



Health & Safety Department

Good Practice Guide for Silestone[®] and ECO by Cosentino[®] manufacture

Health & Safety

The objective of this guide is to provide information in regards to health and safety about the key points to be considered in the tasks of cutting, carving and polishing when manufacturing SILESTONE[®] and ECO by Cosentino[®].

Silestone[®] is fabricated in quartz agglomerate and ECO by Cosentino[®] is a durable surface made of recycled materials. Health & Safety standards laid down by the corresponding legislation are satisfactorily met in their manufacturing process.

The guidance provided herein explains the protection and prevention measures to be observed in order to develop safe working procedures.

These instructions are addressed to employers and employees focused on Silestone[®] and ECO by Cosentino[®] manufacture to help them control the exposure to respirable crystalline silica and similar risks.

More specifically, this guidance sheet provides information and advice on:

- Water-injected hand machines and tools.
- Filter and local extraction systems.
- General ventilation in plants.
- Maintenance and supervision.
- Cleaning.
- Dust monitoring.
- Other risks: cuts, flying particles, noise and loading management.
- Personal protective equipments.
- Training and information for workers.
- Health Surveillance.

Following the key points of this sheet will help reduce exposure risks.

This document should be available for employers and employees specialized in this field so that they make the best use of the control measures implemented.

In addition, this information should be complemented with the "Good Practice Guide through the Good Handling and Use of Crystalline Silica and Products Containing it", issued by NEPSI and does not exonerate employers from meeting the standards established in each country's regulations relating to risk assessments, chemical contaminants and occupational exposure limits (OELs).

Please visit <http://www.nepsi.eu> for any further information.

RECOMMENDATIONS

Access

- ✓ Restrict access to the work area to authorized personnel only.

Water-injected hand cutting machines and tools.

- ✓ Use cutting machines and tools designed by water-injected systems. This will prevent the emissions of airborne dust containing silica.
- ✓ Supervise the water supply systems and ensure they are maintained as advised by the supplier in efficient working order and good repair. Also, take precautions during cold weather against freezing.
- ✓ Ensure that electrical systems, etc. have adequate protection against the hazards present in the working place including water and silica dust.
- ✓ The provision of drainage systems is essential when using water sprays and hoses.



Filter and local extraction systems.

- ✓ Use a reputable supplier of first-class local exhaust ventilation. Contact only qualified engineers to perform the job.
- ✓ The design shall include the following elements: a hood; enclosure or other inlet to collect and contain contaminants; ducts to remove contaminants away from the source; a filter or any other air cleaning device, normally placed between the hood and the fan; a fan or any other air mover to provide the air flow, and more ducting to discharge the cleaned air outside the workplace.
- ✓ Apply local exhaust ventilation at the generation source to capture the dust.
- ✓ Enclose the dust source as much as possible to help prevent it spreading.
- ✓ Local exhaust ventilation should be connected to a suitable dust extraction unit (e.g. a bag filter/cyclone).
- ✓ Don't allow workers to get between the source of exposure and the local exhaust ventilation; otherwise they will be directly in the path of the contaminated air flow.
- ✓ As far as possible, site the work area away from doors windows and walkways to stop draughts interfering with the local exhaust ventilation and spreading the dust.
- ✓ Have a clean air supply coming into the work area to replace extracted air.



- ✓ Keep ducts short and simple and avoid long sections of flexible ducts.
- ✓ Discharge extracted air to a safe place away from doors, windows and air inlets.

General ventilation in plants

- ✓ Ensure the building is adequately ventilated, using force ventilation if necessary. Ensure the ventilation system does not cause settled dust to be stirred up and that contaminated air does not spread to clean areas.
- ✓ Dust suppression sprays (sprinkles of fine mist) may be used to prevent the generation of airborne dust from indoor and outdoor traffic routes or from conveyors.
- ✓ Emissions from dust extraction systems in buildings must be in compliance with local environmental rules.
- ✓ Use walls and flooring surfaces that are easy to keep clean and does not absorb or accumulate dust. When necessary to prevent dust from spreading among levels, use solid floors as far as possible and cover them with a wear resistant material colored to highlight dust contamination.
- ✓ Control panels can be protected by using a membrane.



- ✓ Provide an adequate number of correctly positioned water connection points when using wet cleaning methods.
- ✓ Provide an adequate number of vacuum connection points when using a central vacuum cleaning system.

Maintenance and supervision

- ✓ Ensure equipment is maintained as advised by the supplier and in efficient working order as well as in good repair.
- ✓ Clean your equipment on a regular basis.
- ✗ **Do not clean up with a dry brush or using compressed air.**
- ✗ **Do not allow deposits of dust/debris to dry out before cleaning up.**
- ✓ Maintain the local exhaust ventilation as advised by the supplier in efficient working order and in good repair. Noisy and vibrating fans can indicate a problem.
- ✓ Replace consumables (filters, etc.) in accordance with the manufacturer's recommendations.
- ✗ **Do not modify any part of the system. If you do so, check with the supplier and see that the system maintains its EC label.**
- ✓ You must receive instructions for use and a diagram of the installed systems. You must receive a commissioning report showing the airflows at all inlets, the air speed in the ducts and the pressure index across the cleaner or filter.
- ✓ Obtain information of the design performance of the local exhaust ventilation from the supplier. Keep this information to compare with future test results.
- ✓ Visually check the systems once a week for any signs of damage. If they are constantly used, check them more frequently. If they rarely used, then check them before each use.
- ✓ Keep records of inspection for a suitable period of time which complies with the national laws (five years at least).



Cleaning

- ✓ Clean the equipment on a regular basis.
- ✓ Clean the workplace daily.
- ✓ Clean floors and other surfaces regularly.
- ✓ Use wet or vacuum cleaning methods.
- ✓ Deal with spillage immediately.
- ☒ **As a general rule, vacuum cleaning systems are not adequate for cleaning spillages or wet materials.**
- ☒ **Do not clean up with a dry brush or using compressed air.**
- ☒ **Do not allow deposits of dust/debris to dry out before cleaning up.**
- ✓ If vacuum cleaning systems are going to be needed to deal with bulk spillages of powdered material, they should be specially designed to avoid overloading or blocking.
- ✓ When wet cleaning or vacuum cleaning is not possible and only dry cleaning with brushes can be done, ensure that the workers wear appropriate personal protective equipment and ensure that measures are taken to prevent crystalline silica dust from spreading outside the working area.



Dust monitoring

- ✓ Risk assessment must be carried out to determine whether existing controls are adequate.
- ✓ Both personal and static measurements can be used jointly as they are complementary. It is up to the experts designated by the employers and employees' representatives to opt for the most adequate solutions, while respecting the applicable law.
- ✓ The sampling strategy, the equipment, the analysis methods, and so on, must be defined by experts on Industrial Hygiene.
- ✓ Keep complete records of dust monitoring campaigns and deploy a quality system, as described above.
- ✓ The personnel in charge of the samplings have to set a good example wearing respiratory protective equipment in the required areas.



Other risks: cuts, flying particles, noise, and overloading management.

- ✓ The manufacture of Silestone® and ECO by Cosentino® may involve some risks (also depending on the specific features of your production systems) as, for example, blows and cuts with objects and tools, flying particles, noise exposure, vibrations and loading management.
- ✓ Review the risk assessment results carried out by the experts on Safety and Health.
- ✓ Use appropriate tools for each specific task and keep them in good efficient working order and in good repair.
- ✓ Use the protection equipment required for each specific task: gloves, eye and ear protection.
- ✓ Use mechanical means to transport heavy parts or materials.
- ✓ As far as possible, avoid handling or transporting materials weighing over 20 kg or in an awkward position; avoid also repetitive movements.



Installation of Silestone® and ECO by Cosentino® worktops.

- ✓ The worktop shall be off-the-shelf so that no further work will be carried out in situ.
- ✓ If the worktop needs a final check in the construction site, we recommend you to find a ventilated place (terrace, balcony, etc.) and use a wet cleaning method as far as possible. For this task, respiratory protection must be used against silica FFP3 classification for particles along with eye and ear protection. If the final check is carried out by using a dry cleaning method, safety measures will be the same; it is also recommended to use a portable vacuum system (vacuum cleaner).
- ✓ Use instruments such as manual suction pads when handling the parts.
- ✓ For the pointing of joints, trims, baseboard, etc. with products as Solumastik, Colorsil, and solvents, etc. wear latex gloves must be worn along with protection FFP3 classification combined with filter for organic steam.
- ✓ In order to complete the installation, all dust remains must be gathered in order not to generate, as far as possible, dusty environments; in addition, the work surface must be cleaned up.



Personal protection equipments (PPE).

- ✓ In those areas or workplaces where risks still exist, the use of personal protective equipment is mandatory; those work areas should be clearly demarcated through the provision of appropriate signage.
- ✓ Personal protective equipment must comply with the relevant Community provisions on design and manufacture regarding safety and health. All personal protective equipment must be provided by the company with an EC label.
- ✓ **Respiratory protection against silica must be FFP3 classification.** Note that facial hair will reduce the effectiveness of a dust mask. Operators with facial hair should be provided with air fed respirators or other suitable alternatives.
- ✓ In case PPE is used, provide employees with training on selection, use and maintenance of the equipment.
- ✓ If employees have to wear more than a PPE element, ensure that those elements are fully compatible with each other.
- ✓ Check the respiratory protection equipment effectiveness before using it. Your work wear supplier will be able to advise you on appropriate clothing.
- ✓ Keep records of PPE provided.
- ✓ Provide clean storage facilities for PPE while they are not used.



Hygiene rules.

- ✓ Provide storage accommodation for workers' clothes. Clean clothes must be separated from work clothes.
- ✓ This area should have toilets, showers and wash basins as well as personal lockers.
 - ⊗ **Workers should wash their hands and faces, and take overalls off before eating.**
- ✓ Define a specific clean area where workers can prepare meals, eat and drink away from their working place.
- ✓ Provide your workers with an adequate supply of clean working clothes, including additional outfits. Those workers handling silica dust should wear overalls made of a fabric that prevents dust being absorbed.
 - ⊗ **Do not use compressed air to clean overalls.**
 - ⊗ **Workers should not smoke at their workplace.**

Training and Information for workers

- ✓ Ensure personnel receive training about the risks associated with Silestone[®] and ECO by Cosentino[®] manufacturing tasks.
- ✓ New employees should attend a training session on all aspects of health and safety, including the employers' safe working procedures for dealing with hazardous substances such as respirable crystalline silica.
- ✓ Use a variety of training methods, incorporating visual aids, videos, group discussions and handouts.
- ✓ Workers' knowledge should be assessed at the end of each training session in order to verify that they have understood the training material.
- ✓ Refresher training sessions should be organized to keep workers up to date on the health and safety aspects.
- ✓ Give your workers information on the safety and health effects associated with respirable crystalline silica dust, the noise or any other risk associated with their activity.
- ✓ Give them information on:
 - Good practices to use in the workplace and safe working procedures.
 - When and how to use any respiratory protective equipment (RPE) or other personal protective equipment (PPE) provided.
 - Dust monitoring programs and the rest of scheduled corrective measures.
 - Safety data sheets of the used products.
 - Working equipment, machinery and tools affecting their work.
 - In the event that an employee's measured personal exposure to respirable crystalline silica exceeds the relevant occupational exposure limit value, that employee must be provided with details of his own personal exposure monitoring result.
- ✓ Attendance at training sessions shall be compulsory. Participation must be well documented and records shall be kept.
- ✓ Workers should be asked to provide feedback on each training session, which might help in the organization of future training sessions.



Health Surveillance.

- Your Occupational Health Scheme should keep a record of which tasks are exposed to respirable crystalline silica
- Specific health surveillance protocols shall be implemented in those employees at risk.
 - ☒ Spirometry
 - ☒ X-ray.
 - ☒ High Resolution Tomographies.
 - ☒ Periodicity.

