



# TABLE 1: Specified Exposure Control Methods When Working with Materials Containing Crystalline Silica

EQUIPMENT/TASK	ENGINEERING AND WORK PRACTICE CONTROL METHODS	REQUIRED RESPIRATORY PROTECTION AND MINIMUM ASSIGNED PROTECTION FACTOR (APF)	
		≤ 4 HOURS/SHIFT	> 4 HOURS/SHIFT
(i) 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
(ii) Handheld power saws (any blade diameter)	- 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. - When used outdoors. - When used indoors or in an enclosed area.	None APF 10	None APF 10
(iii) Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inches or less)	<i>For tasks performed outdoors only:</i> - Use saw equipped with commercially available dust collection system. - Operate and maintain tool in accordance with 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
(iv) Walk-behind 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. - When used outdoors. - When used indoors or in an enclosed area.	None APF 10	None APF 10
(v) Drivable saws	<i>For tasks performed outdoors only:</i> - 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
(vi) Rig-mounted core saws or drills	- 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

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		≤ 4 HOURS/SHIFT	> 4 HOURS/SHIFT
(vii) Handheld and stand-mounted drills (including impact and rotary hammer drills)	- Use drill equipped with commercially available shroud or cowling with dust collection system. - Operate and maintain tool in accordance with 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 and a filter-cleaning mechanism. - Use a HEPA-filtered vacuum when cleaning holes.	None	None
(viii) Dowel drilling rigs for concrete	<i>For tasks performed outdoors only:</i> - Use shroud around drill bit with a dust collection system. Dust collector must have a filter with 99% or greater efficiency and a filter-cleaning mechanism. - Use a HEPA-filtered vacuum when cleaning holes.	APF 10	APF 10
(ix) Vehicle-mounted drilling rigs for rock and concrete	- Use dust collection system with close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector. OR - Operate from within an enclosed cab and use water for dust suppression on drill bit.	None	None
(x) Jackhammers and handheld powered chipping tools	- Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact. - When used outdoors. - When used indoors or in an enclosed area. OR - Use tool equipped with commercially available shroud and dust collection system. - Operate and maintain tool in accordance with 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 and a filter-cleaning mechanism. - When used outdoors. - When used indoors or in an enclosed area.	None APF 10	None APF 10

EQUIPMENT/TASK	ENGINEERING AND WORK PRACTICE CONTROL METHODS	REQUIRED RESPIRATORY PROTECTION AND MINIMUM ASSIGNED PROTECTION FACTOR (APF)	
		≤ 4 HOURS/SHIFT	> 4 HOURS/SHIFT
(xi) Handheld grinders for mortar removal (i.e., tuckpointing)	- Use grinder equipped with commercially available shroud and dust collection system. - Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. - Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.	APF 10	APF 25
(xii) Handheld grinders for uses other than mortar removal	<i>For tasks performed outdoors only:</i> - Use grinder equipped with integrated water delivery system that continuously feeds water to the grinding surface. - Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. OR - Use grinder equipped with commercially available shroud and dust collection system. - Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. - Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism. - When used outdoors. - When used indoors or in an enclosed area.	None	None
(xiii) Walk-behind milling machines and floor grinders	- Use machine equipped with integrated water delivery system that continuously feeds water to the cutting surface. - Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. OR - Use machine equipped with dust collection system recommended by the manufacturer. - Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. - 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. - When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes.	None	None

EQUIPMENT/TASK	ENGINEERING AND WORK PRACTICE CONTROL METHODS	REQUIRED RESPIRATORY PROTECTION AND MINIMUM ASSIGNED PROTECTION FACTOR (APF)	
		≤ 4 HOURS/SHIFT	> 4 HOURS/SHIFT
(xiv) Small drivable milling machines (less than half-lane)	- Use a machine equipped with supplemental water sprays designed to suppress dust. Water must be combined with a surfactant. - Operate and maintain machine to minimize dust emissions.	None	None
(xv) Large drivable milling machines (half-lane and larger)	<i>For cuts of any depth on asphalt only:</i> - Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust. - Operate and maintain machine to minimize dust emissions. <i>For cuts of four inches in depth or less on any substrate:</i> - Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust. - Operate and maintain machine to minimize dust emissions. OR - Use a machine equipped with supplemental water spray designed to suppress dust. Water must be combined with a surfactant. - Operate and maintain machine to minimize dust emissions.	None	None
(xvi) Crushing machines	- Use equipment designed to deliver water spray or mist for dust suppression at crusher and other points where dust is generated (e.g., hoppers, conveyors, sieves/sizing or vibrating components, and discharge points). - Operate and maintain machine in accordance with manufacturer's instructions to minimize dust emissions. - Use a ventilated booth that provides fresh, climate-controlled air to the operator, or a remote control station.	None	None
(xvii) 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	- Operate equipment from within an enclosed cab. - When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions.	None	None
(xviii) Heavy equipment and utility vehicles for tasks such as grading and excavating but not including: demolishing, abrading, or fracturing silica-containing materials	- Apply water and/or dust suppressants as necessary to minimize dust emissions. OR - When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab.	None	None

**IF YOUR TASK IS NOT LISTED IN TABLE 1 PLEASE REFER TO:  
RESPIRABLE CRYSTALLINE SILICA IN CONSTRUCTION REGULATION 29 CFR 1926.1153 FOR GUIDANCE**