# Safe Working Practices

## For Working with Respirable Crystalline Silica (RCS)

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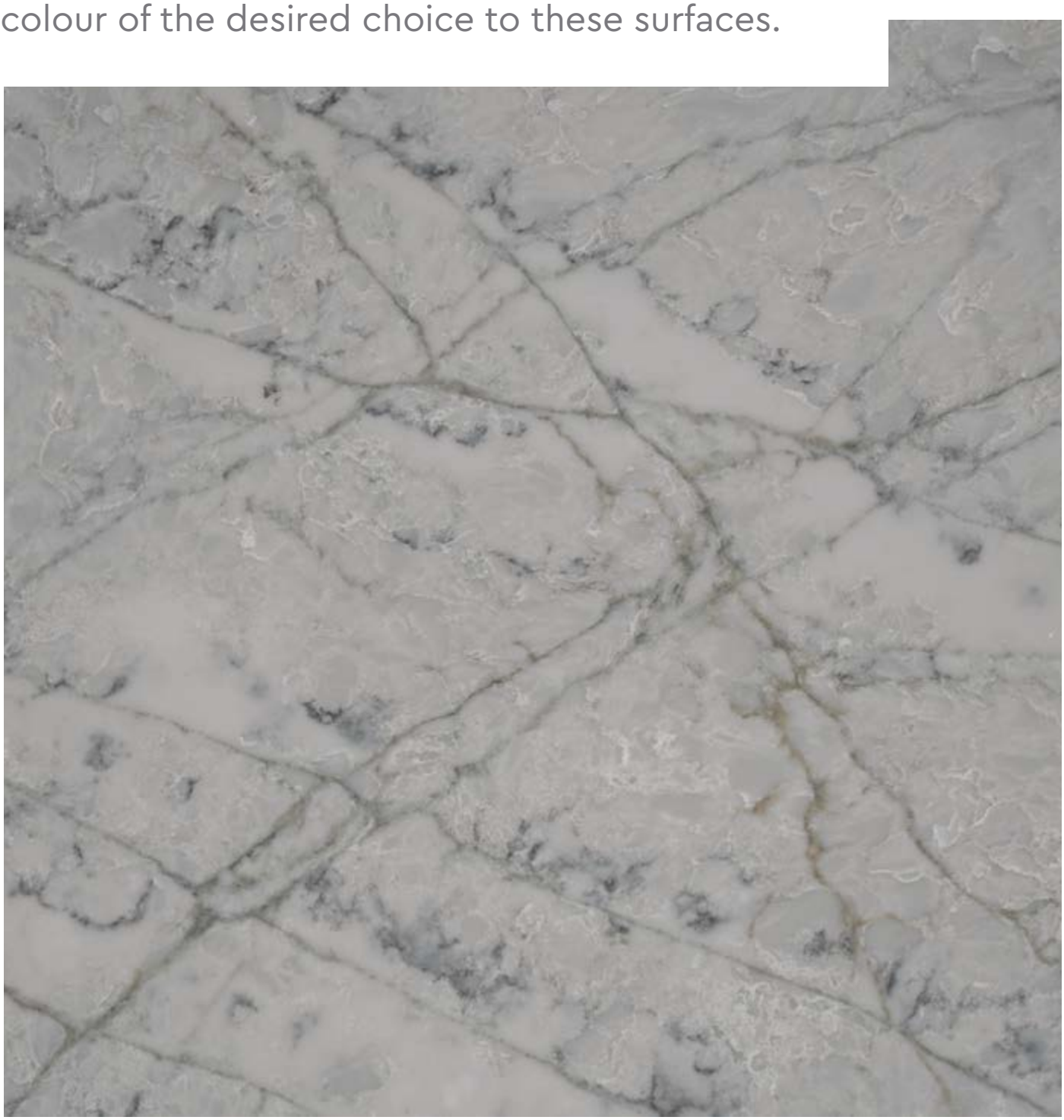
# What is Quartz?

Quartz countertops are man-made and consist of 85- 93% quartz and 7-15% of Unsaturated Polyester Resin. Pigments are used to provide the colour of the desired choice to these surfaces.



# What is Silica?

Silica is a natural substance found in most rocks, sand and clay and in products such as bricks and concrete. In the workplace these materials create dust when they are cut, sanded, carved etc. Some of this dust may be fine enough to breathe deeply into the lungs and cause harm to health. The fine dust is called respirable crystalline silica (RCS) and is too fine to see with normal lighting.

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# Risks associated with respirable crystalline silica (RCS)

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## By breathing in RCS, you could develop the following lung diseases:

**Silicosis:** Silicosis is a lung disease caused by inhaling respirable crystalline silica (RCS). It results in a hardening or scarring (fibrosis) of the lung tissue with loss of lung function. It usually develops after at least 10 years of RCS exposure, with there being no symptoms initially and the changes in the lungs being found on X-ray.

**Chronic obstructive pulmonary disease (COPD):** COPD is a group of lung diseases, including bronchitis and emphysema, resulting in severe breathlessness, prolonged coughing and chronic disability. It may be caused by breathing in any fine dusts, including RCS. It can be very disabling and is a leading cause of death. Cigarette smoking can make it worse.

**Lung cancer:** Heavy and prolonged exposure to RCS can cause lung cancer. When someone already has silicosis, there is an increased risk of lung cancer.

"The health risks from RCS are almost entirely preventable when exposure to dust is adequately controlled – you do not need to become ill through work activities."

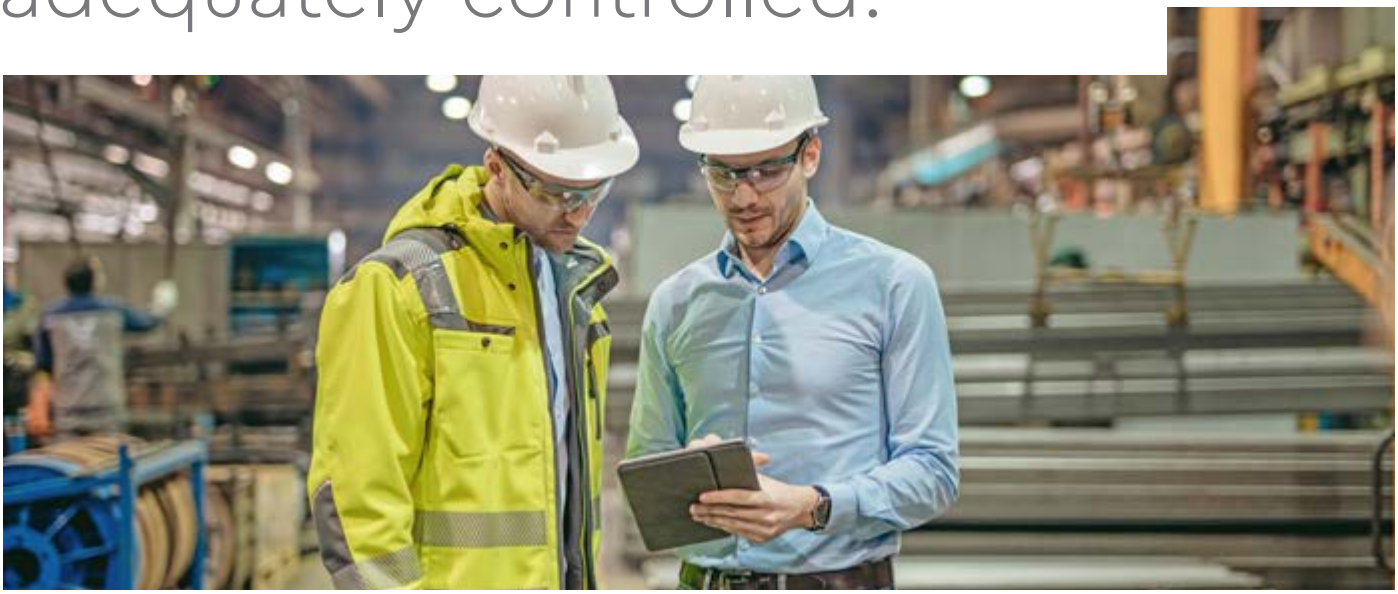
## Responsibilities of employers

Employers must comply with the control of substances hazardous to health regulations (COSHH) and other health and safety regulations related to the workplace.

**These include;**

- Preventing or controlling exposure to Respirable Crystaline Silica (RCS) - For RCS, control measures must keep the exposure below the Workplace Exposure Limit (WEL) of 0.1mg/$m^3$ respirable dust, averaged over 8 hours
- Where necessary providing Personal Protective Equipment (PPE), including Respiratory Protective Equipment (RPE). Half Face Masks or Powered Respirators should be worn depending on the individual wearer; the tasks they are doing and the environment in which they are working. Make sure that the respirator meets the required legal performance standards and carries a UKCA or CE marking.
- Maintain all equipment used as a control measure
- Train employees to use equipment properly and inform them of the health risks

"Employers should ensure that the exposure of employee to substances hazardous to health is prevented, or where this is not reasonably practicable, adequately controlled."



# Control methods

## A combination of controls is likely to be the most effective at reducing airborne RCS.

The use of water suppression whilst grinding and cutting will reduce the level of RCS in the atmosphere

Local Exhaust Ventilation will remove the RCS at source. Dust removal systems in the workplace reduce the levels of RCS in the atmosphere

Where possible segregate activities that have the potential to generate airborne RCS from the rest of the workplace

Ensure regular housekeeping and cleaning of the workplace

Use adequate Personal Protective Equipment (PPE) especially Respiratory Protective Equipment (RPE)

Ensure PPE is suitable for purpose, worn correctly and regularly checked. Employees should be trained on the fitting and use of all PPE

Employees should be made aware and trained on the risks associated with RCS exposure and the methods of prevention

Workplace procedures should be in place to ensure workers are correctly adhering to the control methods

Exposure monitoring should be carried out regularly to ensure the effectiveness of the control methods

This document serves as a general guide. It is essential to comply with all applicable local safety measures, laws, regulations, and standards. Employers are specifically required to adhere to the Control of Substances Hazardous to Health Regulations 2002 (COSHH) (as amended).

## Further information:

hse.gov.uk
Silicosis (HSE)
Control of exposure to silica dust
Silicosis (NHS)
Controlling airborne contaminants at work: A guide to local exhaust ventilation (LEV)
Guidance on respiratory protective equipment
Risks when working with Engineered Stone
Respiratory protective equipment at work: A practical guide
Control of substances hazardous to health (Sixth edition)
Stone Federation Great Britain
Stoneworkers
Quarries Partnership Team

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