

TOOLBOX TALK: SILICA DUST

Job or site _____

Date _____

Led by _____

Open with this

Everybody who is cutting, grinding, drilling or chasing concrete, block, brick, stone or tile today, put your hand up. This talk is for you, and for everybody standing near you.

The talk

Silica is in concrete, block, brick, mortar, stone, tile and some engineered countertops. Cutting or grinding any of it breaks it into particles small enough to reach the deepest part of the lung, where the body cannot clear them.

What they cause is silicosis, which is permanent scarring of the lung, plus lung cancer, kidney disease and COPD. It is not an allergy and it does not wear off. The damage accumulates over years and the symptoms show up long after the exposure that caused them.

The permissible exposure limit is fifty micrograms per cubic meter of air as an eight hour average, with an action level of twenty five. Those numbers are tiny. A few minutes of dry cutting concrete indoors can put a person over the eight hour limit before lunch.

You do not have to do the math, because the standard gives you Table 1. For each common task, cutting with a saw, drilling, grinding, chipping, it lists the control. Almost always that control is water on the blade or a vacuum on the tool with a HEPA filter, and for some tasks a respirator on top of that. Follow the row for your task and you are compliant without air sampling.

Water is the simplest control on the site. A saw with integrated water, a hose on the cut, wet cutting masonry. It costs nothing and it removes most of the dust at source, which is the only place worth removing it.

And never dry sweep or use compressed air to clean up silica dust. That takes settled dust that was out of the air and puts it all back, at head height, for everybody. HEPA vacuum or wet methods, every time.

Point at these before anybody starts

- Every task today that cuts, grinds, drills or breaks concrete, block, brick, stone or tile
- The water feed or the vacuum shroud on each of those tools, and whether it works
- The HEPA vacuum, its filter and its bag

- Respirators, if the task row requires one, and whether the wearer is fit tested and clean shaven
- The cleanup method: wet or HEPA vacuum, never a broom or an air hose
- Who else is working downwind of the dust, including other trades

The rules that apply

- Follow the Table 1 control for your task: water, a HEPA vacuum shroud, or both, plus respiratory protection where the row calls for it.
- The permissible exposure limit is 50 micrograms per cubic meter over 8 hours, with an action level of 25.
- Never dry sweep and never use compressed air to clean silica dust unless no other method works and ventilation controls it.
- Indoors or in an enclosed area, the controls matter more, not less, because the dust has nowhere to go.
- Respirators need a fit test, medical evaluation and a clean shaven seal. Stubble breaks the seal.
- Keep other trades out of the dust zone while the work is running, or shift the work to when they are gone.

Ask the crew

- Who is cutting masonry today, and is the water or vacuum working on that tool right now?
- How are we cleaning up at the end of the day, and is there a broom involved?
- Who else will be in this space while the cutting is happening?

Close with this

Water on it or a vacuum on it, every cut. No brooms, no air hoses. The dust you cannot see is the dust that stays.

Attendance

Everybody who was present signs, including subcontractors and anybody visiting the site.

	Print name and signature
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This talk is general safety information for a crew briefing, not legal advice and not a substitute for the training your employees are required to have. Standards are quoted for orientation only. Check the current text of the standard and your own state plan, which may be stricter than the federal rule.