

## Australia bans engineered stone to prevent silicosis

Australia has become the first country in the world to ban engineered stone, popular in the production of kitchen worktop surfaces, due to the risk of workers developing silicosis—a condition in which inhalation of silica dust over time leads to a progressive decline in lung function and death. After a man in Australia died from silicosis in 2015, a massive campaign started, in which doctors, advocacy organisations, and affected families came together to lobby the Australian government to prevent engineered stone becoming the “asbestos of the 2020s”.

The outright ban will come into effect during 2024 (in most jurisdictions on July 1), after a report was released by Safe Work Australia, a government work health and safety agency, that investigated how a ban could work and whether low-silica engineered stone could remain on the market safely. But experts found that there was no safe amount of silica, concluding: “The use of all engineered stone should be prohibited.” Although the report acknowledged there was a risk of silicosis in other industries, the numbers were disproportionate among engineered stone workers—who had faster disease progression and higher mortality rates. Most people diagnosed with silicosis are younger than 35 years. The Australian Bureau of Statistics has officially recorded 55 deaths from silicosis in 2015–22, but advocacy organisations believe the real number is much higher and will increase as engineered stone practices of the past decade begin to show their effects.

The Chief Executive of Lung Foundation Australia, Mark Brooke, told *The Lancet Respiratory Medicine* that a ban on the importation of engineered stone into Australia was a monumental, life-saving decision that was the culmination of years of advocacy efforts, and as a result of working alongside organisations, such as Safe Work Australia, to make sure

that Australian workers’ voices were heard and included in crucial reports, such as the National Dust Disease Taskforce report and the National Silicosis Prevention Strategy 2023–28 draft and accompanying National Action Plan.

“Silicosis is entirely preventable yet causes permanent disability and premature death. People living with silicosis describe it as like having concrete in their lungs as they struggle to breathe”, Brooke said. “We look forward to further clarification on the ban roll out following the next work health and safety ministers’ meeting in March 2024. What is clear is that a whole systems approach is needed, including government support to re-tool and re-train impacted workers to transition into other industries and professions. Further we must not forget the workers who exist outside of the engineered stone benchtop industry. Almost 600 000 Australian workers are occupationally exposed to silica dust, and exposure occurs in other high-risk industries beyond engineered stone, including mining and quarrying, construction, tunnelling, and manufacturing. It is fair to say that the silicosis epidemic is a direct result of the failures of our current work health and safety systems. The Hierarchy of Controls, which is a system used to control exposure to hazards in the workplace, is the most effective way to reduce the risk of silicosis, illness, and injury”, he continued.

The Thoracic Society of Australia and New Zealand (TSANZ) has campaigned with Lung Foundation Australia and others to have the ban implemented. Vincent So, CEO of TSANZ, said: “Symptoms can take decades to appear, but the disease can cost lives. Curtin University research shows that almost 40% of trades workers are at risk of developing silicosis later in life”. He also points to research by Ryan Hoy (Monash University, Melbourne, VIC, Australia) showing that screening tests

required by employers in all states will not pick up on the early signs of silicosis. In patients with silicosis, 40% of chest x-rays and 72% of basic lung functioning tests came back as healthy. So explains: “The truth is that we do not yet know how big the problem of silicosis really is, but it could be much more common than we currently know”.

So hails the collaborative approach of TSANZ, Lung Foundation Australia, and their partners in presenting a united voice to the Australian Federal Government to introduce the ban. He says: “Together, we have combined our efforts to promote awareness among health-care professionals, tradespeople, and decision makers about the dangers of engineered stone, the emergence of accelerated silicosis, and the spectrum of other hazardous dusts in the workplace. We have together called on the government to ban engineered stone, set up a clinical quality registry, and use this registry to establish an occupational surveillance system which can monitor potential exposure sites and find exposed workers”.

Around 275 000 Australians are at risk of diseases caused by breathing in silica dust from engineered stone. “With the ban, this exposure will be nearly eliminated”, says So. Now, attention is turning to other countries, such as the USA which has around 100 000 stonemasons (vs 10 000 in Australia). Outcomes could be worse in the USA, where workplace protections are generally weaker. During 2010–18, fewer than five cases were reported each year in California, where engineered stone products are popular, but by 2022, this number had increased to more than 20 cases. This surge led the Division of Occupational Safety and Health of California to draft emergency protections, and Los Angeles is considering its own ban.

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For the **Safe Work Australia report** see <https://www.safeworkaustralia.gov.au/safety-topic/hazards/crystalline-silica-and-silicosis/prohibition-use-engineered-stone>

For more on **silicosis research** see <https://oem.bmj.com/content/oemed/early/2023/06/16/oemed-2023-108892.full.pdf>