Silica dust toolbox talk

29 CFR 1926.1153, 1910.1053

Date _____ Trainer _____ Location _____

Opening question

Who here cut, ground or drilled concrete, block, brick or stone this week, and where did the dust go?

Why it matters

Cutting, grinding and drilling concrete, brick, block, stone and mortar throws silica dust into the air. Breathing it over time can cause silicosis, lung cancer and kidney disease. Silicosis has no cure, so the real protection is keeping the dust out of the air you breathe.

Key points

1. **Know where silica dust comes from**
   Crystalline silica is a natural mineral in sand, stone, concrete, brick, block, mortar and engineered stone. Cutting, grinding, drilling or crushing these materials releases dust fine enough to reach deep into your lungs, and much of it is too fine to see. Where you can, pick a method that makes less dust, like splitting pavers instead of sawing them.

2. **Know what it does to your body**
   Breathing silica dust can scar your lungs over time. Shortness of breath and a cough may not show up until years after the damage starts, and by then it cannot be undone. OSHA's silica standard requires the employer's hazard communication program to address at least cancer, lung effects, immune system effects and kidney effects.
   29 CFR 1926.1153(i)(1)

3. **Use the dust controls listed for your task**
   In construction, Table 1 of the silica standard lists tasks and the engineering controls, work practices and respiratory protection for each. For a Table 1 task, the employer must fully and properly put those in place, unless it assesses and limits exposure under the standard's alternative methods. With wet methods, the water flow must be enough to minimize the release of visible dust (29 CFR 1926.1153(c)(2)(ii)). Check the water or vacuum before you start, and stop if you see a dust cloud.
   29 CFR 1926.1153(c)(1)

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4 Clean up with water or a HEPA vacuum

The employer must not allow dry sweeping or dry brushing where it could add to silica exposure, unless wet sweeping, HEPA-filtered vacuuming or other methods that minimize the likelihood of exposure are not feasible. Compressed air may not be used to clean clothing or surfaces where it could add to exposure, unless it is used with a ventilation system that effectively captures the dust cloud or no other method is feasible (29 CFR 1926.1153(f)(2)). General industry has the same rules (29 CFR 1910.1053(h)(1) and (h)(2)).

29 CFR 1926.1153(f)(1)

5 Wear the respirator your task calls for

A respirator backs up dust controls; it does not replace them. Where the standard requires respiratory protection, the employer must provide an appropriate respirator that meets 29 CFR 1910.134. If you use a tight-fitting respirator, you must be fit tested before first use, whenever you switch to a different facepiece and at least annually (29 CFR 1910.134(f)(2)). You cannot wear one with facial hair that comes between the seal and your face (29 CFR 1910.134(g)(1)(i)(A)).

29 CFR 1926.1153(e)(1)

6 Know the plan and the competent person

In construction, the employer must set up and follow a written exposure control plan that lists the silica tasks, the controls for each, the housekeeping measures and how access is restricted when needed (29 CFR 1926.1153(g)(1)). The employer must designate a competent person to make frequent and regular inspections of job sites, materials and equipment to carry out the plan. Workers who must wear a respirator 30 or more days a year under the standard can get medical exams at no cost (29 CFR 1926.1153(h)(1)(i)).

29 CFR 1926.1153(g)(4)

Scenario

Picture this: Two workers are cutting concrete pavers with a handheld saw. The water line keeps clogging, so one of them pulls it off to finish faster. A gray cloud drifts over a nearby crew with no respirators. At the end of the day, someone blows the dust off his jeans with the air hose. What went wrong, and what should each person have done?

Crew discussion

1. Which tasks on our job make silica dust, and what control does each one use?
2. How do we check that the water or vacuum is working before we cut?
3. Who is our competent person for silica, and where is the written plan?
4. What will we use instead of a broom or air hose to clean up today?

Bottom line **Control the dust at the tool every time, clean up with water or a HEPA vacuum, and wear the respirator your task calls for.**

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Sign-in sheet / Hoja de asistencia

Topic / Tema Crystalline silica / Sílice cristalina

Date / Fecha _____

Trainer / Instructor _____ Location / Lugar _____ Company / Empresa _____

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