

Crystalline Silica: Specified Exposure Control Methods (Table 1)

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What is Table 1: “Specified Exposure Control Methods When Working with Materials Containing Crystalline Silica”?

Most employers must evaluate employee exposures to crystalline silica to ensure that employees are not overexposed. **Table 1** is a flexible alternative that identifies 18 common construction tasks that generate high exposures to respirable crystalline silica and specifies engineering controls, work practices, and respiratory protection for each task. When you follow the engineering controls, work practices, and respiratory protection specified for a task on **Table 1**, you are not required to measure respirable crystalline silica exposures to verify that levels are at or below the airborne limits for workers engaged in that task.

OSHA developed **Table 1** in response to stakeholders in the construction industry, who indicated the need for guidance and a standard that is different than a standard for general industry. Among the concerns of construction industry stakeholders were the impracticality of exposure monitoring based on short duration of task and constantly changing conditions, such as weather, job sites, and materials.

Each task listed on **Table 1** identifies construction tasks along with specific dust control methods, so employers know exactly what they need to do to limit worker exposures to silica. The control measures listed in the table include methods known to be effective, such as using water to keep dust from getting into the air or using ventilation to capture dust. In certain circumstances, respirators are also required.

If you do not follow the specific requirements of a **Table 1** task or vary from it in any way, you must assess employee exposures. You cannot use only some of the protective measures and expect exemption from the requirement to monitor employee exposures.

If Table 1 is used and employers are exempt from the exposure assessment do any other provision apply?

Yes. Even when you follow **Table 1**, all other requirements of the standard such as a written exposure control plan, provisions for regulating employee access to certain areas, medical surveillance, and employee training and information apply. **Table 1** only provides an alternative to the exposure assessment requirement.



Without dust controls, using a handheld power saw to cut concrete can expose workers to high levels of respirable crystalline silica.

Photo: NIOSH

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 hrs/ shift	> 4 hrs/ shift
(ii) Handheld 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> <ul style="list-style-type: none"> • When used outdoors. • When used indoors or in an enclosed area. 	None	APF 10
		APF 10	APF 10

EXAMPLE: Table 1 Handheld Power Saws

If workers are sawing silica-containing materials, they can use a saw with a built-in system that applies water to the saw blade. The water limits the amount of respirable crystalline silica that gets into the air.

In this example, if a worker uses the saw outdoors for four hours or less per day, no respirator would be needed. If a worker uses the saw for more than four hours per day or any time indoors, he or she would need to use a respirator with an assigned protection factor (APF) of at least 10.

In this case, a NIOSH-certified filtering facepiece respirator that covers the nose and mouth (sometimes referred to as a dust mask) could be used.

