



AMERICAN SOCIETY OF
SAFETY PROFESSIONALS

Silica Resource Guide for Contractors

ASSP Industrial Hygiene Practice Specialty

September 2018

The recently implemented OSHA silica standards for [construction](#) and [general industry](#) have created many questions for contractors faced with implementing practical solutions to ensure compliance.

Contractors and employers face many challenges in their day-to-day work environments. There is no one-size-fits-all approach to compliance and it often requires significant investments of time and money. Nevertheless, safety professionals' efforts are worthwhile and necessary. We protect workers as well as the bottom line while reducing risk across the full operation.

The [Industrial Hygiene Practice Specialty](#) of the [American Society of Safety Professionals \(ASSP\)](#) developed this resource guide to help contractors currently grappling with questions and confusion. Our guide pulls together critical questions with short answers and resources for more detailed information.

The information here reflects 29 CFR 1910 and 29 CFR 1926. U.S. state or other country requirements may be different. Requirements can change in the future. This document contains general, overview information as of the date of publication. No warranties are made, as this document only presents suggested procedures that may be applicable for work in these environments.

Please read and understand the entire regulation in 29 CFR 1910.1053 and 29 CFR 1926.1153 and the preambles before attempting any work involving respirable crystalline silica. OSHA will be providing additional compliance directives and an expanded frequently asked questions release in the future. These documents should be consulted when available.

Question: Where can we go for OSHA and related silica resources?

Answer: Start with the [OSHA Safety and Health Topics—Silica](#) home page and the [OSHA Frequently Asked Questions \(FAQs\) for Construction](#). OSHA has also posted [videos](#) for controlling silica dust when using Table 1 on the silica standard for construction web page. The [CPWR Work Safely With Silica](#) website and the [NIOSH Workplace Safety and Health Topics](#) web page provide helpful insights as well.

You may also wish to review the applicable voluntary national consensus standards that address silica:

- [ANSI/ASSP A10.49-2015, Control of Health Hazards](#)
- ASTM International [E1132-13e1 Standard Practice for Health Requirements Relating to Occupational Exposure to Respirable Crystalline Silica](#)
- ASTM International [E2625-09\(2017\) Standard Practice for Controlling Occupational Exposure to Respirable Crystalline Silica for Construction and Demolition Activities](#)

Question: What is Table 1 and how is it applied?

Answer: Table 1 is a tool provided in the OSHA silica construction standard that lays out specific tasks common to the construction industry and describes ways to control employee exposure to silica. Examples include wet methods and dust collection vacuum attachments. The intent was to provide practical solutions to reduce exposures to respirable crystalline silica (RCS).

OSHA has also created [detailed fact sheets](#) for Table 1 operations that may be helpful to your operations. OSHA plans to make additions to Table 1 and will reopen comments later in 2018, pending the regulatory agenda calendar.

Question: When is air sampling required?

Answer: Air sampling, also known as exposure assessment, is required if the employer cannot or chooses *not* to use the control measures found in Table 1. If the task is not shown in Table 1, air sampling or the application of objective data is required when employees may be exposed to RCS. It is critical that the air monitoring and sample analysis be conducted per the requirements of 29 CFR 1926.1153 [Appendix A: Methods of Sample Analysis](#).

Air sampling is best performed by qualified industrial hygienists with expertise in selecting the various types of exposure assessment options that may be available for your operations. American Industrial Hygiene Association (AIHA) provides a [listing](#) of industrial hygiene firms that perform exposure assessment.

Question: What is the performance option and how do we use objective data?

Answer: The performance option is an exposure assessment method that uses air sampling data collected by the employer or the use of objective data compiled from other sources.

Objective data is air sampling information provided by employers, other employers, universities, trade associations or manufacturers that closely represents the work tasks, materials used and the controls used at your job site. Objective data can demonstrate that the control methods used at your job site are effective. When available, this can save time and money.

Question: Where can we find objective data?

Answer: Several resources are available. University of Washington Field Research and Consultation Group website, [Silica It's More Than Dust](#), and the Georgia Tech Consultation Program [Silica Management Matrix v2. 2013](#) provide this type of information. The [Construction Employers Association](#) and the [Associated General Contractors](#) are industry organizations that also provide assistance with using objective data that can save time and resources.

Many tool manufacturers can supply air sampling results for their tools when used under specified test conditions. Contractors must carefully review all objective data they anticipate using to determine how applicable the data is to their specific work conditions. Additional data or supplemental air monitoring may be required to properly assess worker exposure.

Question: What is the scheduled air monitoring option?

Answer: The scheduled air monitoring option is the traditional exposure assessment method that uses air sampling data collected by the employer. Scheduled air monitoring is required when: 1) the task is not listed in Table 1; 2) the employer does not use Table 1; 3) objective data is not available; or 4) when initial air monitoring results exceed the action level.

Question: What other options are available for air sampling?

Answer: Your workers' compensation insurance carrier may provide sampling, analysis and support (in some cases at a reduced cost). State insurance regulations may require your insurance company to provide loss control services as part of the policy. These services can be valuable and time saving. Another option is a private industrial hygiene consultant. OSHA's consultation program is another great resource. Federal and state-plan OSHA can provide valuable expertise in consultation and air sampling from noncompliance officers.

Question: When is medical surveillance required for RCS exposure?

Answer: Each worker who is required to wear a respirator for RCS must be offered a medical exam within the first 30 days of being assigned work covered by the standard, and every 3 years after the initial exam if the worker is still required to wear a respirator for 30 days or more per year under the standard.

Review [Appendix B – Medical Surveillance Guidelines](#) and make informed decisions for your company. A [medical surveillance guide](#) is available from Silica-Safe. Note: A year is a rolling 365 days, not a calendar year. Also, the worker has the right to refuse the examination if they choose.

Question: When are respirators required? What counts towards the 30 days of use?

Answer: Respirators are required during Table 1 tasks that require respirator use; when the exposure to RCS exceeds, or is expected to exceed, the PEL; or where an exposure assessment has not been documented. In addition, if an employee is required to wear a respirator at any time during a work shift, this counts as one day toward the 30-day requirement. This includes the required use of filtering facepiece respirators (i.e., N95 disposable respirator).

Question: What respirators can be used for silica?

Answer: All NIOSH tested and certified particulate or supplied-air respirators may be used for silica protection within their design limitations (e.g., assigned protection factor). The 95-, 99- and 100-efficiency filters can be used for negative-pressure, air-purifying respirators. A 100-efficiency filter is not required. Filtering face piece (i.e., disposable) respirators can also be used. Powered-air respirators use HE filters, and these are currently the only filters certified for use in this equipment.

Question: What federal OSHA publications are available to explain the new regulations?

Answer: OSHA’s small entity compliance guides are excellent and should be a desk reference for everyone involved with managing silica exposure programs and worker safety.

- [The Small Entity Compliance Guide for the Respirable Crystalline Silica Standard for Construction](#) – OSHA
- [Small Entity Compliance Guide for Respirable Crystalline Silica Standard for General Industry and Maritime](#) – OSHA

Other OSHA resources include:

- [Interim Enforcement Guidance for the Respirable Crystalline Silica in Construction Standard](#)
- [OSHA Fact Sheets—Control of Silica Dust in Construction \(series\)](#). This series of fact sheets addresses controls on tools listed in Table 1 of 29 CFR 1926.1153

If you reside in a state-plan state, visit your [state OSHA webpage](#) or call and request support.

Question: What resources are available for silica competent person training?

Answer: The competent person must have sufficient training to identify existing and foreseeable RCS hazards in the workplace and make prompt corrective measures to control RCS hazards. AIHA’s [Recommended Skills and Capabilities for Silica Competent Persons white paper](#) is an excellent resource. OSHA’s [final rule on Occupational Exposure to Respirable Crystalline Silica](#) also provides excellent insight. We also suggest you also review the three voluntary national consensus standards referenced in question #1 for technical information on this issue.

Question: Where can we find exposure control plan resources?

Answer: [OSHA’s small entity compliance guides and various silica publications](#) and the [Create-A-Plan to Control the Dust resource](#) from CPWR—The Center for Construction Research and Training are excellent resources. The CPWR tool provides guidance on developing your site-specific written exposure control plan, which is a critical tool for site management.

Question: Can general industry use Table 1 from the construction standard?

Answer: Yes. The construction standard provides a good explanation for this. If your operations are general industry, Table 1 can be used if the work is not performed regularly or under the same conditions.

Question: How do we know when the construction regulation (29 CFR 1926.1153) or the general industry regulation (29 CFR 1910.1053) applies to a specific work operation?

Answer: The following resources clarify which standard may apply:

- 29 CFR 1926.1153 ([a](#)) [Scope and Application](#)
- 29 CFR 1910.1053 ([a](#))(3) [Scope and Application](#)
- OSHA Letters of Interpretation – [Knobbs Letter Nov. 18, 2003](#)
- OSHA Letters of Interpretation – [Tindell Letter Feb. 1, 1999](#)
- OSHA Letters of Interpretation – [Ellis Letter May 11, 1999](#)

Question: How can we handle unique tasks that arise on projects that are not listed in Table 1 and or when sampling/objective data is not available?

Answer: Initial exposure estimations and interim safety procedures may be made using data from similar tools that operate in a similar manner and perform a similar function. This should be supported by further exposure assessment as soon as possible.

To develop these interim safety procedures until further worker exposure assessment can be completed, look for a qualified person. As defined in 29 CFR 1926.32(m), a qualified person is “one who by possession of a recognized degree, certificate or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work or the project.”

CONCLUSION

The construction silica regulation is a complex, performance-oriented regulation that gives contractors flexibility for compliance. However, this flexibility also requires contractors to ensure that selected compliance methods protect workers to the maximum extent feasible.

As construction site conditions can change by the day, regular reevaluation and modification of the silica program and controls may be necessary. Contractors should use all available resources, including insurance loss control, private consultants, OSHA consultation, university programs and tool manufacturers, in developing their programs and addressing concerns.

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