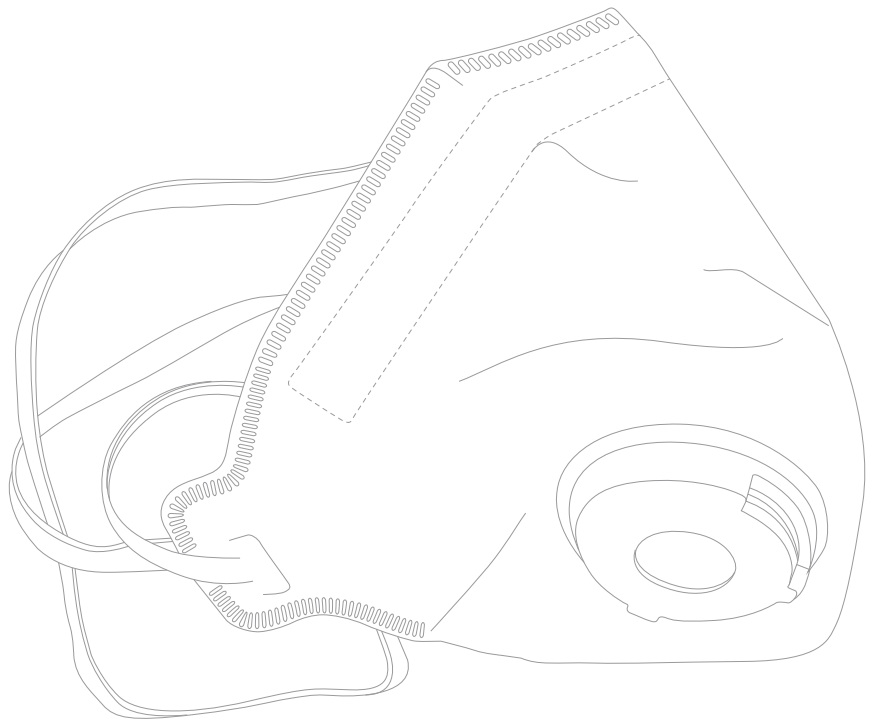


Health & Safety Guide

Preventing the exposure to respirable crystalline silica during the installation of stone (natural or engineered), ceramic benchtops, prefabricated modules and blanktops.



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WARNING

This guide has been prepared for professionals (stonemasons, installers, etc.) and provides information and recommendations on health and safety issues to be considered during installation of stone (natural or engineered), ceramic benchtops, prefabricated modules and blanktops.

These products contain different amounts of crystalline silica. Processing them incorrectly or without adopting the appropriate safety measures can cause serious illnesses.

IN NO CASE IS THIS GUIDE EXHAUSTIVE OR SUBSTITUTIVE OF THE LEGAL OBLIGATIONS IN REGARDS OF HEALTH AND SAFETY UNDER THE APPLICABLE LOCAL REGULATIONS. ALWAYS OBTAIN ADVICE FROM YOUR ADMINISTRATION AND FROM A PROFESSIONAL INDUSTRIAL HYGIENIST TO IMPLEMENT THE OCCUPATIONAL SAFETY MEASURES REQUIRED TO MEET THE REGULATORY REQUIREMENTS AND TO MITIGATE THE EXPOSITION TO DUST, AS THE REQUIRED SAFETY MEASURES DEPEND ON THE SPECIFIC CONDITIONS OF THE WORKPLACE.

Index

Preamble	5
Objective and scope	6
Planing the installation	6
Minimize dust during inevitable modifications	7
Water dust suppression	7
Local exhaust ventilation	8
Respiratory protective equipment	10
Managing and minimizing dust	13
Proper clean up at completion	14



Preamble

Crystalline silica is a basic component of soil, sand, granite, quartz, and many other minerals. Respirable size particles of crystalline silica (known as RCS) may result when workers, cut, drill or grind these objects.

Respirable crystalline silica may pose a health hazard if workers are not protected properly and workplaces are not properly controlled to reduce silica dust.

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

If there are not implemented preventive measures, workers may be exposed to RCS when cutting, trimming, grinding or polishing stone during the installation of stone (natural or engineered) or ceramic benchtops.

Uncontrolled dry cutting, trimming, grinding or polishing stone should be avoided because it exposes workers and others to large amounts of RCS.

Prior to the installation, consult the Safety Data Sheet (SDS) and "Good Practice Guide".

The cutting, grinding or polishing of stone should be avoided without control, as it may pose a risk of overexposure to SCR for workers.

Once the product is once the product is installed, it is totally safe for its the intended use safe for the intended use.

An installation process is not considered under control if the daily exposure is not within the limit value established by the competent labor authority. Consult the limit values established in your country.

Objective and scope

This guide is aimed at professionals who install kitchen, bath or similar countertops, whether they are prefabricated modules that have just been fabricated and installed at a customer's house or installation of countertops fabricated in the workshop whether it is natural stone, engineered stone or ceramic materials.

Its objective is to establish preventive measures to eliminate or minimize, as far as possible, the risk of exposure to respirable cristaline silica.

Planing the installation

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

- Accurate measuring.
- Cutting holes and voids at the workshop before installation always if possible. Get the location and measurements prior to installation
- Completing alterations at the workshop always if possible.
- Consulting and communicating with principal contractors and clients to prevent alterations on site.
- In the case of carrying out the installation tasks of a prefabricated module, it is necessary the use of water cutting methods and when it is not possible, then use equipment with dust suppression with an efficiency of 99'9 % either indoors or outdoors.
- The water flow of the tools used in the installation in enclosed spaces should be sufficient to minimize the emission of visible dust

Minimize dust during inevitable modifications

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.
- Operate and maintain the tools in accordance with the manufacturer's instructions to minimize emissions.



Use appropriate respiratory protection

Water dust 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 splashes are controlled using guards, plastic flaps or brush guards.
- Consider covering furniture and other surfaces with plastic sheeting to protect them from the action of dust or water.

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 should be avoided. It is also dangerous to use electric power tools that are not designed to be used with water.



Mini Grinder Bosch GWS 1000 W + wet accessories.

Local exhaust ventilation

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

A class H Vacuum or dust extractor for highly hazardous dusts could be required according to the local legislation. H class vacuums are marked with a special label.

Mini grinder Makita + Vacuum system. 9557NB/2+DVC863L+195236-5+196846-1



EN 60335-2-69 Annex AA, divides vacuum cleaners for hazardous dust into three Classes of use:

- Class L - Dust representing a moderate risk - The vacuum cleaner filter traps over 99 % of dust with a grain size of under 2 microns
- Class M - Dust representing a medium risk - The vacuum cleaner filter traps over 99.9 % of dust with a grain size of under 2 microns
- Class H - Dust representing a high risk - The vacuum cleaner filter traps over 99.995 % of dust with a grain size of under 1 micron (it includes carcinogenic dusts and dusts contaminated with carcinogens and/or pathogens)

According to the european EN 1822 proper HEPA filters for a proper extraction should be:

- H13 EU13 S EU13> = 99.99%
- H14 EU14 - EU14> = 99.999%

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.

Vaccum H class Nilfisk VHS42



Respiratory protective equipment

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

The level of protection of the respiratory filters must be in accordance with local regulatory requirements.

Suitable respiratory protective equipment with a particle filter must be worn:

AUTHORITY	TYPE OF PARTICLE FILTER
NIOSH	From N95, R95, or P95 filter or higher level (N99, R99, P99, N100, R100, P100) according to the dust concentration. https://www.cdc.gov/niosh/npz/npzd0684.html
European standard EN143	High efficiency filter P3
Australian Standard AS/NZS 1716	P1 used against mechanically generated particles P2 for use against mechanically & thermally generated particles eg metal fumes & smokes

In any case consult the local legislation to check if any other requirement is required.

Please check applicable local law if any other specification is determined.

Use appropriate respiratory protection even when working with water as a dust reduction measure when processing stone benchtops independently on the material (natural stone, quartz, ceramics)

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. Keep in mind that facial hair can make facial mask adjustment difficult and may reduce its effectiveness.

It is also strongly recommended a powered, air-purifying respirator with a tight-fitting face piece and a high-efficiency particulate filter.





Managing and minimizing 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 the installation.
- 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.
- Provide workers with an adequate amount of clean work clothes, including spare parts.
- Workers who handle silica dust, should wear proper chemical jumpsuit made of textile that to avoid dust absorption.
- Do not use compressed air to clean work clothes. Workers should not smoke inside the facilities.
- At the end of the work day, clean up, shower if necessary, and put on clean clothes before leaving work.
- Under no circumstances should work clothes be washed next to family clothes. It is recommended to hire a specialized laundry service.

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, see:

- Good Practice Guide, for the prevention of exposure to silica dust. Cosentino.
- Safety data Sheet. Cosentino.
- Product safety label. Cosentino.
- Local legislation

For the control of exposure and the implementation of preventive measures seek the advice of a specialist in industrial hygiene.

In this guide, manufacturers' equipment are shown:

- Cut, localized extraction and aspiration. Makita
- Provided by Unceta. <https://ecommerce.unceta.es/>
- Vaccum. Nilfisk. <https://www.nilfisk.com/es-es/Pages/default.aspx>
- Personal Protective equipment. 3M. https://www.3m.com.es/3M/es_ES/worker-health-safety-es/personal-protective-equipment/



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