



Cal/OSHA's Approach to Silica Safety and New Standard for Protection of Workers

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Limitations of 2016 Silica Standard

2016 Silica Standard was not adequate to address the hazards of artificial stone and resulting silicosis crisis

Limitations of 2016 Silica Standard

- Performance-based
 - Inadequate details on protective measures
 - Not well-calibrated for small fabrication shops
- Exposure Assessment (air sampling or objective data)
 - Requires exposure assessment prior to enforcing protective measures
 - Difficult, inefficient, time-consuming to enforce
 - Employers can alter work conditions to generate artificial low numbers

Limitations of 2016 Silica Standard

- Feasibility: Employers can avoid implementing key protections by claiming they are infeasible
 - Subsection (f) Engineering & work practice controls
 - Subsection (h) Prohibitions on dry sweeping, dry brushing, and compressed air cleaning
- Objective data (subsection (a)(2)) Employers exempt from standard using objective data showing exposures are below the action level, without conducting site-specific air monitoring
- One-time monitoring (subsection (d)(3)(ii)): Employers can conduct air monitoring on a single day and exempt themselves from the standard for that task, from that point onward, if the results show exposures are below the action level. Easy to manipulate to produce false low results

Topics

Highlights of New Silica Regulation

Silica Rulemaking Timeline in California

DATES

SILICA GENERAL INDUSTRY REGULATION

Prior to Oct 2016

No substance specific standard

Oct 2016 – Dec 2023

California Code of Regulations Title 8 §5204 Silica
Identical to 29 CFR 1910.1053

Dec 2023 – Feb 2025

§5204 Emergency Changes to Silica Regulation

Feb 2025 –

§5204 New Permanent Silica Regulation

New Silica Standard

California Code of Regulations Title 8 Section 5204

Improvements to Silica Standard:

- New definition - “*High-exposure trigger tasks:*”
 - Any dust-creating work (cutting, grinding, drilling, gouging, carving, polishing, etc., and cleaning/handling of materials/wastes generated) for
 - Artificial stone > 0.1% crystalline silica, or
 - Other material >1% crystalline silica
 - Limited to countertop fabrication and similar work
- Requires engineering controls and high-level respiratory protection (APF 1000) regardless of exposure levels, objective data, AL, or PEL. No feasibility exceptions.

New 2025 Silica Standard

- Improves medical surveillance
- Adds medical removal
- Requires silicosis and lung cancer reporting
- Enhances Cal/OSHA's ability to issue Order Prohibiting Use (OPU) for
 - Dry cutting
 - Insufficient or lack of respiratory protection

New Silica Standard

Subsection (d) Exposure assessment

- (d)(2) Performance option (objective data) not allowed for exposure assessments of high-exposure trigger tasks
- (d)(3) Cannot discontinue monitoring regardless of previous results
 - **2016 Silica Standard**: *If initial monitoring indicates employee exposures < AL, employer may discontinue monitoring...*
 - **New Silica Standard**: *...Monitoring shall **not** be discontinued for high-exposure trigger tasks. High-exposure trigger tasks shall be monitored by a qualified person at least every 12 months, or more frequently as required in this section.*

New Silica Standard

Subsection (e) Regulated Areas

- **2016 Silica Standard:** Regulated area required wherever employee's exposure is > PEL
- **New Silica Standard:** All high-exposure trigger tasks must be conducted in the regulated area regardless of exposure levels

New Silica Standard

Subsection (f) Methods of Compliance

- **2016 Silica Standard**: Engineering and work practice controls required where exposures > PEL unless employer demonstrates controls are not feasible
- **New Silica Standard**: Effective wet methods required regardless of exposure levels. No feasibility exceptions

New Silica Standard

New Subsection (g) Imminent Hazards

- **2016 Silica Standard:** n/a
- **New Silica Standard:** Order Prohibiting Use (Immediate work stoppage) for failing to correctly implement:
 - Effective wet methods
 - Respiratory Protection
 - Housekeeping (prohibitions on dry sweeping, dry brushing, compressed-air cleaning)
 - Reporting carcinogen use or silicosis cases

New Silica Standard

Subsection (h) Respiratory Protection

- **2016 Silica Standard (subsection (g))**: required when exposure > PEL
- **New Silica Standard**: For employees exposed to a high-exposure trigger task, respiratory protection required regardless of exposure levels:
 - Requires a Powered-air purifying respirator (PAPR) with an Assigned Protection Factor (APF) of 1000 or other respirator with APR > 1000.
 - HEPA, N100, R100, or P100 filter
 - Allows for a respirator with a lower APF if all exposures < AL as measured every 6 months and certain other conditions are met.

New Silica Standard

Subsection (i) Housekeeping

- **2016 Silica Standard (subsection (h))**: feasibility exceptions for prohibitions on dry sweeping, dry brushing, and compressed-air cleaning
- **New Silica Standard**: No feasibility exceptions
 - Prohibits dry sweeping, dry brushing, and compressed-air use
 - Prohibits walking or moving equipment through silica dust/debris

New Silica Standard

Subsection (j) Medical Surveillance

- **2016 Silica Standard (subsection (i))**: Medical surveillance required for employees exposed > AL for 30 or more days per year
 - Medical surveillance includes chest X-ray (can give false negative results for early-stage silicosis & lung cancer)
- **New Silica Standard**: Medical surveillance required for employees exposed to high-exposure trigger tasks for 30 or more days per year regardless of exposure levels.
 - Requires low-dose CT Scan in place of chest x-ray
 - Several other additions

New Silica Standard

New Subsection (k) Medical Removal

- **2016 Silica Standard:** n/a
- **New Silica Standard:**
 - Removal from silica exposure when recommended by the PLHCP
 - Employer must maintain employee earnings for 6 months after removal
 - Similar to other substance specific regulations

New Silica Standard

Subsection (I) Communication of Silica Hazards

- **New Silica Standard**: Added –
 - Training must be in language understood by employees and appropriate for their level of education and literacy
 - Additional topics covered in training
 - Improved sign for regulated areas. Must also be in Spanish

(1)(3) Warning Sign at Entrance to Regulated Area



DANGER

RESPIRABLE CRYSTALLINE SILICA
CAUSES PERMANENT LUNG DAMAGE
THAT MAY LEAD TO DEATH

MAY CAUSE CANCER

WEAR RESPIRATORY PROTECTION IN
THIS AREA

AUTHORIZED PERSONNEL ONLY

(1)(3) Warning Sign at Entrance to Regulated Area



PELIGRO

SÍLICE CRISTALINA RESPIRABLE

PROVOCA DAÑO PERMANENTE A LOS
PULMONES QUE PODRIA CAUSAR LA
MUERTE

PUEDE PROVOCAR CÁNCER

USAR PROTECCIÓN RESPIRATORIA EN
ESTA ÁREA

SOLO PERSONAL AUTORIZADO

New Silica Standard

New Subsection (m) Reporting of Silicosis

- **2016 Silica Standard:** n/a
- **New Silica Standard:** Employers and PLHCPs must report silicosis cases to Cal/OSHA and California Department of Health within 24 hours



Questions?