CrewSigned

Silica Toolbox Talk

5-minute read-aloud · Last reviewed November 24, 2026

Silica is a natural mineral found in sand, stone, concrete, brick, block, mortar, tile and engineered stone countertops. It is not dangerous when it is sitting there in one piece. The danger comes when we cut, grind, drill, chip, sand or crush those materials. That creates very fine dust that floats in the air, much finer than you can see, and gets deep into your lungs.

Once silica dust is in your lungs, it stays there. It causes scarring called silicosis, which makes it harder and harder to breathe and has no cure. Silica also causes lung cancer, COPD and kidney disease. Some people get sick after years of exposure; with very heavy exposure it can happen much faster. By the time you notice symptoms, the damage is done.

That is why there are strict rules for silica on construction sites. The main idea is to stop the dust where it is made.

Water is the most common control. Saws, grinders and drills with water attachments keep dust wet so it falls instead of floating. Make sure the water is flowing the whole time you cut, not just at the start.

Vacuum dust collection is the other main control. Shrouds on grinders and drills connect to a vacuum with a proper filter that pulls dust away as it is made. Keep the shroud tight to the surface and empty or change the filter as directed.

For some tasks, even with water or a vacuum, a respirator is also required. If you are told to wear one, you need to be fit tested and trained, and you need to be clean shaven where the seal meets your face.

Housekeeping matters. Do not dry sweep silica dust and do not blow it off with compressed air, because that puts it right back in the air. Use wet methods or a HEPA vacuum instead.

Think about others nearby. Cut away from other workers when you can, stay upwind, and keep people who are not part of the task out of the dust. Our written plan says how each task is controlled, and the competent person checks that it is followed.

Do not take the dust home. Clean off your clothes with a vacuum, not by shaking them or blowing them off, and wash up before you eat or leave.

Discussion questions

1. Which tasks on this job create silica dust, and what control are we using for each one?
2. Is the water or vacuum on your saw or grinder working the way it should today?
3. Why do we never dry sweep or blow off silica dust with compressed air?

OSHA standard

29 CFR 1926.1153, Respirable crystalline silica
https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.1153

SOURCES

Silica: Small Entity Compliance Guide for the Respirable Crystalline Silica Standard in Construction (OSHA 3902): https://www.osha.gov/sites/default/files/publications/OSHA3902.pdf
Silica: Controlling Silica Dust in Construction, Overview of Standard Fact Sheet (OSHA 3681): https://www.osha.gov/sites/default/files/publications/OSHA3681.pdf
NIOSH, Silica and Worker Health: https://www.cdc.gov/niosh/silica/about/index.html
OSHA Safety and Health Topics, Crystalline Silica: https://www.osha.gov/silica-crystalline

This talk does not replace training that an OSHA standard requires. Scripts are based on OSHA and NIOSH publications and rewritten in plain language.

Safety Meeting Sign-In Sheet

TOPIC
Silica Toolbox Talk

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TIME

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