Dust and Silica Toolbox Talk

Key points, do's and don'ts, and questions with answers. The attendance sign-off sheet is on the last page.

Asked to show your toolbox talk records? The Site Book keeps each talk and its signatures with the job, on Pro: **thesitebook.co.uk/features/toolbox-talks**

Key points to cover

- Respirable crystalline silica (RCS) is a very fine dust made when you cut, chase, drill, grind or break materials such as concrete, mortar, brick, block, tile, slate, sandstone and granite
- Engineered stone, widely used for kitchen and bathroom worktops, can contain up to 95% crystalline silica. HSE says dry cutting it is unacceptable
- The workplace exposure limit (WEL) for RCS is 0.1 mg/m³ (8-hour TWA) — this is a very small amount
- Silicosis, lung cancer, and COPD are all linked to silica dust exposure
- Control the dust at source first: use on-tool water suppression or on-tool extraction (with an M or H class extraction unit) when you cut, chase, grind or drill these materials. Engineered stone must be cut with on-tool water suppression: extraction on its own is not an alternative
- Never dry sweep or use compressed air to clean up dust — use an M or H class vacuum or damp down
- RPE is worn on top of water or extraction, not instead of them, because extraction does not capture all the silica. For tasks like chasing, HSE advises RPE with an assigned protection factor (APF) of 20, such as an FFP3 disposable mask or a half mask with a P3 filter
- A tight-fitting mask only protects you if it has been face-fit tested to you and you are clean-shaven where it seals against your face
- Employers must provide health surveillance where there is a reasonable likelihood of silicosis. Take part when it is offered

Do's and don'ts

Do

- Use water suppression on every disc cutter, wall chaser, and floor grinder
- Use on-tool dust extraction connected to an M or H class extraction unit
- Wear the RPE you have been given (APF 20, such as FFP3) when cutting, chasing, grinding or drilling stone, concrete, brick or mortar, and check it is working before every use
- Be clean-shaven where a tight-fitting mask seals, and only wear a mask you have been face-fit tested for
- Throw disposable masks away at the end of the shift, or sooner if they clog with dust
- Clean up with an M or H class vacuum or damp down — not a broom
- Attend health surveillance (lung function tests) when offered

Don't

- Never cut, chase or grind concrete, stone, brick or mortar without water suppression or on-tool extraction, and never cut engineered stone worktops without on-tool water suppression
- Never use compressed air to blow dust off yourself or surfaces
- Never dry sweep construction dust — it creates an invisible cloud of fine particles
- Never remove your mask while dust is still in the air — wait until the area is clear
- Never ignore a persistent cough or breathlessness — see occupational health

Questions to check understanding

Ask each question and let the crew answer before you read out the answer.

Q1. What is the workplace exposure limit for respirable crystalline silica?

Answer: 0.1 mg/m³ as an 8-hour time-weighted average. This is a very low level — a small amount of uncontrolled cutting can exceed it.

Q2. Name two ways to control silica dust at source when cutting concrete.

Answer: 1) Water suppression — a continuous water supply to the blade or disc to suppress dust at source. 2) On-tool extraction — a dust collection system attached directly to the tool, connected to an M or H class extraction unit.

Q3. Why is silicosis so dangerous?

Answer: Silicosis is incurable and progressive — even after exposure stops, the disease can continue to worsen. It causes permanent scarring of the lungs, reducing breathing capacity, and significantly increases the risk of lung cancer.

Q4. What should be used to clean up construction dust?

Answer: An M or H class vacuum or extraction unit, or wet methods such as damping down. Do not dry sweep — it pushes dust into the air. A standard domestic vacuum is not suitable.

Q5. Your mask is tight-fitting. What has to be true for it to protect you?

Answer: It must have been face-fit tested to you, and you must be clean-shaven where it seals against your face. Check it is working before every use.

Q6. The saw has water or extraction on it. Why do you still need a mask?

Answer: Water and extraction reduce the dust, but HSE notes that extraction does not capture all of the silica. The mask protects you from what is left.

Attendance sign-off sheet: Dust and Silica Toolbox Talk

Everyone who attended prints their name and signs to confirm they received this talk.

Date _____ **Time** _____

Site or location _____ **Presented by** _____

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This is general guidance for UK construction sites. Check it against your own risk assessment, method statement and the site before you deliver it. Toolbox talk from The Site Book, reviewed 1 November 2026. Read it online at thesitebook.co.uk/toolbox-talks/dust-and-silica.