

OSHA's Final Crystalline Silica Rule

- Published in *Federal Register* on March 25, 2016

- Covers 2.3 million workers



OSHA's Final Rule

- **Two final standards:**
 - One for General Industry and Maritime
 - One for Construction
- Similar to other OSHA health standards, ASTM consensus standards, industry guidelines



Reasons for the Final Rule

- First update in more than four decades
- Current Permissible Exposure Limits (PELs) are formulas that many find hard to understand
- Construction/shipyards PELs are obsolete particle count limits
- General industry formula PEL is about equal to 100 $\mu\text{g}/\text{m}^3$; construction/shipyards formulas are about 250 $\mu\text{g}/\text{m}^3$

Health Benefits of Rule

- Estimated to prevent 642 fatalities annually from causes such as:
 - lung cancer,
 - silicosis and other lung diseases, and
 - end-stage kidney disease
- Estimated to prevent over 900 cases of silicosis annually
- Estimated to generate net benefits of approximately \$7.7 billion annually

Estimates of Those Affected by Final Rule

- 2.3 million workers
 - 2 million in construction;
 - 300,000 in general industry and maritime
- More than 1 million establishments
 - 663,000 in construction
 - 352,000 in general industry and maritime



Silica Standard for Construction 29 CFR 1926.1153

- Para (a) Scope
- Applicable to all occupational exposures in construction work, except when exposures remain below 25 mg/m³ as an 8-hour time-weighted average (TWA) under any foreseeable conditions.



Silica Standard for Construction 29 CFR 1926.1153

- Para (b) Definitions –
 - *Same as general industry, except:*
 - *Exclusion of regulated areas*
 - *Definition for competent person:*

An individual who is capable of identifying existing and foreseeable respirable crystalline silica hazards in the workplace and who has authorization to take prompt corrective measures to eliminate or minimize them. The competent person must have the knowledge and ability necessary to fulfill the responsibilities set forth in paragraph (g) of this section.

Silica Standard for Construction 29 CFR 1926.1153

- Para (c) Specified Exposure Control Methods
 - *This paragraph contains specific tasks and corresponding engineering controls (presented in Table 1)*
- Para (d) Alternative exposure control methods
 - *This paragraph directs employers to comply with the PEL, exposure control methods, and monitoring requirements if the employer opts out of Para (c)*

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- Para (e) Respiratory protection
 - *Same as general industry except for no requirement for regulated areas*
- Para (f) Housekeeping
 - *Same as general industry*
- Para (g) Written Exposure Control Plan
 - *This provision requires documentation of sources of exposure and mitigation measures, including controls and inspections.*

Silica Standard for Construction 29 CFR 1926.1153

- Para (h) Medical Surveillance
 - *Required for any employee required by the standard to use a respirator more than 30 days per year*
- Para (i) Communication
 - *Includes provisions for training in health hazards, tasks that result in exposures, control measures, identification of designated competent person, and other requirements*
- Para (j) Recordkeeping
 - *Same as general industry*

Silica Standard for Construction 29 CFR 1926.1153

- Para (k) Dates
 - *The standard becomes effective June 23, 2016, but obligations for compliance begin June 23, 2017. Compliance with sampling methods will be enforced beginning on June 23, 2018.*
- Appendices
 - *Appendix A – methods of sampling analysis*
 - *Appendix B – medical surveillance guidelines*

Operations Included in Table 1

- Stationary masonry saws
- Handheld power saws
- Handheld power saws for cutting fiber-cement board
- Walk-behind saws
- Drivable saws
- Rig-mounted core saws or drills.
- Handheld and stand-mounted drills
- Dowel drilling rigs for concrete
- Vehicle-mounted drilling rigs for rock and concrete
- Jackhammers and handheld powered chipping tools
- Handheld grinders for mortar removal (*i.e.*, tuckpointing)
- Handheld grinders for uses other than mortar removal.
- Walk-behind milling machines and floor grinders
- Small drivable milling machines (less than half-lane)
- Large drivable milling machines (half-lane and larger)
- Crushing machines
- Heavy equipment and utility vehicles used to abrade or fracture silica-containing materials
- Heavy equipment for grading and excavating

Table 1. Exposure Control Methods for Selected Construction Operations			
Operation	Engineering and Work Practice Control Methods	Required Air-Purifying Respirator (Minimum Assigned Protection Factor)	
		≤ 4 hr/day	> 4 hr/day
(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

Questions?


