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**CRYSTALLINE SILICA INFORMATION**

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1. **Introduction**

Better Exteriors does sell products containing crystalline silica. Crystalline silica is a common mineral found in many natural and man-made substances. A crystalline silica-containing substance is defined as any substance that:

*a. contains more than 1% crystalline silica; and*

*b. is reasonably likely to be mechanically processed at a workplace; and*

*c. is not in a respirable form.*

1. **Handling & storage of the crystalline substance**

Better Exteriors’ architectural surfaces are not hazardous substances in their solid form.

There is risk involved in working with crystalline silica substances when these substances are mechanically processed (for example through cutting or grinding), in which crystalline silica dust is generated. Exposure to crystalline silica dust over a long period of time at low to moderate levels, or short periods at high levels, can lead to serious health conditions such as silicosis, which is an irreversible, incurable, and progressive lung disease that can lead to disability and death.

The nature and severity of risk will depend on multiple factors including the percentage of crystalline silica in the material, exposure conditions and sites, and activities undertaken that result in the release of silica dust.

1. **Better Exteriors Materials & their Crystalline Silica Content**

**Table 1**. Better Exteriors products, categorised by material type, and the estimated proportion (percentage) of crystalline silica in the substance and type. Where we have analysis results, this has been provided.

|  |  |
| --- | --- |
| ***Material*** | ***SiO2 content (%)*** |
| Limestone  | 0-5% |
| Travertine  | 0-5% |
| Marble | 0-5% |
| Granite  | 5-60 % |
| Porphyry | 30-40% |
| Gneiss | 50-60% |
| Quartzite  | 70-80% |

1. **Exposure standard**

The workplace exposure standard for respirable crystalline silica (silica dust) must not exceed is 0.05mg/m3 (an eight-hour time weighted average).

Persons conducting a business or undertaking should keep worker exposure to silica dust as low as reasonably practicable. Air monitoring must be conducted if there is any uncertainty that the exposure standard is being exceeded, or to find out if there is a risk to a worker’s health.

1. **Control measures**

Elimination is the most effective way to mitigate risk.

Where risk cannot be eliminated, managing risks and worker exposure to silica can be achieved by selecting and implementing measures using the hierarchy of controls: substitution, isolation, engineering controls, administrative controls, and personal decontamination controls.

1. **Substitution**

Substitution is choosing a substance that is less hazardous or has a less hazardous form of crystalline silica. For example, materials with a lower crystalline silica content.

1. **Isolation of the hazard**

Isolation refers to principles of safe work design that use enclosures, reducing exposure to dust by designating areas for tasks that generate dust and appropriate worker positioning during these tasks. For example, excavator operators work in a pressurised cabin with a HEPA filtration system.

1. **Engineering controls**

Engineering controls are mechanical controls that minimise the risk of exposure to dust, such as local exhaust ventilation, on-tool water suppression (wet cutting), or on-tool dust extraction. They need to be used when cutting, grinding, crushing, drilling or demolishing materials containing crystalline silica.

1. **Administrative controls**

If a risk to health from exposure to crystalline silica dust still remains, further administrative controls may be necessary.

Administrative controls include clean-up and good housekeeping processes, shift rotations and modifying cutting sequences to ensure there is no spread or released dust after each job is completed and to avoid build-up of crystalline silica dust on the plant, equipment, working surfaces or the floor. For example, using a HEPA-filtered Dust Class M or H vacuum, low-pressure hosing, mopping, squeegeeing, or wet wiping down surfaces.

Never use compressed air, dry sweeping, or high-pressure water to clean up as this is likely to generate airborne dust

1. **Personal Protection Information**

If a risk to health from exposure to crystalline silica dust still remains, further reduction of risk must be undertaken through appropriate personal protective equipment (PPE).

This generally includes respiratory protective equipment (at a minimum of a P2 efficiency half face respirator, or powdered air purifying respirator (PAPR)).

You can find further information on what you must do to keep your workers safe from the risks of crystalline silica from the below resources:

***Safe Work Australia***

[Crystalline silca & silicosis](https://www.safeworkaustralia.gov.au/safety-topic/hazards/crystalline-silica-and-silicosis#:~:text=The%20workplace%20exposure%20standard%20for%20respirable%20crystalline%20silica%20(silica%20dust,%2Dhour%20time%20weighted%20average)).

[Choosing & implementing control measures for silica dust](https://www.safeworkaustralia.gov.au/safety-topic/hazards/crystalline-silica-and-silicosis/choosing-and-implementing-control-measures-respirable-crystalline-silica)

***Cancer Council***

[Silca dust](https://www.cancer.org.au/cancer-information/causes-and-prevention/workplace-cancer/silica-dust)