

# Working with reconstituted stone

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## Fatal health risks when working with some types of stone

Working with reconstituted stone exposes employees to crystalline silica dust. If the dust is not managed properly, this can have serious health effects.

Reconstituted stone products such as those used as kitchen benchtops can contain up to 95% crystalline silica. To find out how much crystalline silica is in a product, check the safety data sheet (SDS) or other information from the supplier.

### Health risks

When you do things like cut, grind, drill or polish products that contain crystalline silica, it releases very fine dust. The dust may not be visible. Breathing in this dust is likely to cause deadly diseases, such as:

- silicosis
- lung cancer
- kidney disease
- autoimmune disease.

You don't have to be exposed to silica dust for a long time to develop silicosis. You can develop the disease after a short period of very high exposure.

Silicosis is on the increase and it can be fatal. People working in benchtop fabrication are particularly at risk.



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## Employers must control exposure

Employers must control the risks of employee exposure to crystalline silica dust. When determining what control measure to use, employers must apply the hierarchy of control. Employers must first determine if the risk of exposure to crystalline silica dust can be eliminated. Where the risk of exposure can't be eliminated, it must be reduced as far as is reasonably practicable, using one or more of these controls:

- substitution (eg substituting high silica content reconstituted stone products with products with a lower silica content)
- isolation
- engineering controls (see below).

If the risk of exposure still remains, administrative controls and personal protective equipment must be used.

## Reduce dust when cutting, grinding or polishing

Dry cutting, grinding or polishing reconstituted stone generates dust with very high levels of crystalline silica. Anyone who has done dry cutting will have been exposed.

Employers must not allow dry cutting without engineering controls. These are:

- Wet methods, such as hand tools with water suppression. **WorkSafe views wet methods as reasonably practicable in all but very rare situations.**
- Local exhaust ventilation (LEV), such as tools fitted with extraction attached to a HEPA filtered dust class H vacuum cleaner. This control requires proper design, installation, use and maintenance to ensure effective capture of generated dust at the source.

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Wet methods are preferred over LEV as it is more likely to be effective in reducing exposure. But you may need to use both wet methods and LEV to reduce the dust enough.

When wet methods and LEV don't adequately reduce dust, use respiratory protective equipment (RPE) as an extra control. Employers must provide at least a P1 filter. RPE must be facial fit tested for each employee. Employees must wear them during all tasks where there is a risk of dust exposure. Employers must give employees information, instruction and training in RPE use and maintenance.

There are consequences for employers who don't control risks of dry cutting. If WorkSafe inspectors observe cutting, polishing or grinding without appropriate engineering controls, they may issue enforcement notices or take other action. Failing to control risks of dry cutting may be a criminal offence.

## Reduce dust during installation

Wherever possible, eliminate cutting at the installation site. If you can't eliminate cutting at the installation site, use the cutting controls listed above.

## Housekeeping

Make sure clean up and housekeeping processes don't generate dust in the air. Do not use compressed air for cleaning areas or personal cleaning.

## Exposure standard

Safe Work Australia publishes exposure standards for airborne contaminants. The exposure standard for crystalline silica dust is 0.1 mg/m<sup>3</sup> as a TWA (time-weighted average over 8 hours) airborne concentration.

This standard is being reviewed. Until the review is complete, WorkSafe Victoria recommends that employees are not exposed to levels above 0.05 mg/m<sup>3</sup> as a TWA.

## Air monitoring

By law, employers must carry out air monitoring if:

- they are not sure if their employees are exposed to levels of silica dust that are above the exposure standard, or
- they can't work out if there's a risk to employee health without air monitoring.

Employers should carry out regular air monitoring to ensure employee exposure is controlled.

## Health monitoring

By law, employers must provide health monitoring if exposure to crystalline silica is likely to affect employee health. Employers should carry out health monitoring in all stone benchtop fabrication workplaces, unless air monitoring data shows that exposure is less than 0.025 mg/m<sup>3</sup> as a TWA.

## Further information

Contact the WorkSafe Victoria Advisory Service on 1800 136 089 or go to [worksafe.vic.gov.au](https://www.worksafe.vic.gov.au).

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