

Protecting Your Workers from Silica Dust & Silicosis: What You Need to Know



A Growing Risk in Your Industry

Silicosis is making a deadly comeback in Australia, particularly in industries such as stone processing, road and tunnel construction, mining, and quarrying.

Progressive scarring of the lung tissue is caused by inhalation of respirable crystalline silica (RCS) dust, leading to an irreversible and potentially fatal disease.

However, silicosis is only part of the picture. RCS exposure has also been linked to:

- Lung cancer
- Chronic Obstructive Pulmonary Disease (COPD)
- Kidney disease
- Autoimmune conditions
- Skin and eye irritation

Current estimates suggest **up to 600,000 workers are exposed annually**, with **approximately 250 cases of lung cancer** and **350 new cases of silicosis attributable to RCS** exposure every year.*

**These figures are estimates; actual numbers vary between studies.*

What Tasks Put Workers at Risk?

Workers are most at risk when tasks generate fine respirable crystalline silica (RCS) dust, especially if controls are not in place. High-risk tasks include:

- Dry cutting, drilling, or grinding stone, brick, or concrete
- Jackhammering and chiselling masonry
- Tunnelling and rock excavation
- Using pressurised air to clean surfaces
- Crushing, loading, or dumping rock

The risk increases significantly when these activities are carried out without effective dust controls such as water suppression, local exhaust ventilation, enclosed cabins, or correctly fitted respiratory protection.

Legislation, WHS Guidelines & Compliance

Mandatory Exposure Limits

Since 2020, Australian work health and safety legislation stipulates that workers must not be exposed to RCS levels exceeding **0.05 mg/m³** over an 8-hour workday, based on a 5-day working week.

This exposure standard reflects the significant health risks associated with RCS and the need for robust controls, ongoing monitoring and worker protection.

Key Legislative Updates

- From 1 July 2024 – National ban on engineered stone benchtops, slabs and panels
- From 1 September 2024 - new stringent WHS regulations require employers to demonstrate compliance in four critical areas:
 - Air monitoring to verify workers' exposure levels
 - Comprehensive risk assessments for any activity generating respirable crystalline silica (RCS).
 - Mandatory health monitoring of workers at risk of exposure
 - Mandatory case notification of all new diagnoses of silicosis to the National Occupational Respiratory Disease Registry

Your Legal Responsibilities as an Employer

If your PCBU works with materials containing 1% or more crystalline silica, you must follow the [Managing risks of respirable crystalline silica in the workplace: Code of Practice](#) (or equivalent code in your jurisdiction), which includes:

- **identifying and assessing the level of risk** from RCS developing and implementing a Silica Risk Control Plan;
- **applying engineering controls** (e.g. water suppression, on-tool extraction, local exhaust ventilation);
- **applying administrative controls** (planning work, safe work procedures, task rotation);
- **ensuring correct and consistent use of PPE** (including annual respirator fit testing and fit check training for all workers who are required to wear negative pressure respiratory protective equipment with P2 filtering; and
- **conducting regular air monitoring** to verify control effectiveness.

You must also:

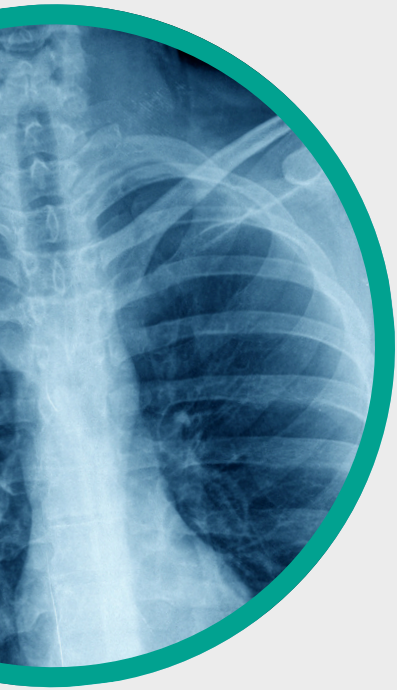
- Comply with state and territory work health and safety legislation
- Provide education and training for workers.
- Enrol workers at significant risk of RCS exposure in a health monitoring program.



Legislation, WHS Guidelines & Compliance

✗ Non-Compliance can Lead to:

- Improvement or prohibition notices issued by WHS regulators
- Financial penalties and potential prosecution
- Personal liability for company officers under due diligence requirements
- Increased insurance premiums
- Operational disruption
- Serious harm to your workforce — and your reputation



Best Practice Health Monitoring

For any workers at significant risk of RCS exposure, you must implement a formal health monitoring program that includes:

- **engaging an Occupational Hygienist** to map exposure profiles and risk levels;
- **conducting baseline assessments** before work begins;
- **periodic health monitoring**, including a minimum of an annual respiratory questionnaire and spirometry;
- **exit assessments** with a complete record transfer for the new employer; and
- **ongoing reviews by experienced occupational physicians** for those diagnosed with silicosis or who have experienced a deterioration in lung function.

Already Have a Worker Diagnosed with Silicosis?

You still have a duty of care. Steps you must take include:

- removing or reassigning the worker to eliminate further RCS exposure;
- implementing enhanced respiratory health surveillance under a respiratory physician's care;
- offering psychosocial support and alternative duties; and
- reassessing and improving your silica risk controls immediately: review air monitoring data, engineering controls, safe work procedures and PPE programs to prevent further cases.

For comprehensive information on this topic, download the [**Managing the Risks of Respirable Crystalline Silica and Silicosis guide**](#)

How KINNECT can Help

We partner with employers across the mining, construction, and manufacturing industries to deliver:

- [RCS Health Surveillance Programs](#)
- [Pre-Employment and Exit Medicals](#)
- [Respirator Fit Testing](#)
- [Ongoing clinical advice and support from experienced occupational physicians](#)



- ✓ Compliant with Safe Work Australia Guidelines
- ✓ Tailored to suit legal requirements for your industry
- ✓ Delivered national wide: 20+ KINNECT offices & 1500+ of affiliate clinics

Resources

KINNECT Silicosis & RCS Resource Centre

<https://www.kinnect.com.au/silicosis-respirable-crystalline-silica-resource-centre>

National Dust Disease Taskforce Final Report

www.health.gov.au/resources/publications/national-dust-disease-taskforce-final-report?language=en

National Occupational Respiratory Disease Registry

www.health.gov.au/our-work/nordr

Safe Work Australia - Health Monitoring for Crystalline Silica

www.safeworkaustralia.gov.au/sites/default/files/2021-09/health-monitoring-guidance-crystalline-silica.pdf

Safe Work Australia Clear Lung Resources: Information for Your State or Territory

www.safeworkaustralia.gov.au/clearlungs/resources