Installing stone benchtops

Breathing in dust generated during the installation of stone benchtops can cause serious lung diseases, including silicosis and lung cancer, because it contains respirable crystalline silica (RCS).

Workers may be exposed to RCS when cutting, trimming, grinding or polishing stone during the installation of stone benchtops. Uncontrolled dry cutting, trimming, grinding or polishing stone is prohibited because it exposes workers and others to large amounts of RCS.

Eliminate making alterations on site

Eliminate the need for cutting, trimming, grinding, polishing or sanding during installation by:

- accurate measuring – remember the saying; ‘measure twice, cut once’
- cutting holes and voids at the workshop before installation – get the location and measurements prior to installation
- completing alterations at the workshop – if it doesn’t fit take it back
- consulting and communicating with principal contractors and clients to prevent alterations on site.

Minimise dust during alterations

If alterations on site are unavoidable, workers must be provided with the right tools and control measures to carry out this work safely. These include:

- only using power tools that use water suppression or on-tool dust extraction
- workers wearing adequate respiratory protective equipment
- putting other measures in place to manage exposure including work practices and personal protective equipment.

Water suppression

Use stone saws, grinders or polishers specifically designed for use with water suppression and make sure:

- the water feed is attached to the tool and directed at the material and/or tool to prevent visible dust during the process
- water pressure and flow is maintained at a minimum of 0.5L/min
- water spray is controlled using guards, plastic flaps or brush guards.

Figure 1: Water suppressed stone saw.

Note: Using a spray bottle or holding a sponge or garden hose against the blade of disc of a grinder or polisher to suppress dust does not control the risk of exposure to RSC and is not permitted. It is also dangerous to use electric power tools that are not designed to be used with water.

Local exhaust ventilation

Use on-tool extraction, for example saws, grinders and polishers can be fitted with a shroud and attached to a vacuum or dust extractor.

Figure 2: On-tool extraction.

The vacuum or dust extractor must be H class rated for high hazard dusts. H class vacuums are marked with a special label.

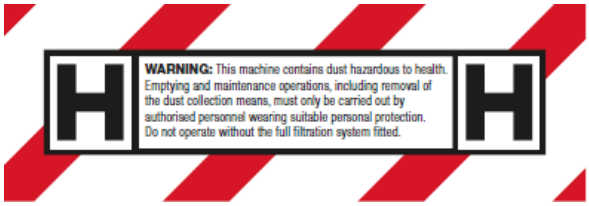

Figure 3: H class vacuum label.

Place a sacrificial backer-board or spoil-board under the stone slab to increase the effectiveness of on-tool extraction. This will prevent dust from being released below the slab during cutting or trimming.

Figure 4: On-tool extraction using backer-board.

Figure 5: Stone slab sitting on chipboard sheet used as a backer-board.

Respiratory protective equipment

Respiratory protective equipment (RPE) is required in addition to using water suppression or on-tool extraction.

RPE must include at a minimum a P1 or P2 half face respirator, however a powered air purifying respirator is strongly recommended. Workers wearing a tight-fitting respirator (a respirator that relies on a tight seal between the worker and the face piece) must pass a fit test.

Figure 6: Worker cutting a stone benchtop in a high rise.

Managing and minimising dust

Other measures to manage dust when carrying out cutting, trimming, grinding or polishing activities while onsite include:

- working in a well-ventilated area where possible, for example outside
- preventing exposure to others not involved with the cutting or grinding task by restricting access to the area
- preparing and carrying out work in accordance with a safe work method statement
- providing workers with personal protective equipment including disposable coveralls or an apron, safety boots or gumboots and hearing protection.

Proper clean up at completion

Proper clean up after installation is important to avoid other people being exposed to RCS.

Keep respirators on and thoroughly clean the area, tools and equipment after finishing the job using either an H class vacuum cleaner or wet methods such as hosing, mopping or wet wiping down surfaces.

Dry sweeping methods such as brooms or using compressed air are not permitted as these methods can recirculate RCS into the air.

For more information

Visit worksafe.qld.gov.au and search:

- benchtop fabrication
- respiratory protective equipment
- safe work method statements.