

TOOLBOX TALK

Dust and silica toolbox talk

About seven minutes · COSHH Regulations 2002

SITE	DATE	GIVEN BY

WHY IT MATTERS

HSE says over 500 construction workers are believed to die from exposure to silica dust every year. HSE calls silica the biggest risk to construction workers after asbestos. Silica is in concrete, brick, block, mortar, stone, sand and tiles, and every time a disc, a chaser or a drill goes into them it comes out as dust fine enough to reach the bottom of the lungs.

The diseases are silicosis, which scars the lungs so they cannot stretch, COPD, which leaves people fighting for breath on a flight of stairs, and lung cancer. None of them show up on the day. Most take years to show, and by the time they do the damage is done and hard to treat. Nobody on this site can see the dust that does the harm, which is why we control the task and not the dust we can see.

HSE, Construction dust: the health risks

THE POINTS TO MAKE

- ☐ **Three dusts, all harmful**

Silica dust comes from concrete, brick, block, mortar, stone, sand and tiles. Wood dust comes from cutting and sanding timber, and hardwood dust causes asthma and cancer of the nose. Lower risk dust, mainly gypsum from plasterboard and limestone, still harms the lungs in quantity. The job and the material tell you which one you are making.
- ☐ **Plan the dust out first**

Before a tool starts, ask whether the dust needs making. Order blocks and kerbs to size, use a block splitter instead of a saw, fit cable trays instead of chasing, and cut outside rather than in a room. Less cutting means less dust, and every cut avoided is one nobody has to be protected from.
- ☐ **Extraction on the tool**

For chasers, grinders, drills, sanders and saws indoors, the shroud and hose connect to an M or H class vacuum, not a domestic or general site vacuum. Check the shroud sits on the surface, the hose has no splits and the filter is changed as the maker says. HSE asks for a check at least weekly. A full bag or a loose hose means the dust is going into the room.
- ☐ **Clearing up makes dust too**

Dry sweeping concrete dust and debris puts it straight back in the air at the height people breathe. Damp down and use a brush, shovel and bucket for small amounts, and an M or H class vacuum for fine dust. Compressed air is never used to blow dust off clothes, tools or surfaces. Do not brush dust off clothing either. Take dusty overalls off before the van and the cabin.
- ☐ **A tiny amount is the limit**

The legal limit for silica is 0.1 milligrams in a cubic metre of air, averaged over a working day. HSE measured peaks of around 5 milligrams when chasing concrete and up to 70 when cutting kerbs dry. A few minutes of uncontrolled cutting can use up a whole day of allowance. The limit is a ceiling, not a target: the law asks for exposure as low as we can get it.
- ☐ **Water on the blade**

For cut-off saws, floor saws and tile cutters, the water suppression attachment goes on and stays on for the whole cut, fed from a pressurised bottle or the mains, with enough flow to keep the blade wet. A dribble at the start and a dry blade by the end is not suppression. Check the water before the first cut, not after the dust cloud.
- ☐ **Masks: the right one, fitted**

The mask for this work is at least an FFP3 disposable or a half mask with a P3 filter, a protection factor of 20, worn on top of water or extraction, never instead. A tight-fitting mask needs a face fit test for the make and model you wear, and a clean-shaven face. For more than an hour without a break, HSE says to consider powered RPE with a hood or helmet.

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TOOLBOX TALK, CONTINUED

Dust and silica toolbox talk: do, do not, and the questions

DO

- Check the water feed or the extraction unit before the first cut, and stop if either fails.
- Wear at least an FFP3 or a P3 half mask for dusty tasks, on top of water or extraction.
- Come to work clean shaven if you wear a tight-fitting mask, and tell us if your fit test is out of date.
- Cut outside, or screen the area off, so people nearby are not breathing the dust from your job.
- Clean up with an M or H class vacuum or by damping down, and empty the vacuum where the dust will not blow about.
- Tell us about coughing, wheezing or breathlessness that lasts, so health surveillance can pick it up early.

DO NOT

- Do not cut concrete, stone, block, brick, kerbs or tiles dry. If the water or the extraction is not there, the cut waits.
- Do not use a mask with a bent nose clip, a loose strap or stubble under the seal, and do not share one.
- Do not sweep dry or blow dust off with compressed air, a leaf blower or a brush in an enclosed room.
- Do not run a chaser or grinder with the shroud removed, even for a short cut in a corner.
- Do not treat a short job as too small to matter: a few minutes dry can exceed a whole day of allowance.
- Do not eat, drink or smoke where silica dust is in the air, and wash before breaks.

ASK THE TEAM

- ? Which tasks on this site today make silica dust, and what is on each tool to control it?
- ? Where is the water coming from for the cut-off saw, and who checks it before the cut?
- ? Which vacuum do we use for the chaser, and when was its filter last changed?
- ? Who here has a face fit test for the mask they are wearing today, and for which model?
- ? How are we clearing up at the end of the shift, and where does the dust go?

TO CLOSE

Nobody chooses to lose their breath. People get silicosis because the water bottle was empty, the hose was in the van, the mask was the wrong one or the clearing up was done with a broom. The dust that does the harm cannot be seen, so we judge the control, not the cloud. If the water or the extraction is not working, stop, ask, and we will sort it.

Record it. Who gave the talk, where, when, who was there and what was raised. The last page is the record.

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ATTENDANCE RECORD

Dust and silica toolbox talk: given and understood

Each person signs on the day to say they were present and understood the talk. Anyone who joins the team later is given the talk before starting, and signs here.

SITE	DATE	TIME	GIVEN BY
NAME	COMPANY	TRADE OR ROLE	SIGNATURE

QUESTIONS RAISED, AND THE ANSWERS GIVEN	ACTIONS AGREED, WHO AND BY WHEN	
TALK GIVEN BY (SIGNATURE)	POSITION	DATE

MANAGEMENT OF HEALTH AND SAFETY AT WORK REGULATIONS 1999, REGULATION 10: INFORMATION FOR EMPLOYEES