

New Silica Dust Standard



Gary Auman
Auman, Mahan & Furry
110 N. Main St., Ste. 1000
Dayton, OH 45402-1738
gwa@amfdayton.com

RESPIRABLE SILICA

Effective date: June 23, 2016

Enforcement Date: ^

Delayed until September 23, 2017

Enforcement Date for General Industry: June 23, 2018

CRYSTALLINE SILICA



ID Silica Dust Hazards

Respirable silica dust consists of:

- 1. Quartz;**
- 2. Cristobalite; and/or**
- 3. Tridymite contained in airborne particles that can be breathed.**

Competent Person

Determine whether employees will be exposed to respirable silica dust.

Competent Person

Before work begins:

**Determine exposure
Regardless of source**

Competent Person

**Review the SDS for quartz, cristobalite,
and/or tridymite.**

SILICA PEL

New Action Level 25 $\mu\text{g}/\text{m}^3$

New PEL 50 $\mu\text{g}/\text{m}^3$

(This is about 20% of the old PEL.)

SILICA PEL

Occasional or brief exposures will generally not reach the threshold.

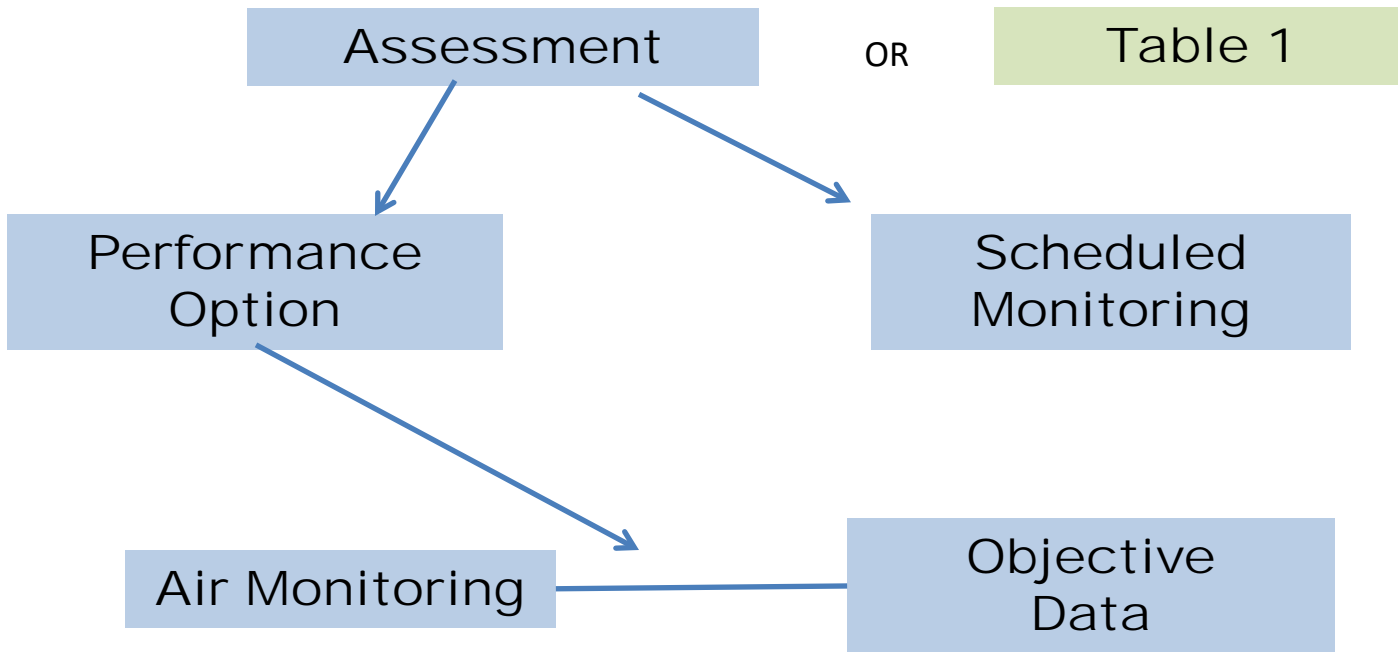
Two Ways to Comply

Table 1

OR

Employer Assessment

Two Ways to Comply



Two Ways to Comply

First:

Follow the guidelines in Table 1.

Table 1

Table 1 matches 18 common construction tasks with dust-control methods, so employers know how to limit silica exposure for those common tasks.

Table 1

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	<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>	None	None
(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. 	<p>None</p> <p>APF 10</p>	<p>APF 10</p> <p>APF 10</p>
(iii) Handheld power	For tasks performed outdoors only:		

Table 1

- Stationary masonry saws
- Handheld power saws
- Handheld power saws for cutting fiber—cement based
- Walk-behind saws
- Drivable saws
- Rig-mounted core saws or drills
- Handheld and stand-mounted drills

Table 1

- Dowel-drilling rigs for concrete
- Vehicle-mounted drilling rigs for rock and concrete
- Jack hammers and handheld-powered chipping tools
- Handheld grinder for mortar removal
- Handheld grinders for other uses

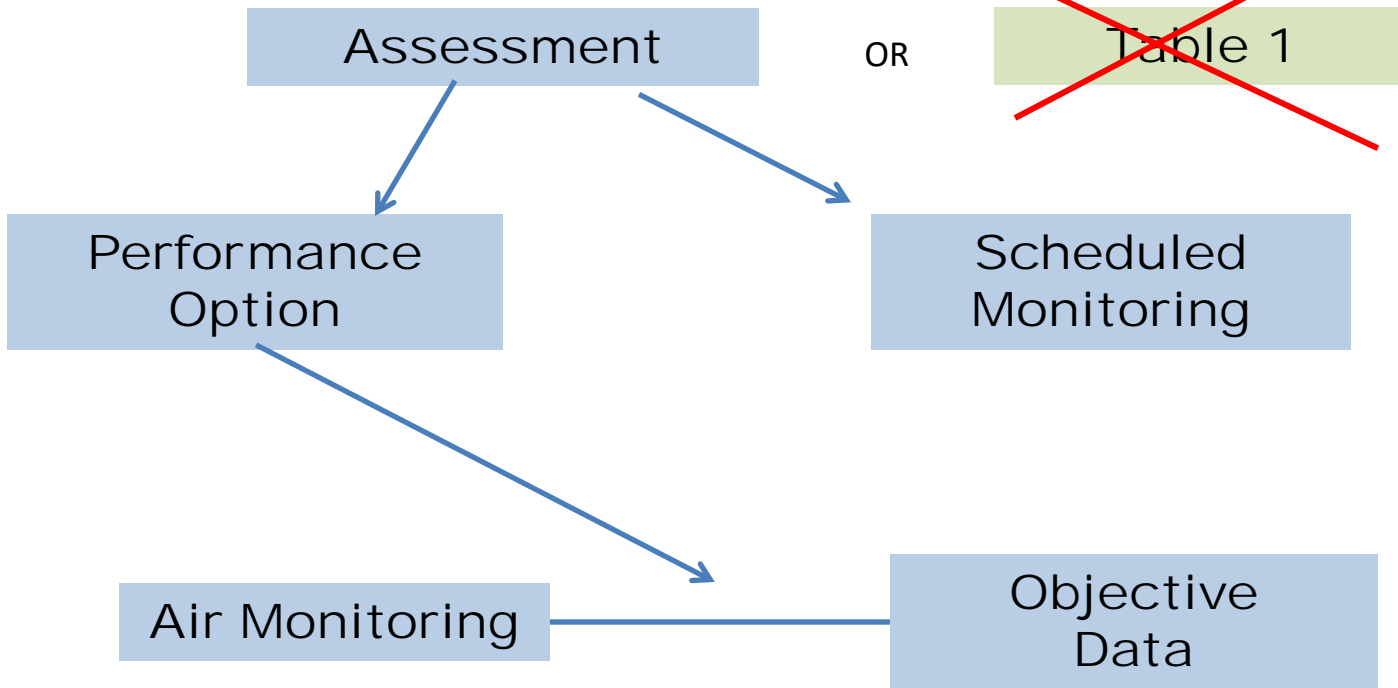
Table 1

- Walk-behind milling machines and floor grinders
- Small drivable milling machines
- Large drivable milling machines

Table 1

- Crushing machines
- Heavy equipment and utility vehicles used to abrade or fracture silica-containing materials
- Heavy construction equipment and utility vehicles for trucks, such as grinding and excavating

Two Ways to Comply



Two Ways to Comply

Second:

Employer Assessment

Determine the amount of silica exposure and control the exposure to keep it below the permissible exposure limits.

Use engineering controls that limit the dust. If that is inadequate, then provide respirators.

Employer Assessment

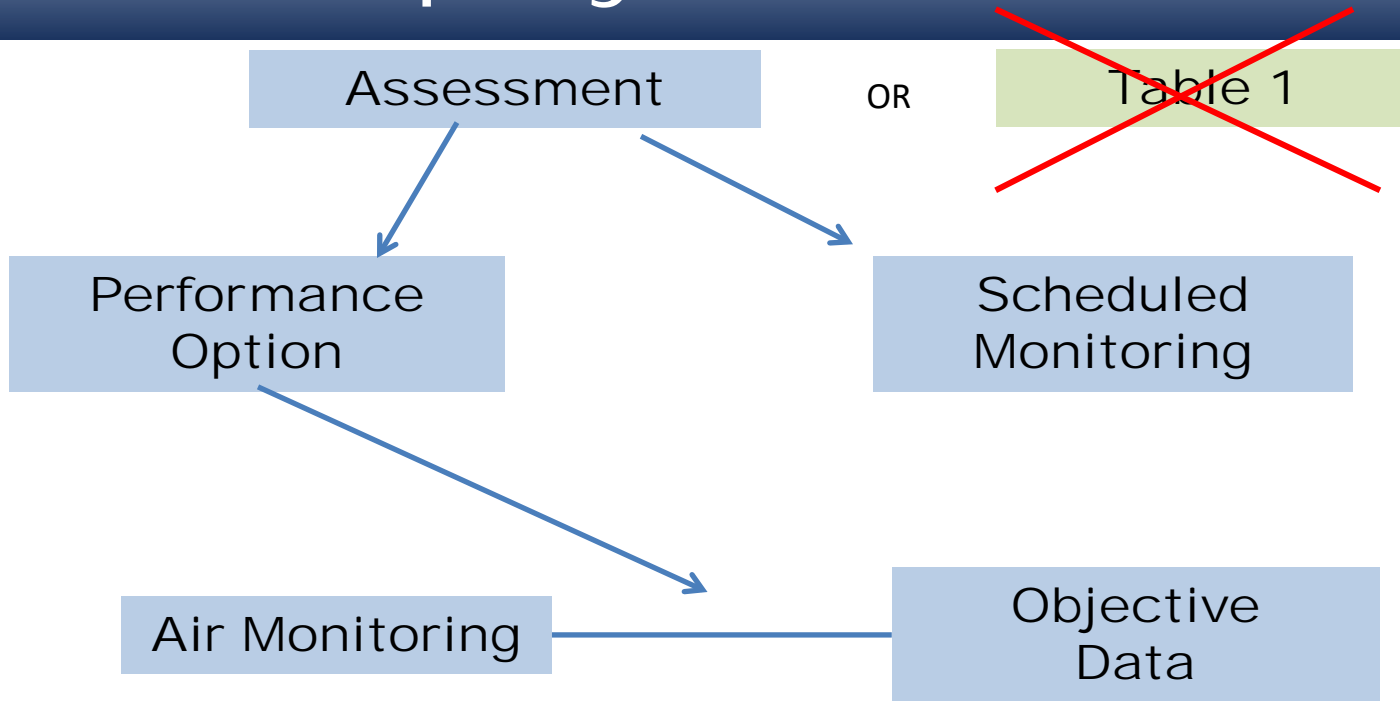
Two options for assessing exposures:

1. The performance option.

or

2. The scheduled monitoring option.

Employer Assessment



Employer Assessment

The Performance Option

Air monitoring and/or objective data

Employer Assessment

The Performance Option

Air Monitoring

Employer Assessment

The Performance Option

Objective Data must include:

- Industry-wide surveys;
- Calculations based on the composition of a substance; and
- Historic air monitoring data.

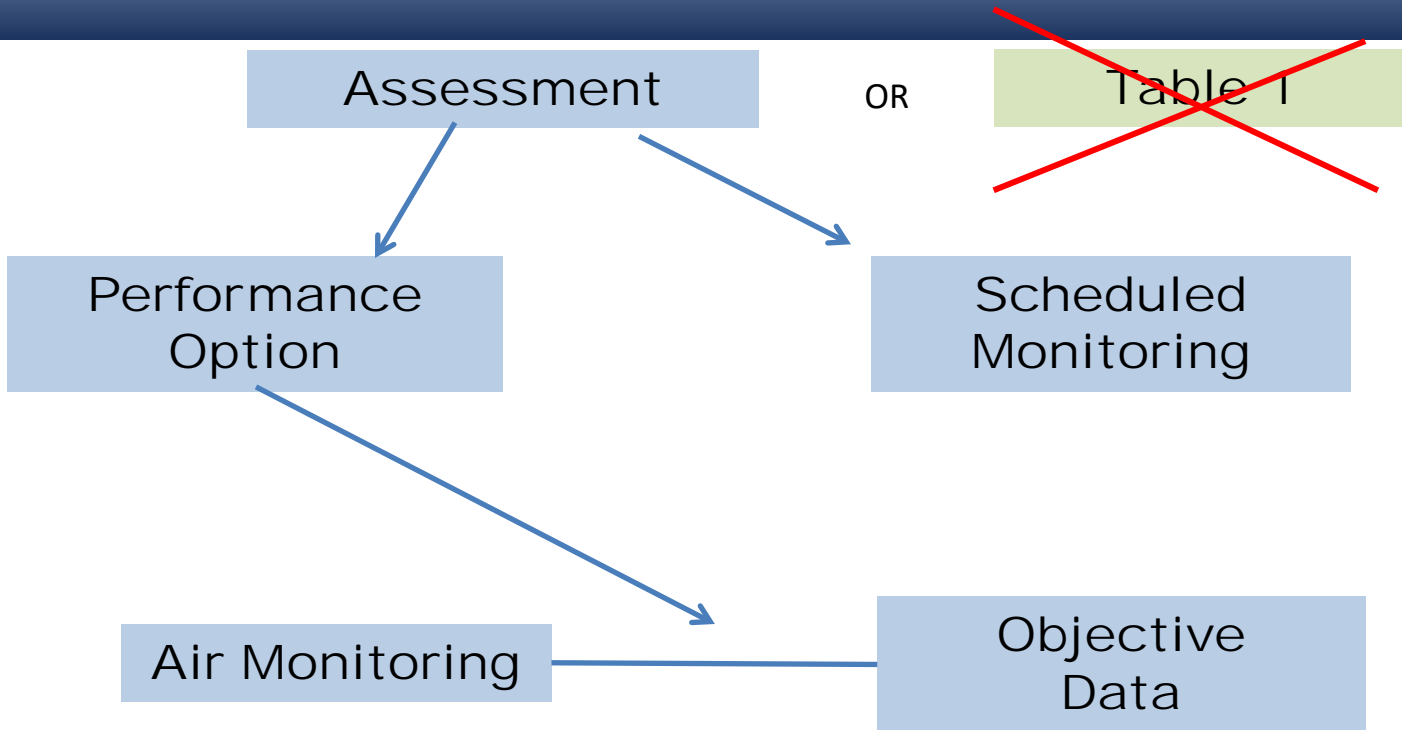
Employer Assessment

The Performance Option

Objective Data

Data must reflect workplace conditions closely resembling or with higher exposure potential than employers' current operations.

Two Ways to Comply



Employer Assessment

SCHEDULED MONITORING

Perform initial monitoring to assess 8-hour TWA for each employee in each work area.

If exposure is below action level, may discontinue monitoring.

Where above action level, but below PEL, repeat monitoring within 6 months.

Where above PEL, repeat monitoring within 3 months.

If subsequent monitoring is below action level, repeat testing in no fewer than 7 days, but within 6 months. When 2 consecutive measurements are below action level, may discontinue monitoring.

Limiting Exposure



\$160.00

Uline



\$15.00

Uline



\$19.00

Uline



\$18.63

MSC Direct



\$29.45

J. J. Keller & Associates, Inc.



\$544.21

MSC Direct



4 stores



1 store



2 stores



ESTABLISH AND IMPLEMENT A WRITTEN CONTROL PLAN

- **Describe employers' work activities that cause exposure to silica dust;**
- **Describe the engineering controls, work practices, and respiratory protection used to limit silica dust; and**
- **Restrict housekeeping that exposes workers to silica dust.**

MEDICAL SURVEILLANCE

Available to employees at no cost.

Initial medical exam to be made available to employees within 30 days of initial assignment.

- Medical and work history
- Physical exam (concentrating on respiratory system)
- Chest X-ray
- Test for latent TB
- Any other tests ordered by PLHCP (Physician or Other Licensed Health Case Professional)

MEDICAL SURVEILLANCE

The employer shall make available, at no costs to employee, periodic medical exams every three (3) years.

EMPLOYEE TRAINING

Employees must demonstrate knowledge and understanding in at least the following:

- 1) Health hazards associated with exposure to respirable crystalline silica;
- 2) Specific tasks in workplace that could result in exposure;

EMPLOYEE TRAINING contd.

- 4) Specific measures implemented by employer to protect employees from exposure;
- 5) Contents of standard; and
- 6) Purpose and description of medical surveillance program.

RECORDKEEPING

1. Air-monitoring data
2. All objective data relied on for compliance
3. Medical surveillance

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1. Air monitoring data
2. All objective data relied on for compliance.
3. Medical surveillance.

General Industry

Enforcement:

June 23, 2018

General Industry

Silica standard: 29 CFR 1910.1053

Nearly identical to the construction industry silica standard.

Key Differences

No Table 1

Table 1 does *not* appear in the general industry standard.

General industry employers may follow Table 1, but only if their task is “indistinguishable from a construction task listed on Table 1.”

If a general industry employer follows Table 1, then that employer must follow the remainder of the construction standard.

Key Differences

Regulated Areas

General industry employers must establish a regulated area where employer reasonably suspects that silica dust exposure will exceed the PEL.

Key Differences

Regulated Areas

- Mark off the area
- Post warning signs
- Restrict access to only those employees who are required to be there.
- PPE required for those entering the regulated area must have a respirator sufficient to reduce exposure below the PEL.

Key Differences

No Competent Person required

General industry employers do not need a competent person for silica.

But that doesn't mean they can't have one.