



Crystalline Silica: the “new asbestos”?

Are you aware of the risks?

High silica exposure rates among Australian workers came to light in 2018, prompting reviews of state workplace health and safety (WHS) laws and exposure limits. Following a national consultation process, an agreement has now been reached among State and Territory WHS Ministers to reduce the workplace exposure standard (WES) from 0.1 mg/m³ to 0.05mg/m³ for Respirable Crystalline Silica (RCS). This is to be implemented as soon as practicable, but no later than 30 September 2022. Victoria has already implemented the revised WES, where others have slated it for this year.



Victoria

- Revised WES implemented 17 December 2019.
- 171 workplaces visited, 311 notices issued.
- Worksafe Victoria currently working on a model to improve the regulation and enforcement of laws relating to Crystalline Silica.



South Australia

- Revised WES due for implementation 1 July 2020.
- Commenced a silicosis screening program.



New South Wales

- Safework NSW strategy, Roadmap 2022, aims to reduce workplace exposure to hazardous chemicals by 30% by 2022.
- Introduction of NSW silicosis registry to gain information and trends on all identified cases.
- Targeted program to reduce the number of WHS non-compliant workplaces



Queensland

- 552 breach notices were issued for:
 - dry-cutting
 - inadequate protective equipment and
 - inappropriate workplace cleaning practices.
- 15 infringement notices.
- \$54,000 in fines issued.
- WorkCover Queensland funded health checks for almost 800 current or former stonemasons
 - 115 of them were found to have contracted silicosis already, 16 of whom are terminal.



Tasmania

- Has banned the use of dry cutting techniques on engineered stone.



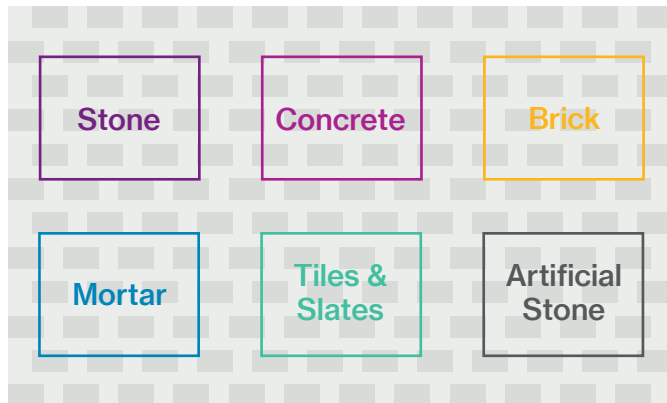
Western Australia

- Has banned the use of dry cutting techniques on engineered stone.

What is Crystalline Silica?

Crystalline silica (quartz) is a common mineral found in:

- most rocks, sands, and clays
- products such as concrete, mortar, brick, blocks, pavers, tiles, natural and composite stone benchtops
- cement-based materials such as fibre-cement sheeting and autoclaved-aerated concrete.



What is Respirable Crystalline Silica (RCS)?

When workers cut, drill, saw or grind products containing crystalline silica dust particles are generated and released into the air, they can be respired and are known as respirable crystalline silica. RCS is a major workplace health hazard and exposure can cause short- and long-term negative health effects.

- Laying ballast
- Cutting concrete
- Bricklaying
- Stone working
- Tunneling
- Sweeping up

Examples of work activities that can generate RCS dust particles include:

During fabrication and installation of composite (engineered or manufactured) stone countertops	Paving and surfacing	Brick, concrete or stone cutting; especially using dry methods
Excavation, earth moving and drilling plant operations	Mining, quarrying and mineral ore treating processes	Abrasive blasting (blasting agent must not contain greater than 1 per cent of crystalline silica)
Clay and stone processing machine operations	Construction labouring activities	Angle grinding, jack hammering and chiselling of concrete or masonry
Tunnelling	Foundry casting	Pottery making
	Hydraulic fracturing of gas and oil wells	

Health effects of occupational exposure to Crystalline Silica

- Chronic bronchitis
- Emphysema
- Acute silicosis
 - can develop after a short exposure to very high levels of silica dust, within a few weeks or years, and causes severe inflammation and an outpouring of protein into the lung.
- Accelerated silicosis
 - can develop after exposures of three to 10 years to moderate to high levels of silica dust and causes inflammation, protein in the lung and scarring of the lung (fibrotic nodules).
- Chronic silicosis
 - can develop after long term exposure to lower levels of silica dust and causes fibrotic nodules and shortness of breath.
 - can include progressive massive fibrosis where the fibrotic nodules in the lung aggregate.
- Lung cancer.
- Autoimmune-related diseases.
- Renal disease.
- Chronic obstructive pulmonary disease.

How does this affect your workplace and what does it mean for your business?

The new WES will apply to all activities that could potentially generate RCS. The common tasks in working with these products that may generate RCS such as cutting, drilling, grinding would all be impacted by the lower exposure standard.

With regulators in all jurisdictions focusing on the compliance of employers in relation to their WHS duties to have adequate dust controls in place, ensuring your business has reviewed and updated its process for the use of Crystalline Silica in the workplace will see you avoid enforcement action being taken.

Duties of employers regarding Crystalline Silica and Respirable Crystalline Silica (RCS) in your workplace:

- Identifying the hazards from Crystalline Silica and RCS
- Obtaining, recording and displaying a Safety Data Sheet
- Keeping a register of hazardous chemicals
- Managing the risk of worker exposure to RCS
- Providing adequate personal protective equipment
- Ensuring WES are not exceeded
- Monitoring workplace air for RCS
- Health monitoring for exposed workers
- Keeping air monitoring records
- Keeping health monitoring records
- Reviewing control measures for Crystalline Silica and RCS exposure
- Induction, information, training and supervision about the risk involved working with Crystalline Silica and RCS

How Willis Towers Watson can assist you to manage the risk

- Review of your risk management process with regards to silica exposure to ensure it is safe and compliant with the new WES.
- Conduct a risk profile of your company's work activities to identify if any of them are putting workers at risk of exposure to silica.
- Develop a procedure detailing how Silica is safely managed in your organisation, from identification through to health monitoring and review.
- Hazardous Substance Awareness training for workers – specifically for crystalline silica and RCS.
- Review your current process to ensure your health monitoring processes meet the minimum requirements for crystalline silica and RCS.

Contact your WTW representative today or our WHS Specialist to find out if you are eligible for additional WTW funding to support risk management of these activities or various government rebates.

Contact

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