Davenport Masonry Silica Best Practice

Revised 08-01-19

1. Cutting Brick, Block Stone

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	APF 10 APF 10

2. Demo/ chipping hammer

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Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	
		≤ 4 hours/shift	> 4 hours/shift
(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.	None APF 10	APF 10 APF 10
	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	APF 10 APF 10

3. Handheld grinder for mortar removal

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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

4. Rotary hammer drill (multiple holes)

(1) hole-Silica standard does not apply

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Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	
		≤ 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

5. Mixing mortar

Spec mix mortar will be mixed using dust cover to minimize the exposure

Spec mix air monitoring results is at Quartz 31 ug/m^3 which is below the PEL of 50 ug/m^3

Conventional mortar mixing will be done by adding 3/4 of water, 1/4 of sand, breaking the bag of mix onto the cutter, carefully add dry mortar mix upwind while stepping away from the dust plume, then add remainder of sand and water to eliminate hazard. Wear respiratory protection

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Conventional mortar mixing: employee exposure is reasonably be anticipated to remain below 25 µg/m3 as an 8-hour TWA when performing this tasks that involve only minimal exposure to respirable crystalline silica. When this

tasks is performed in isolation from other tasks that generate significant exposures to respirable crystalline silica, the standard does not apply. Wear respiratory protection

Hand mixing in a wheelbarrow will be done by adding 3/4 of water, 1/4 of sand, cutting the bag open, carefully pouring the contents into the wheelbarrow while stepping away from the dust plume, then add remainder of sand and water to eliminate hazard. Employee exposure is reasonably be anticipated to remain below 25 µg/m3 as an 8-hour TWA when performing certain tasks that involve only minimal exposure to respirable crystalline silica. When this task is performed in isolation from tasks that generate significant exposures to respirable crystalline silica, the standard does not apply. Wear respiratory protection

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6. Clean up masonry debris

Whenever possible Clean when Green before

Using pump sprayer or sweeping compound, spray debris to be cleaned-up or apply sweeping compound per instructions. Using a shovel for scrap and scoop into dumpster