

Health Alert!

Stone Countertop Fabrication Workers At Risk For An Incurable Lung Disease

The Problem: In 2019, the National Institute for Occupational Health and Safety (NIOSH) [reported on an outbreak of silicosis](#), including fatalities, among workers employed in the countertop fabrication industry. Many of these workers were less than 50 years of age and engaged in fabrication tasks such as polishing, cutting, and grinding of stone surfaces or engineered stone.

That cloud of dust you see when a worker cuts or grinds concrete, brick, or artificial stone is not just harmless dust. It contains crystalline silica. Most crystalline silica is in the form of quartz. Granite, for example, is 40-60% quartz and fabricated countertop products can consist of over 90% quartz. Fine particles created by cutting and grinding these products can get deep into the lungs causing silicosis, which is disabling, irreversible, and incurable. Crystalline silica dust can also cause lung cancer, kidney damage, and autoimmune disease.

The good news is that exposure to silica dust is 100% preventable. You can work with silica-containing materials in ways that do not result in exposure to dust.



MATERIALS: granite, artificial/engineered stone, cultured stone, other stone products

TASKS: cutting, grinding, polishing, drilling

Employers should do the following to stop workers' exposure to silica dust:

- ✓ Train workers on the health hazards of silica and best practices for controlling dust.
- ✓ Always use water integrated dust control system or local HEPA exhaust ventilation.
- ✓ Frequently clean the work area with a HEPA-filtered vacuum so dust can't become airborne.
- ✓ If engineering controls can't keep silica exposures below the OSHA PEL of 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) of air averaged over an 8-hour workday, use a NIOSH-approved respirator that's right for the job.

Note: If respirators are used, then the employer needs to follow the OSHA Respiratory Protection standard.

- ✓ Provide initial and periodic medical exams to exposed workers.
- ✓ Request a free safety consultation from the NJ Department of Labor and Workforce Development on how to reduce workers exposures.



See back for additional information...

Additional Information

Safety Consultation

Free!

- ▶ If your company needs help measuring silica exposure or complying with the OSHA silica standard, call the NJ Department of Labor and Workforce Development – Occupational Safety & Health On-Site Consultation Program at (609) 292-0404 for a free, confidential visit. Additional information on how to get started can be found on their website at:

<https://www.nj.gov/labor/safetyandhealth/consultations-trainings/private-sector-safety-health-consultations/>

OSHA Silica Rule

- ▶ Frequently Asked Questions: Respirable Crystalline Silica Rule: [osha.gov/silica/Silica_FAQs_2016-3-22.pdf](https://www.osha-slc.gov/silica/Silica_FAQs_2016-3-22.pdf)
- ▶ Text of OSHA Respirable Crystalline Silica Rule: [osha.gov/silica/SilicaConstructionRegText.pdf](https://www.osha-slc.gov/silica/SilicaConstructionRegText.pdf)

Engineering Controls

- ▶ Silica Exposure During Granite Countertops Fabrication: pdfs.semanticscholar.org/e6a8/651b59365b5656e05331907ec6f7f6fe0562.pdf
- ▶ Engineering Controls for Silica: [cdc.gov/niosh/topics/silica/exposure.html](https://www.cdc.gov/niosh/topics/silica/exposure.html)

Personal Protective Equipment (PPE)

- ▶ Respirators: [cdc.gov/niosh/docs/96-112/default.html#Respiratory%20Protection](https://www.cdc.gov/niosh/docs/96-112/default.html#Respiratory%20Protection)

Other Resources

- ▶ OSHA/NIOSH Hazard Alert: Worker Exposure to Silica during Countertop Manufacturing, Finishing and Installation
[Note: This alert contains useful technical information. However, the Permissible Exposure Level for silica dust has been lowered since this publication was released and there are now additional requirements under the new silica standards.]
[osha.gov/Publications/OSHA3768.pdf](https://www.osha-slc.gov/Publications/OSHA3768.pdf)
- ▶ NIOSH -- Inhaling Silica Dust Can Cause Deadly Lung Disease: [cdc.gov/niosh/topics/silica/pdf/Silica_infographic-508.pdf](https://www.cdc.gov/niosh/topics/silica/pdf/Silica_infographic-508.pdf)
- ▶ NIOSH -- Silica Topic Page: [cdc.gov/niosh/topics/silica/default.html](https://www.cdc.gov/niosh/topics/silica/default.html)

NIOSH Field Studies

- ▶ NIOSH -- In-Depth Survey Report: Engineering Control of Silica Dust from Stone Countertop Fabrication and Installation
 - Minnesota: [cdc.gov/niosh/surveyreports/pdfs/375-12a.pdf?id=10.26613/NIOSHEPHB37512a](https://www.cdc.gov/niosh/surveyreports/pdfs/375-12a.pdf?id=10.26613/NIOSHEPHB37512a)
 - Texas: [cdc.gov/niosh/surveyreports/pdfs/375-11a.pdf?id=10.26613/NIOSHEPHB37511a](https://www.cdc.gov/niosh/surveyreports/pdfs/375-11a.pdf?id=10.26613/NIOSHEPHB37511a)

Articles, Blogs, Podcasts

- ▶ Outbreak of Silicosis among Engineered Stone Countertop Workers in Four States -- blogs.cdc.gov/niosh-science-blog/2019/10/29/silicosis-countertop/
- ▶ Silica Hazards from Engineered Stone Countertops -- blogs.cdc.gov/niosh-science-blog/2014/03/11/countertops/
- ▶ NPR -- Workers Are Falling Ill, Even Dying, After Making Kitchen Countertops: [npr.org/sections/health-shots/2019/10/02/766028237/workers-are-falling-ill-even-dying-after-making-kitchen-countertops](https://www.npr.org/sections/health-shots/2019/10/02/766028237/workers-are-falling-ill-even-dying-after-making-kitchen-countertops)
- ▶ Morbidity and Mortality Weekly Report (MMWR) -- Severe Silicosis in Engineered Stone Fabrication Workers – California, Colorado, Texas, and Washington, 2017–2019: [cdc.gov/mmwr/volumes/68/wr/mm6838a1.htm](https://www.cdc.gov/mmwr/volumes/68/wr/mm6838a1.htm)
- ▶ Morbidity and Mortality Weekly Report (MMWR) -- Surveillance for Silicosis Deaths Among Persons Aged 15–44 Years – United States, 1999–2015: [cdc.gov/mmwr/volumes/66/wr/mm6628a2.htm](https://www.cdc.gov/mmwr/volumes/66/wr/mm6628a2.htm)