

Are your dust-control measures making things worse?

A breath of bad air can be avoided, provided the right controls are put in place and used correctly. And certain 'afterthought' dust-control provisions can actually endanger workers rather than reduce their exposure to dust. Read on for advice on dust protection.



The health and safety jargon for dust in its breathable form is Respirable Crystalline Silica (RCS), and it can lead to all kinds of very unpleasant lung diseases. Most common is silicosis, where the breathing gets harder and the person more vulnerable to more serious lung infections, and even lung cancer. These conditions do take years of exposure to develop, but very high levels of exposure without safety precautions can turn years into months.

As with most cases in construction-related health and safety, you can do 10 times more good work with the right preparation. At design stage, for instance, building designers should always aim to minimise the silica-releasing processes commonly found during construction. For example, you can cut the need to drill/chase out concrete and masonry right down with pre-built in recesses for electric wiring, gas and plumbing, or even with surface-mounted containment.

By following the appropriate control measures, the threat is all but gone, meaning you and your workers can breathe a little easier.

Studies have shown that dust created during construction presents a serious long-term threat to your employees. And just like asbestos, the effects of breathing in this dust can take many years to manifest – with potentially fatal consequences. As mentioned earlier, long-term inhalation of silica dust can lead to the condition silicosis, which scars the lungs and reduces overall breathing capacity. Continued exposure leads to a form of lung cancer – and there is no cure for the condition.

Do your plans include provisions for dust?

As an employer, you have a duty to control the amount of dust your employees are exposed to. According to the HSE, the maximum amount of silica dust an employee can legally inhale each day will fit inside the 'O' of a one penny coin. And that is after you have applied the 'right' controls to reduce exposure. Yet despite the seriousness of the condition, research conducted by the Construction Dust Partnership (CDP) – an industry collaboration directly involving many organisations, including the HSE – found that just 3 per cent of workers were aware of the dangers of dust. Worse still, the majority of site operators rarely considered the risks posed by dust during the project design phase.

The problem with bolt-on provisions

As a result of this lack of planning, most dust-control measures tend to be less effective, and this greatly increases the risk of harmful exposure. Worse still is when these 'afterthought' dust-control provisions actually exacerbate the situation.

The following dust-control 'solutions' can all endanger your workers:

The non-classified vacuum – Keeping a vacuum cleaner handy makes perfect sense, but non-classified vacuums, such as the domestic type, do not offer the level of filtering required to capture the finest of dust particulates in hazardous areas. This means that as air is sucked



through the vacuum, tiny silica particles are expelled through the exhaust and into the air. Now the dust has moved from the floor/work surface and is even easier to breathe in.

Dry sweeping – A broom is a cheap, effective way to quickly collect dust and other rubbish/rubble on-site. But again, the sweeping motion actively releases inhalable dust into the air, increasing exposure in the process.

Air-blowing tools – Virtually the same as using a broom, but you don't have to come into physical contact with rubble to move it, or to spread the microscopic particles everywhere.

Instead of collecting dust, as is intended, each of these 'control' methods actually places your employees in danger.

Even if your construction project is already underway, it's not too late to put in place these measures to reduce dust exposure:

Use the correct equipment – There are industrial vacuum cleaners available that can filter even the smallest particles of silica dust. They may be more expensive, but using these types of vacuums will help keep your employees healthy and alive (helping you avoid potential fines and being in court).

Damping down before sweeping

Obvious yet easily overlooked, damping down is a simple, effective way to prevent dust being thrown into the air as it is collected. By carefully spraying water over the areas to be cleaned, the dust is 'stuck' together, ready to be swept up and disposed of safely.

Need help?

Managing construction site dust isn't complex, but it's a lot easier if you put proper plans in place before work starts. If you're struggling with this or have concerns that your employees are at risk of over-exposure to silica, please get in touch and we'll help explain your options moving forward.

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