

INFORMATION STATEMENT: RESPIRABLE CRYSTALLINE SILICA

What is respirable crystalline silica (RCS)?

Crystalline silica is a common mineral found in many building materials, such as:

- bricks
- concrete and cement
- engineered stone
- natural stone (e.g. granite or sandstone)
- fibre cement products.

Working with materials that contain crystalline silica can make (or generate) a dangerous dust called **respirable crystalline silica (RCS)**.

RCS can be generated when working with these materials, including tasks such as cutting, sawing, grinding, drilling, polishing, scabbling and crushing.

Other tasks like dry sweeping or using compressed air can disturb settled dust containing RCS and make it airborne.

Respirable crystalline silica (RCS) is a hazardous chemical. A PCBU must manage risks to health and safety associated with using, handling, generating or storing a hazardous chemical at a workplace.

What are the health effects of RCS?

Respirable crystalline silica (RCS) is dangerous because:

- it is easy to breathe in RCS
- is too small to be seen by eye
- it can stay in the air for several hours (even over 24 hours, when there is no wind or ventilation).

Breathing in RCS can lead to serious lung diseases, including silicosis and lung cancer. Over time, these lung diseases can cause permanent disability and death.

There are three types of silicosis:

- *acute silicosis* is very rare and results from exposure to very short-term and very large amounts of RCS (e.g. less than one year)
- *accelerated silicosis* results from short-term large amounts of inadequately protected exposure to RCS (1–10 years exposure)
- *chronic silicosis* results from long term exposure (10+ years of exposure) to low levels of RCS.

The symptoms of silicosis include:

- shortness of breath
- severe cough
- weakness.

These symptoms may not appear for many years after breathing in RCS. That is why it is so important to eliminate or minimise exposure to RCS in the workplace as much as is reasonably practicable.

Tasks that generate or disturb RCS

RCS can be generated and released into the air during tasks that involve high-energy processing, such as:

- cutting
- sawing
- grinding
- drilling
- scabbling
- crushing.

RCS can also be disturbed after it has settled in the workplace, such as through:

- using dry sweeping, compressed air or high-pressure water to clean up
- letting slurry dry out before cleaning it up
- allowing excessive dust build-up around equipment and work areas.

Advice for Bulk Sand and Derived Aggregate Products

Our bulk sand and aggregate products are graded from natural sources, and are not subject to high energy processes that would produce RCS.

If our bulk sand and derived aggregate products (or any products produced from them) are subject to any task that would generate RCS (please see above for examples), suitable workplace practices should be implemented to mitigate risk.

Any workplace practices implemented are recommended to meet the requirements identified in: *Managing Respirable Crystalline Silica Dust Exposure In Construction And Manufacturing of Construction Elements, Code of practice, Workplace Health And Safety Queensland, 2022.*

Further safety advice for this product is available in the Bulk Sand and Derived Aggregate Products Safety Data Sheet.