of employees during work, or the opening of doors and windows, will not negatively affect the airflow.

CLOSING COMMENT:

Retired, and discontinued Multiquip Models and equipment Series (not identified in this document that are still being used) are also effected by this new OSHA SILICA ruling and similar operational steps and procedures must be observed.

END



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*** Reference:
29 CFR Parts 1910, 1915, and 1926
[Docket No. OSHA-2010-0034]
RIN 1218-AB70
Occupational Exposure to Respirable Crystalline Silica**