

OSHA Silica Rule Fact Sheet

Updated April 19, 2017

OSHA has announced new regulations for worker exposure to respirable silica dust on construction sites. As a service to our customers, James Hardie wants you to have the facts about this new rule.

What is the updated OSHA rule for silica dust and when does it take effect?

The revised regulations became effective June 23, 2016. Employers were required to comply one year later, June 23, 2017, however OSHA has extended this compliance date to September 23, 2017. The revisions reduce the permissible exposure limit (PEL) for silica dust by about 80% — from 250 $\mu\text{g}/\text{m}^3$ to 50 $\mu\text{g}/\text{m}^3$, and affect many construction trades: concrete cutting and finishing, cutting tile, brick, stone materials and cutting fiber cement.

Many construction trade groups comprised of builders, contractors and manufacturers have challenged the need and practicality of changing the silica dust regulation. As a result, the new rule is currently under judicial review, and compliance requirements or deadlines may be affected again. As an industry leader, James Hardie is prepared with tools and resources to assist our customers, regardless of how or when the new rule is implemented.

Does the revised rule mean that silica-containing products like fiber cement can no longer be used?

No. The rule regulates activities that generate silica dust on a jobsite. It does not mean that silica-containing products cannot be used, or that other materials must be used instead. Many building materials including wood and paint are subject to safe use requirements, and all jobsite dust is subject to a PEL. This new OSHA rule simply focuses on silica dust.

What does this mean for installers of James Hardie fiber cement products?

James Hardie fiber cement products are safe to have, use and install. Silica dust is only a concern when cutting fiber cement with high speed tools such as circular saws. Storing, moving, handling and nailing fiber cement products does not present a hazard. Cutting fiber cement products using shears (mechanical, pneumatic or manual) or the score and snap method does not present a hazard.

When cutting with high speed saws, using a circular or chop saw outfitted with a HardieBlade® saw blade and a vacuum dust collection system is the most effective way to reduce dust. OSHA recognizes this and specifically states:

...for cutting fiber-cement board outdoors in accordance with Table 1 for any task duration, OSHA has determined that in such circumstances, employee exposures will be reduced to 50 $\mu\text{g}/\text{m}^3$ or less when the controls specified for this task on Table 1 are fully and properly implemented.¹

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¹ OSHA Final Silica Rule 2016-04800: <https://www.gpo.gov/fdsys/pkg/FR-2016-03-25/pdf/2016-04800.pdf>

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What does the revised rule include?

OSHA requires employers to take specific actions to protect workers on construction sites², based on the amount of silica dust they are exposed to, on average, over an 8-hour period. The table below summarizes some key points of the rule.

If silica dust exposure for a given task is...		
Below action level (AL) of 25 µg/m ³	Between the AL (25 µg/m ³) and PEL (50 µg/m ³)	Above the PEL (50 µg/m ³)
Regulation does not apply if exposure is below the AL under all foreseeable circumstances	Conduct sufficient measurements or use objective data to show exposure will not exceed the PEL.	<ul style="list-style-type: none">• Implement engineering controls and practices to keep exposure below the PEL• Use respirators (e.g. NIOSH-approved dust masks) if controls and practices are insufficient to stay below the PEL• Offer medical exams if respirators must be worn more than 30 days/year
	<ul style="list-style-type: none">• Establish and implement a written exposure plan listing tasks that expose workers to silica and how to control exposures• Train workers on silica exposures hazards and means to control dust	

How is exposure determined?

Silica exposure is determined one of two ways:

1. By referencing objective data, which means studies or reports by recognized experts who have evaluated dust exposures for certain tasks³, or
2. By directly monitoring actual employee exposure

Actual exposure is measured using an air sampling device that is placed in the work area or worn by an employee. An industrial hygienist (IH)⁴ will generally oversee the sample collection. The samples are collected and sent to a qualified lab for analysis and the IH will review the results and make recommendations.

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2 OSHA Fact Sheet- OSHA's Crystalline Silica Rule: Construction <https://www.osha.gov/Publications/OSHA3681.pdf>

3 The National Institute for Occupational Safety and Health (NIOSH) published several reports related to controlling silica dust on job sites, including concrete grinding, tuck-pointing and fiber cement. <http://www.cdc.gov/niosh/topics/silica/constructioncontrolmain.html>

4 Industrial Hygienists are degreed scientists or engineers trained to evaluate workplace health and safety issues. While there is no licensing program, the American Board of Industrial Hygiene administers a certification program; Certified Industrial Hygienists (CIH) must have be degreed, have least four years of experience and pass a 1-day exam. <https://www.aiha.org/about-ih/Pages/default.aspx>



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What does this mean? What is “Table I?”

Table I of the revised rule lists several construction site tasks that generate silica dust and specified equipment and procedures - called “engineering controls” - to keep dust below the PEL.

OSHA provides a specific Table I exemption for cutting fiber cement boards using a handheld power saw (with blade diameter of 8 inches or less)⁵:

For tasks performed outdoors only:

- *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.*

OSHA has stated that “full and proper implementation” of the specified engineering controls listed in Table I “satisfies the employer’s duty to achieve the PEL;” wearing respirators [dust masks] or further exposure monitoring is not needed.⁶

What about dust exposure plans and training?

James Hardie understands that jobsite safety is one of your most important responsibilities, and can assist with getting you the support you need to comply with the revised silica regulation. We have been working with industry safety and industrial hygiene experts and have developed exposure plans and training materials that are available upon request to help builders, contractors and subcontractors determine when Table 1 controls are needed and how to comply with the updated rules.

What if I have other questions?

As always, you can reach out to your local James Hardie rep if you have any additional questions. Also, James Hardie has established www.jhsafesite.com as a resource for information about using fiber cement products.

⁵ OSHA Standard §1926.1153, p 3: <https://www.osha.gov/silica/SilicaConstructionRegText.pdf>

⁶ OSHA Final Silica Rule 2016-04800



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