

SUBMISSION

Public consultation on the prohibition on the use of engineered stone

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- Use the saved version to enter your responses under each question below. These questions are from the [public consultation on the prohibition on the use of engineered stone](#).
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Submissions will be accepted until **11.59 pm on 2 April 2023**. **[Extension granted to RACP until 16 April]**

Additional documentation

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1. Name or organisation

The Royal Australasian College of Physicians (RACP)

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N/A - contact: policy@racp.edu.au

Consultation questions

1. Do you support a prohibition on the use of engineered stone? Please support your response with reasons and evidence.

The Royal Australasian College of Physicians (RACP), the Australasian Faculty of Occupational and Environmental Medicine (AFOEM), the Thoracic Society of Australia and New Zealand (TSANZ) and the Australia and New Zealand Society of Occupational Medicine (ANZSOM) jointly support the recommendations of the National Dust Diseases Taskforce to proceed with a prohibition on the use of engineered stone if appropriate control measures have not been introduced by mid-2024.

It is our view that a more fundamental question needs to be given serious consideration: why have work health and safety (WHS) systems in Australia failed to protect workers? This is a valid question when:

- There have been epidemics of occupational lung diseases over the past decades, namely asbestosis, mesothelioma, coal workers pneumoconiosis and now accelerated silicosis.
- There are many hazardous substances in workplaces which require appropriate controls. Introducing bans as a response mechanism is not a substitute for regulation, appropriate licensing, continuous workplace monitoring, health surveillance, reporting, compliance checking and enforcement.
- Banning every substance which can cause harm is an extreme reaction and not a measured WHS response based on a hierarchy of controls, and further, sends a poor message.
- Of critical importance is that regulation is insufficient unless complemented by continuous workplace monitoring, health surveillance, reporting, compliance checking and enforcement.

Supporting comments for our position:

- Silicosis (all forms) in workers who work with engineered stone causes considerable morbidity and mortality and is life shortening and irreversible.
- Almost all cases of silicosis, and especially those in the younger age groups and the shorter times since first use to diagnosis, are in stonemasons working with engineered stone.
- Since the introduction of engineered stone to Australia in the early 2000s there has been failure by governments (regulators) and employers to identify and control the extreme risk associated with this material. It has been the direct cause of the major outbreak of silicosis that now must be addressed and addressed effectively. Present WHS systems are ineffective.

- These deliberations must recognise that lesser degrees of silicosis cause chronic obstructive pulmonary disease (COPD). To date this significant health impact has been overlooked. International reports indicate that construction workers have a 50% greater incidence of moderate to severe COPD.¹ There is no reason to suggest this is any lower in Australia.
- We highlight research that shows over 20% of workers screened from the stone benchtop industry workers in Queensland and Victoria have been diagnosed with silicosis caused by engineered stone.² This is a substantially greater proportion of affected workers using engineered stone than those who work with other silica containing materials. This does not include workers who have been exposed and who will develop silica dust related diseases in the future.
- Uncontrolled exposure to silica dust from working with engineered stone, and natural stones, is continuing at worker expense.
 - Evidence supports the fact that current regulatory efforts have not been sufficient.³
 - To date, there is no evidence to demonstrate lower-level risk mitigation strategies to limit exposure have been universally applied within the industry. Inappropriate work practices continue particularly in the construction and mining industries.
 - Dust levels have not been well controlled despite the use of wet work and the high publicity about harm. This has been attested to through by both records of infringement notices issued to employers and dedicated investigative journalist reports (refer to Channel 9 tv 60 Minutes program, aired 19 February 2023, and subsequent print media articles).
 - Employers willing to comply are being adversely affected by a failure to prevent competitors who are continuing to compromise the health of their workers.
 - There has been a failure to prosecute and ban those businesses which have wilfully disregarded work health and safety regulations.
- A ban on the use of engineered stone was recommended by the National Dust Diseases Taskforce if, by July 2024, there was no measurable and acceptable improvement in regulatory compliance rates for the engineered stone sector as reported by jurisdictions, and preventative measures are not effectively protecting those working with engineered stone from silicosis and silica-associated diseases. As at March 2023 there is no available evidence that material improved controls have been achieved. Taskforce members agreed that if the measures recommended did not achieve the expected significant improvements in worker safety within the subsequent years, then immediate action should be taken to ban the product. Industry and governments were asked to demonstrate as a matter of urgency that engineered stone can, in fact, be used safely. We strongly support effective prevention, and, in the absence of a viable alternative, we endorse the recommendation of the National Dust Diseases Taskforce and support a full ban on the importation of some or all engineered stone products.
- A ban on all engineered stone addresses the key facts that:
 - Engineered stone has very high silica content.
 - When cut, polished or drilled using unsafe practices it generates high levels of very fine, respirable silica dust, materially different from that seen with natural stone. The ultra-fine particles have a larger surface to volume ratio, causing a greater reactivity in the cellular structures of the lung.
 - A lower silica content engineered stone fabricated by unsafe work practices will continue to promote associated risks and cellular reaction in the lungs of exposed workers.

¹ Dement JM, Cloeren M, Ringen K, Quinn P, Chen A, Cranford K, Haas S, Hines S. COPD risk among older construction workers—Updated analyses 2020. *American Journal of Industrial Medicine*. 2021 Jun;64(6):462-75.

² Hoy RF, Glass DC, Dimitriadis C, Hansen J, Hore-Lacy F, Sim MR. Identification of early-stage silicosis through health screening of stone benchtop industry workers in Victoria, Australia. *Occupational and environmental medicine*. 2021 Apr 1;78(4):296-302.

³ Kate Cole, Deborah Glass, Tracey Bence, Dino Pisaniello, Peter Knott, Shelley Rowett, Sharann Johnson, Prevention of the Occupational Silicosis Epidemic in Australia: What Do Those Who Assess Workplace Health Risk Think Should Be Done Now?, *Annals of Work Exposures and Health*, Volume 67, Issue 2, March 2023, Pages 281–287, <https://doi.org/10.1093/annweh/wxac064>

- This product is not made in Australia. It is large, and readily identifiable when it arrives in Australia, and therefore relatively easy to licence, track and if necessary, ban.
- The main reason that engineered stone is used in benchtops is its appearance, however, there are many suitable alternatives which pose a much lower risk.

2. If yes, do you support a prohibition on the use of all engineered stone irrespective of its crystalline silica content? Please support your response with reasons and evidence.

The RACP, AFOEM, TSANZ and ANZSOM jointly support a total ban of all engineered stone regardless of its crystalline silica content, unless all jurisdictions implement an effective licencing scheme to control the importation, distribution, sale, fabrication and installation of engineered stone.

Supporting comments for our position:

- Engineered stone contains constituents other than crystalline silica which can pose a risk in addition to that directly related to crystalline silica dust. Alternative products with lower silica content (claimed as safer) have not been supported by evidence of their safety.
- There is no scientific or medical data to identify a safe level of crystalline silica in natural or engineered stone when processed in an unsafe way.
- Until there is an accepted body of evidence that any material used as a substitute can be worked with without risk to workers, substitution with a different engineered stone product is not an appropriate response:
 - There has been a failure to identify and manage, within the existing regulatory framework, the known hazardous properties of engineered stone when it was introduced in the early 2000s. This failure has materially contributed to the harm that has been well documented among Australian workers.
 - There is currently no evidence that an engineered stone product with a lower silica content, processed in accordance with the currently evident processes, would carry “*an acceptable risk*”.
 - Further there is no “*acceptable risk*” for the entirely preventable life-shortening consequences. A lower silica content engineered stone does not eliminate the risk posed by ultrafine silica particles (refer to response for Q1). A safe low level has not been established.
- While silicosis in all its forms is one adverse outcome from exposure, it is not the only adverse health outcome. COPD, autoimmune and renal diseases are also known consequences (refer to response for Question 1).
- Regarding the risk of silicosis arising from the exposure to dust generated by fabricating engineered stone, international research is investigating a potential relationship between the heightened risk of accelerated silicosis and the physiochemical composition of the dust. There may be additional risk of silicosis (and other diseases) related to the other components of engineered stone. For example, the resins or the heavy metal constituents (including known carcinogens) in engineered stone may increase the risks associated with engineered stone. If the percentage of additives were to increase as the crystalline silica content decreased, then the risk associated with these other components of engineered stone would increase. Though well-intentioned, the suggestion of permitting lower silica content substrate could then be associated with a new health consequence for the worker.
- All engineered stone should be managed within a licencing scheme or banned from importation.

3. If no, do you support a prohibition of engineered stone that contains more than certain percentage of crystalline silica? If yes, at what percentage of crystalline silica

should a prohibition be set? Please support your response with reasons and evidence.

The current regulatory framework does not prevent unsafe work practices, therefore the RACP, AFOEM, TSANZ and ANZSOM strongly recommend a complete ban rather than setting an artificial threshold for silica content in engineered stone. We do not consider that there is sufficient evidence to set a “safe” level of 40% or otherwise.

4. How many businesses work with engineered stone only?

N/A – Outside our area of expertise. Members are seeing many small businesses with limited capability to provide the required control measures for working with engineered stone.

5. How many businesses work with both engineered stone and non-engineered stone products?

N/A – Outside our area of expertise.

6. Do you have any data or information on the risks to workers from the other non-crystalline silica elements of engineered stone? Are these risks increased in engineered stone of less than 40% crystalline silica content?

- The risks associated with silica dust are well established and there is no known safe content level. The risk is due to cumulation. Different content levels change the rate of cumulation. Unsafe work practices enhance the rate of cumulation.
- The body of evidence pertaining to the level of silica content can be found in the literature regarding cancer associated with silica dust exposure. (*This information may be sourced from Cancer Council Australia*).
- Recent research directly associated with engineered stone has focused on identifying the risks due to the inhalation of the additives in engineered stone and assessing whether the associated risk effects the relative risk associated with the known magnitude of the crystalline silica risk in existing engineered stone products. See for example, Ramkissoon C, Gaskin S, Thredgold L, Hall T, Rowett S, Gun R. Characterisation of dust emissions from machined engineered stones to understand the hazard for accelerated silicosis. *Scientific Reports*. 2022 Mar 14;12(1):1-0. [<https://www.nature.com/articles/s41598-022-08378-8>]. This study examined the characteristics of twelve engineered stones and three natural stones, the properties of engineered stones and their unique hazard potential.
- We strongly recommend SafeWork Australia undertake a comprehensive review of the toxicological properties of all the constituents of engineered stone.

7. In relation to Option 3, do you have:

a) any information on the additional benefits of a licensing scheme over the enhanced regulation agreed by WHS ministers (Option 5a) that would already apply to engineered stone products containing less than 40% crystalline silica content?

- Licensing has been in place in Victoria since 2022 and our members have observed major changes in work practices within the stone benchtop industry. (*Further information regarding this should be provided by WorkSafe Victoria*).
- Our members participating in, and observing, would welcome an opportunity to discuss refinements to the Victorian scheme, for a model that could be applied nationally, as a licensing scheme has the following benefits:

- Enhanced regulation for engineered stone importation, disposition, fabrication and installation.
- Would create a more complete list of the businesses within the industry sector.
- Competitors unable to meet safe work standards would be excluded from the industry.
- Under the current system, operators unable to meet safe work standards are only evident to regulators and inspectors after they have exposed workers to hazards while working with engineered stone.

b) feedback on the implementation of concurrent licensing schemes for both prohibited engineered stone and non-prohibited engineered stone?

Outside a licensing scheme, the importation, distribution, sale, fabrication and installation of engineered stone products should be prohibited.

8. Are the assumptions and scenarios described for Option 6 in the Decision RIS accurate and appropriate? If not, why? Please provide additional information to support the impact analysis.

Option 6 sets out the framework for a prohibition of engineered stone. This is based on similar requirements for the prohibition of asbestos products and its use under limited specific circumstances. Therefore, while the assumptions and scenarios largely seem appropriate, we make the following comments:

- We are disappointed to see bureaucratic and administrative processes being used to delay implementation and action by Australia's governments and regulators.
- Our understanding of the number of workplace inspectors that continue to issue infringement and prohibition notices is unacceptable. The recent joint investigation by the *Sydney Morning Herald* and *60 Minutes* revealed workers are continuing to be exposed to unsafe work practices (February 2023).
- The National Dust Diseases Taskforce recommendations were predicated on timely implementation of all its recommendations. There is no visible agency monitoring and coordinating the implementation of the All-of-Government endorsement of the Taskforce recommendations.
- There is no National Registry of Occupational Respiratory Diseases compiling relevant data. Enabling legislation is yet to be tabled in Parliament, even though it was proposed by the Taskforce in its Interim report in December 2019, accepted as necessary in January 2020, affirmed as fundamental in the Taskforce's July 2021 final report, and subsequently accepted by the All-of-Governments response in March 2022.
- The Taskforce recommended supports necessary for healthcare professionals have not been forthcoming.
- The time since the Taskforce delivered its recommendations has made stark the deficiencies in organisations established to protect the health of Australian workers. The composition and governance structures of SafeWork Australia and jurisdiction bodies have proven inadequate. In light of the delays in responding to the Taskforce recommendation to establish a national oversight body to coordinate the recommendations, it has been observed that inadequate proactive action within jurisdictions is exacerbating this tragic situation.
- We emphasise the importance of applying the hierarchy of controls regarding the health risks in the workplace. The highest order control involves the elimination of the hazard and if elimination is not practicable, then substitution with a lower risk hazard wherever possible. This requires early identification of hazards and timely response. SafeWork Australia and the regulatory bodies across Australia's States and Territories have failed to respond in a timely manner.

- If the known hazards associated with the fabrication of substances, such as engineered stone, are not eliminated, then the option is to implement a robust licencing scheme to maximise the efficacy of the lower order health risk management strategies. Business that cannot meet compliance standards should be prohibited from operating.
- The experience from Victoria needs to be appropriately considered. While Victoria has been more proactive in implementing a licencing scheme compared to other jurisdictions, the medical practitioner experience from its implementation should be used to inform the design of a national scheme.
- There is no comprehensive evaluation underway to assess the effectiveness of enhanced regulation. In the absence of such an evaluation or if an evaluation has not shown a significant improvement, the recommendation from the Taskforce of a prohibition on engineered stone should be implemented. We do not support extending the date beyond July 2024.

9. Are there any other options or issues you think should be considered for a prohibition on the use of engineered stone?

We note in the Decision RIS that factors such as industry support packages, transitions to alternative materials and training for workers are raised. We note the following:

- Most businesses in the stone benchtop industry are small, many are family run, and many involve culturally and linguistically diverse persons and employees. For these reasons, even the best evidenced based control measures are likely to face significant implementation hurdles.
- If applied universally, the additional cost of compliance, while necessarily adding a cost to the end-purchaser, is unlikely to adversely affect its market position between the high-end natural stone and ceramic products and the cheaper alternatives.
- Members are aware of patients (workers) with an established diagnoses of silicosis from working with engineered stone, who have continued to be exposed due to a lack of understanding and education, financial incentives and/or failures of regulators to intervene and/or properly regulate.
- To effectively enforce the prohibition, there will need to be appropriate active involvement of the WHS regulation agencies, industry, union, and consumer engagement.
- Research is required to understand the toxicological properties of engineered stone with lower silica content. However, no fabrication of any engineered stone should occur outside a licenced industry sector.

10. Should there be a transitional period for a prohibition on engineered stone? If so, should it apply to all options and how long should it be?

The time frames recommended by the National Dust Diseases Taskforce are considered appropriate. If a transitional period is required, then it should be minimal, such as to meet existing orders.

The high risks of serious disease and death is shown from high quality published Australian research (refer earlier comments). Any benefits of continuing to use engineered stone outside a strict and comprehensive licensing scheme, when there are suitable alternatives in which the health risks are negligible, are substantially outweighed by the high risks of engineered stone. In such circumstances it is difficult to justify continued use.

11. Do you have any evidence or data on the number of cases of the other silica-related diseases (such as lung cancer, chronic obstructive pulmonary disease, kidney disease, autoimmune disease) attributed to exposure to crystalline silica from engineered stone?

- This information would be readily available if a National Occupational Respiratory Disease Registry existed. Despite there being experience demonstrating the need for a Registry from asbestosis, mesothelioma and coal workers pneumoconiosis epidemics, the recommendation for such a Registry has come from the National Dust Diseases Taskforce. A national Registry has still not yet been established and we consider this unacceptable. A national Registry should be established as a matter of urgency and developed and operated with specialist medical input.
- Research should continue and be published internationally regarding the risks of health effects related to engineered stone. Members, in the course of their independent research efforts, are involved in collating such data from available sources.
- It is important to include here the latency associated with the development of lung cancer. We are in the early stages of capturing reliable figures regarding the disease outcome for workers who have worked with engineered stone. This risk can only be determined with longer term linkage studies of the identifiable cohort of exposed workers engaged in various schemes programs. There is a similar situation regarding autoimmune diseases, although published findings from the Victorian silica-related disease registry have shown that markers of autoimmune disease are substantially increased in engineered stone workers, strongly suggesting that there will be a substantial increase in these autoimmune diseases over time.

12. Do you have any additional evidence or information on the impacts of silicosis or silica-related diseases?

- The enormity of the direct and indirect impacts of silica-related diseases on workers and those close to them cannot be overstated.
- The Victorian silica-associated disease registry has identified a significant number of people with adverse mental health outcomes.⁴ With 25% of screened artificial stone benchtop workers having silicosis, and more workers predicted to develop disease in the future (given the known high exposure levels in screened workers who are yet to be diagnosed with a silica related disease), then there are likely to be substantial negative impacts on healthcare costs, loss of income, compensation claims, insurance and social support systems.
- This is a high priority area for research.

⁴ Hore-Lacy F, Hansen J, Dimitriadis C, Hoy R, Fisher J, Glass D, Sim MR. Predictors of psychological stress in silica-exposed workers in the artificial stone benchtop industry. *Respirology*. 2022 Jun;27(6):455-61.