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**The Royal Australasian College of
Physicians' submission to Hīkina
Whakatutuki | Ministry of Business,
Innovation and Employment**

**Work with engineered stone and
materials containing crystalline silica**

Poutūterangi | March 2025

The Royal Australasian College of Physicians (RACP) welcomes the opportunity to submit feedback on the Ministry of Business Innovation and Employment's consultation on work with engineered stone and material containing crystalline silica.

The RACP works across more than 40 medical specialties to educate, innovate and advocate for excellence in health and medical care. Working with our senior members, the RACP trains the next generation of specialists, while playing a lead role in developing world best practice models of care. We also draw on the skills of our members, to develop policies that promote a healthier society. By working together, our members advance the interest of our profession, our patients and the broader community.

Background

Silicosis is a preventable, progressive, fibrotic lung disease caused by airborne respirable crystalline silica (RCS) becoming trapped in the lungs causing inflammation and scarring. Once airborne, RCS is small enough to be inhaled deep into the lungs and can lead to autoimmune disorders, kidney diseases, and lung diseases including cancer¹. Over the last 15 years, around 1000 New Zealand workers in Aotearoa New Zealand (NZ) have been exposed to high concentrations of RCS while working with engineered stone, a popular product for benchtops².

The true burden of silicosis in New Zealanders exposed to high concentrations of RCS from working with engineered stone is unknown. Meanwhile, health screening in Australia in recent years indicates nearly 1 in 4 engineered stone workers who have been in the industry there since before 2018 are suffering from silicosis or other silica dust related diseases³. Government (regulators) and employers in Australia have failed to identify and control the extreme risk associated with this material. This situation led to a call for a prohibition ban on the use of engineered stone in 2023, which was supported by the RACP⁴. Australia's ban on engineered stone became effective from 1 July 2024, the first policy of its kind in the world⁵.

Our clinicians observe that a profound lack of leadership for assessment of silicosis risk in exposed workers and lack of preventative action in Aotearoa NZ leaves our workers similarly at risk, with no-one 'owning' the issue of worker health in this field. Controls currently in place are not sufficient to prevent harm or to allow long-term follow-up and support. Applying Australian data, 250 of the 1000 workers who have fabricated engineered stone in the past 15 years will develop silica-related diseases.

Aotearoa NZ needs to learn from the legacy of asbestos which continues to be responsible for around 220 deaths per year⁶, and provide a co-ordinated and expert-led response to silica-related diseases. Our history with asbestos shows the consequences of delay and failure to adopt the precautionary principle - the absence of scientific certainty should not prevent prudent actions that may reduce risk. Compared to asbestosis, the discrete nature of the industry exposed and at risk

¹ American Lung Association. Learn About Silicosis. [Internet]. Available from: American Lung Association. Available from: [Learn About Silicosis | American Lung Association](#). Accessed 21 January 2025.

² Muthu A, Edwards A. Beautiful benchtops: How should we protect our workers? Public Health Communication Centre Aotearoa. [Internet]. Public Health Communication Centre Aotearoa, 4 March 2025. Available from: [Beautiful benchtops: How should we protect our workers? | PHCC](#) Accessed 4 March 2025.

³ Australian Government Department of Health and Aged Care. National Dust Diseases Taskforce. National Dust Diseases Taskforce – Final report to Minister for Health and Aged Care. 30 June 2021. Commonwealth of Australia (Department of Health); 2021. [Internet]. Available from: [Final Report to Minister for Health and Aged Care](#). Accessed 21 January 2025.

⁴ Royal Australasian College of Physicians (RACP). Submission to SafeWork Australia. Prohibition ban on the use of engineered stone. RACP; April 2023. [Internet]. Available from: [racp-joint-afocem-tsanx-and-anzsom-submission-safe-work-australia-consultation-on-a-prohibition-ban-on-the-use-of-engineered-stone.pdf](#) Accessed 16 January 2025.

⁵ Kromhout H, van Tongeren M, Cherie JW. Should engineered stone products be banned? Accessed 21 January 2025. Occupational and Environmental Medicine 2024;81: 329-330. Available from: [Should engineered stone products be banned?](#) Accessed 21 January 2025.

⁶ Worksafe NZ. More must be done to manage asbestos risks. 25 November 2022. Worksafe; 2022. [Internet]. Available from: [More must be done to manage asbestos risks | WorkSafe](#) Accessed 4 March 2025.

from high concentrations of RCS should act as an incentive to prevent harm. Silicosis impacts a workforce rather than the general public, and a small, but highly vulnerable workforce, including many Māori, Pacific and migrant workers, many of whom do not have good access to health care.

RACP recommendations

In response to the range of options presented by MBIE to control the risks from engineered stone and other sources of exposure to respirable crystalline silica, the RACP recommends the following:

- **Option 5 A - A complete ban on imports and fabrication of engineered stone to prevent further harm to workers.**
 - It is imperative that Aotearoa NZ follows Australia's lead to implement a complete ban on imports and fabrication of engineered stone to halt further harm to workers.
 - At the very least rigorous controls of engineered stone importers and fabricators are required.
- **Option 4b and 4c – mandatory health and exposure monitoring supported by a National Registry of workers exposed to silica dust.**
 - This is urgently required to ensure effective monitoring and worker protection, allowing long-term follow-up and support.
 - The National Registry would provide much needed help to define the magnitude and importance of the problem of silicosis in Aotearoa NZ⁷.
- The RACP has called for these options in letters to the Government and in recent media in Aotearoa NZ^{8,9,10}.
- Our members would welcome the opportunity to provide further feedback to the MBIE consultation and believe that engagement with our clinical experts, such as our Occupational and Environmental Medicine Physicians, would be of significant benefit.

If there is not a total ban on imports and fabrication of engineered stone, **strong regulation will be required for any replacement “low silica” material, claimed as safe.** While there have been innovations by the sector to develop new products with no or very low silica content¹¹, 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*”⁴. RACP urges caution that these products have **not been supported by evidence of their safety.**

RACP also calls for a **National Occupational Health and Wellbeing Service**, to ensure regular mandatory follow-up of exposed workers, and occupational health and wellbeing more generally.

⁷ Australian Government Department of Health and Aged care. National Dust Diseases Taskforce. National Dust Diseases Taskforce – Final report to Minister for Health and Aged Care. 30 June 2021. Commonwealth of Australia (Department of Health); 2021. [Internet]. Available from: [Final Report to Minister for Health and Aged Care](#). Accessed 21 January 2025.

⁸ Royal Australasian College of Physicians (RACP). Media release – Physicians call on New Zealand government to follow Australia's lead to ban engineered stone and support workers already exposed to silica dust. RACP; 18 March 2024. Available from: [Physicians call on New Zealand Government to follow Australia-s lead to ban engineered stone and support workers already exposed to silica dust](#). Accessed 16 January 2025.

⁹ Otago Daily Times (ODT). Engineered stone benchtops 'made bogeyman'. ODT; 19 March 2024. Available from: [Engineered stone benchtops 'made bogeyman' | Otago Daily Times Online News](#). Accessed 21 January 2025.

¹⁰ New Zealand Herald. Doctors urge ban on benchtop material engineered stone, warn tradies of risk from silicosis lung disease - NZ Herald. 18 March 2024. [Internet]. Available from: [Doctors urge ban on benchtop material engineered stone, warn tradies of risk from silicosis lung disease - NZ Herald](#). Accessed 21 January 2025.

¹¹Carey R, Ramkissoon C. Engineered stone is now banned. But how safe are the alternatives? The Conversation; 2024. Available from: [Engineered stone is now banned. But how safe are the alternatives?](#) Accessed 5 march 2025.

Responses to questions

Question 1: Do you consider we have outlined the correct criteria and do you think any weighting should be applied? If so, why?

No. This consultation does not consider the need for a national occupational health service or an occupational disease registry, which are important additions to support the health of our workers in Aotearoa NZ, especially Maori, Pacific and migrant workers who do much of our safety critical and dusty, dirty work.

Question 2. Do you think the status quo is adequate or inadequate to address the risks involved in work where RCS may be present?

The status quo has proven insufficient in Aotearoa NZ and is absolutely inadequate. **There is strong evidence of risk of harm from working with engineered stone with high crystalline silica content.**

- While the true burden of silicosis in New Zealanders exposed to high concentrations of RCS from working with engineered stone is unknown, **Aotearoa NZ is likely facing a problem of similar proportions to Australia.**
- Exposure to high concentrations of RCS **has potentially affected 250 out of the 1000 workers** who have handled engineered stone¹². Data from Australia (Queensland and Victoria) shows that about one in four workers who handled engineered stone before 2018 developed silicosis or silica-dust-related diseases¹³. Given the similarities in workplace practices, it is reasonable to expect similar outcomes in Aotearoa NZ.
- This data does not include the inherently latent risk of workers who will develop silica dust related diseases in the future.
- Silicosis from engineered stone is also likely contributing to health inequalities - previous research has shown that Māori are more likely to be exposed to workplace hazards - in general and some carcinogens specifically - compared to non-Māori¹⁴.
- Genetic factors put some workers at much greater risk of developing silica-diseases¹⁵.
- **Lesser degrees of silicosis also 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 COPD¹⁶. There is no reason to suggest this is any lower in Aotearoa NZ.
- There would be a substantially greater proportion of affected workers using engineered stone than those who work with other silica containing materials.

Uncontrolled exposure to silica dust from working with engineered stone, and natural stones, is continuing at worker expense.

¹² Stuff NZ. Death by dust: NZ may be on the cusp of a silicosis epidemic. Stuff1 NZ, 22 April 2023. [Internet]. Available from: [Death by dust: NZ may be on the cusp of a silicosis epidemic | Stuff](#) Accessed 21 January 2025.

¹³ Australian Government Department of Health and Aged care. National Dust Diseases Taskforce. National Dust Diseases Taskforce – Final report to Minister for Health and Aged Care. 30 June 2021. Commonwealth of Australia (Department of Health); 2021. [Internet]. Available from: [Final Report to Minister for Health and Aged Care](#). Accessed 21 January 2025.

¹⁴ Denison HJ, Eng A, Barnes LA, et al Inequities in exposure to occupational risk factors between Māori and non- Māori workers in Aotearoa New Zealand. J Epidemiol Community Health [Internet]. 2018;72: 809-816. Available from: [Inequities in exposure to occupational risk factors between Māori and non-Māori workers in Aotearoa New Zealand | Journal of Epidemiology & Community Health \(bmj.com\)](#) Accessed.16 January 2025.

¹⁵ Adegunsoye A, Kropski JA, Behr J, et al. Genetics and Genomics of Pulmonary Fibrosis: Charting the Molecular Landscape and Shaping Precision Medicine. American Journal of Respiratory and Critical Care Medicine. 2024;210(4). Available from: <https://doi.org/10.1164/rccm.202401-0238SO> Accessed 17 February 2025.

¹⁶ 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. Available from: [COPD risk among older construction workers—Updated analyses 2020 - Dement - 2021 - American Journal of Industrial Medicine - Wiley Online Library](#) Accessed 23 January 2025.

- Controls currently in place are not sufficient to prevent harm or to allow long-term follow-up and support.
- Occupational and Environmental Medicine physicians observe **the risks presented by engineered stone cannot be adequately controlled by the principles of good occupational hygiene control practices**. This is mainly because of the nature of the hazard presented by these materials and the difficulty in ensuring all employers and workers understand the risks and abide by the necessary control measures
- Since the introduction of engineered stone to Aotearoa NZ in around 2005 there has been insufficient responses by government, regulators and employers to identify and control the extreme risk associated with this material.
- To date, there is no evidence to demonstrate that lower-level risk mitigation strategies to limit exposure have been universally applied within the industry. Evidence instead indicates that current regulatory efforts have not been sufficient, and businesses are not consistently using effective controls to reduce the risk of harm.
- Non-compliance with safety guidelines among fabricators is rampant, with a WorkSafe NZ investigation over three years showing over **90% of 126 inspected businesses were ignoring the safety guidelines** and failed to properly protect workers from toxic silica dust¹⁷.
- Workers who have worked with engineered stone for at least six months in the last 10 years in Aotearoa NZ are able to have their health assessed under the Accelerated Silicosis Assessment Pathway¹⁸. However, this pathway has significant limitations:
 - Despite the alarming potential for disease, **only a fraction of exposed workers have been assessed through the Accident Compensation Corporation (ACC) case-finding pathway**.
 - As of September 2023, only **190 of 1000 workers had lodged claims**¹⁹.
 - These figures are based on claims lodged rather than completed assessments. Many workers were still in the pathway at the time assessment findings were last reported.
 - Constraining workplace situations impact choices for workers. Our members have confirmed that many workers avoid the pathway due to concerns about job loss and the lack of immediate health benefits. The absence of comprehensive occupational health monitoring exacerbates this problem.

Alternative, safer materials are available.

- 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. Safer alternatives to engineered stone, such as the traditional materials of granite or marble, are still available. Dust from engineered stone contains up to 95% silica, compared to 2 to 45% in natural stones²⁰. While working with marble and granite also results in exposure to crystalline silica when produced and used, their much lower crystalline silica content and probably more controlled use has not resulted in the serious outbreaks of (acute) silicosis among workers.

¹⁷ Stuff NZ. Over 90% of engineered stone businesses put bench top workers at risk of fatal lung disease. Stuff NZ, 1 March, 2023 [Internet]. Available from: [Over 90% of engineered stone businesses put bench top workers at risk of fatal lung disease | Stuff.co.nz](https://www.stuff.co.nz/health/123456789) Accessed 16 January 2025.

¹⁸ Health New Zealand – Te Whatu Ora. Accelerated silicosis pathway. [Internet]. Available from: [Accelerated silicosis assessment pathway – Health New Zealand | Te Whatu Ora](https://www.health.govt.nz/our-work/accelerated-silicosis-pathway). Accessed 16 January 2025.

¹⁹ Ministry of Health – Manatū Hauora. Accelerated silicosis update. [Internet]. Available from: [Accelerated silicosis update | Ministry of Health NZ](https://www.health.govt.nz/our-work/accelerated-silicosis-update) Accessed 16 January 2025.

²⁰ Office of Industrial Relations. Workplace Health and Safety Queensland. Code of Practice. Managing respirable crystalline silica dust exposure in the stone benchtop industry Code of Practice 2019. [Internet]. Available from: [Managing respirable crystalline silica dust exposure in the stone benchtop industry Code of Practice 2019](https://www.oir.govt.nz/our-work/accelerated-silicosis-update). Accessed 29 July 2024.

3. What, if anything, could the regulator do within the status quo to address the risks without needing to change current laws and regulations?

- The RACP is of the view that not changing current laws and regulations would put even more of our kaimahi at grave risk. The severity of this risk warrants a more significant response
- We should learn from the Australian experience that even stricter regulatory and compliance settings were insufficient to protect workers.
- As outlined above, RACP physicians observe that lack of safety compliance among fabricator businesses and an inadequate health assessment pathway remain barriers to ensuring effective monitoring and worker protection.
- Additional barriers to health assessment include workforce turnover, difficulty accessing a GP, and increased pressures within primary care.
- There has been enough time for regulation and current efforts have been less than ideal, meaning status quo is not an option.

4. Do you support or oppose implementing specific requirements for working with engineered stone?

- Aotearoa New Zealand needs immediate mandatory controls - wet cutting, extraction ventilation, PPE, education, and training.
- Voluntary controls do not work across the industry – our members have seen this time and time again in many other areas of industry.
- To effectively enforce specific requirements for working with engineered stone, there will need to be appropriate active involvement of the worker health and safety regulation agencies, industry, unions, and consumer engagement.
- The RACP emphasises the importance of applying the hierarchy of controls regarding the health risks in the workplace - eliminating the hazard and, if this is not practicable, then substitution with a lower risk hazard wherever possible.
- Implementation of effective hazard control measures to protect workers in this industry are well overdue and should include the elimination of very high silica content artificial stone or at the very least, cessation of dry processing, which has been found to generate very high RCS levels²¹.
- The hierarchy of controls is a key strategy for reducing risk to workers and can work to prevent a range of silica-related diseases besides silicosis. The value of the hierarchy of controls is not only in relation to prevention but in the minimisation of levels of exposure to silica dust.
- If the known hazards associated with the fabrication of substances, such as engineered stone, are not eliminated, then the option is to implement a rigorous and robust licencing scheme to maximise the efficacy of the lower order health risk management strategies.

5. Do you support or oppose a regulatory requirement for licencing of workplaces that cut, grind or polish engineered stone?

- The RACP supports a regulatory requirement for licencing of workplaces to cover importation, distribution, sale, fabrication and installation of engineered stone. No fabrication of any engineered stone should occur outside a licenced industry sector. Business that cannot meet compliance standards should be prohibited from operating.
- The status quo is unacceptable, workers are still being exposed to RCS which will have huge impacts on them, their family and friends, as well as social, economic and business consequences.

²¹ Hoy R, Dimitriadis C, Abramson M, et al. Prevalence and risk factors for silicosis among a large cohort of stone benchtop workers. *Occup Environ Med* 2023;0:1–8. Available from: [Prevalence and risk factors for silicosis among a large cohort of stone benchtop industry workers](#) Accessed 5 February 2025.

- As most businesses in the stone benchtop industry are small, many are family run, and many involve culturally and linguistically diverse people and employees, even the best evidenced based control measures are likely to face significant implementation hurdles.
- We suggest that as Victoria in Australia has been proactive in implementing a [licensing scheme](#) since 2022, the medical practitioner experience from its implementation should be used to inform the design of a national licencing scheme in Aotearoa NZ. Our members have observed major changes in work practices within the stone benchtop industry in Victoria. Our members would welcome an opportunity to discuss refinements to the Victorian scheme, for a model that could be applied in Aotearoa NZ.

6. What should be the conditions of gaining and maintaining a licence?

The RACP suggests a minimum checklist be prepared and the input of RACP physicians be sought before being finalised from a worker health perspective. This should include:

- Strict adherence to mandatory controls - wet cutting, extraction ventilation, PPE, education, and training.
- Mandated silica content testing and labelling of all existing ES slabs to ensure compliance.
- Contribution to research data.

7. What are the benefits and costs of operating under a licensing system?

A licensing scheme has the following benefits:

- Safer transition away from engineered for existing installations and contracts, to allow for the completion of projects and the safe removal or modification of engineered products.
- Enhanced regulation for engineered stone importation, disposition, fabrication and installation.
- Would create a more complete list of the businesses within the industry sector.
- 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.

8. Do you consider a licensing system would be effective in reducing harm?

Yes, a licensing system would go some way in reducing harm because:

- 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.
- However, the RACP considers this to be not as effective as other options in reducing risk of harm. Budgetary constraints may impact the ability to effectively monitor and/or enforce regulatory measures other than an outright ban – see comment on support for this option below.

9. Do you support or oppose the introduction of a general duty to reduce RCS exposures from work in all workplaces where there is a likelihood of exposure to RCS?

- It is a step in the right direction, but not as effective as removing the risk entirely.
- A 'duty of care' (4A) will not guarantee monitoring (health or exposure) will happen, and as workers change workplaces they might not otherwise get this input or consideration that silica exposure might be the cause of any future symptoms they might present with. For example, if in the future they happen to be not working in the industry but were still exposed at a previous point in time.

- The mandatory monitoring of worker health and workplace exposure is still required to ensure this duty is fulfilled in terms of exposure risk and to ensure worker health is kept first and foremost (see more on support for this below).
- The very fast development of disease (in cases of accelerated silicosis), as well as the long latency between exposure and disease in other cases means that all workers should be followed up over the longer term, so they can have access to health care regardless of when their exposure was in time.

10. Do you undertake health monitoring currently? If so, what and how often?

A number of our members work as specialist Occupational and Environmental Physicians and undertake a variety of daily occupational health work including monitoring.

11. Do you support or oppose mandatory worker health monitoring for workers in all workplaces where there is a likelihood of exposure to RCS?

- We strongly support mandatory worker health monitoring for workers in all workplaces where there is a likelihood of exposure to RCS.
- Even if there were a total ban on the import, supply, and use of engineered stone (as discussed below), challenges around health monitoring would remain.
- As discussed above, only a fraction of exposed workers have been assessed through the ACC case-finding pathway. **No singular organisation has jurisdiction over the whole issue of worker health and wellbeing. No-one “owns” worker health.**
- To improve health monitoring for workers, **the RACP calls for an official national registry of all people with workplace silica dust exposure** to be established and this to:
 - be developed and operated with specialist medical input compiling relevant data.
 - go further than the recently established Australian National Occupational Respiratory Disease Registry which only records people diagnosed with lung diseases. Misdiagnosis is happening – there is clinical evidence of this indicating there will be others with disease or in the latent period.
 - **facilitate long-term health monitoring, track exposure, and support research on disease progression.**
 - be accessible to relevant clinicians and integrated with existing health systems to **ensure continuous follow-up and support.**
- Notification and coding of diagnoses of silicosis will
 - Enable the true extent of occupational lung disease related to engineered stone in Aotearoa NZ to become clearer.
 - Enable the government of the day to have real-world data to inform their policies to eradicate this workplace health issue. Evidence to date on the number of cases of the other silica-related diseases (such as lung cancer, chronic obstructive pulmonary disease, kidney disease, autoimmune disease) would be readily available if a National Occupational Respiratory Disease Registry existed.
- The RACP calls for research to continue and be published internationally regarding the risks of health effects related to engineered stone. RACP members are actively involved in this through independent research programs.
- Research is also required to understand the toxicological properties of engineered stone with lower silica content.
- The Victorian silica-associated disease registry has identified a significant number of people with adverse mental health outcomes²². With 25% of screened artificial stone benchtop workers having silicosis, and more workers predicted to develop disease in the future (given

²² 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. Available from: [Predictors of psychological stress in silica-exposed workers in the artificial stone benchtop industry](#) Accessed 16 January 2025

the known high exposure levels in screened workers who are yet to be diagnosed with a silica related disease), 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 research⁴.

- It is important to highlight the latency associated with the development of lung cancer. Aotearoa NZ is 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 time⁴.

12. Do you support or oppose mandatory worker exposure monitoring for workers in all workplaces where there is a likelihood of exposure to RCS?

- **RACP strongly supports mandatory worker exposure monitoring for workers in all workplaces where there is a likelihood of exposure to RCS.**
- We don't know how much, how often or how long workers have been exposed to RCS. We need the data to reduce the burden of harm.
- As called for above, the introduction of a national registry of people with workplace silica dust exposure could strongly support in tracking exposure.

13. Do you support or oppose a full ban on import, supply, and use of engineered stone?

The RACP supports a full ban on the importation, supply, and use of engineered stone to halt further harm to workers from this source.

A full ban would remove any new or ongoing exposure risk to workers and thus reduce the risk of harm. The most effective way to remove risk of harm is to remove the exposure causing harm (especially if there is an uncertain likelihood of effectiveness from any implemented proposals to mitigate / reduce risk).

The RACP supports a total ban on importing engineered stone because:

- 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.
- In Australia 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. Regulation has not been complemented by continuous workplace monitoring, health surveillance, reporting, compliance checking and enforcement. This failure has materially contributed to the harm that has been well documented among Australian workers, and potentially impacting on one in four workers in Aotearoa NZ also.
- This product is not made in Aotearoa NZ. It is large and readily identifiable when it arrives in Aotearoa NZ, and therefore relatively easy to licence, track and if necessary, ban.

The RACP supports a total ban of all engineered stone regardless of its crystalline silica content in Aotearoa NZ.

The ban on engineered stone in Australia has already resulted in innovations by the sector to develop new products with no or very low crystalline silica content and these are available in

Aotearoa NZ also. These products guarantee to contain alternative raw materials such as recycled glass mixed with resins and pigments, rather than silica.

Though well-intentioned, the suggestion of **permitting lower silica content substrate could be associated with a new health consequence for the worker.** The reasons are:

- Alternative engineered stone **products with lower silica content (claimed as safer) have not been supported by evidence of their safety.** 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*”.
- There is also **no scientific or medical data to identify a safe level of crystalline silica in natural or engineered stone when processed in an unsafe way.** 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.
- 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 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. 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.
- 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 increase⁴.

Support for Option 5 could helpfully mitigate against any potential inability to support other options (2,3 4A) if insufficient resources in the sectors concerned impacts the ability to support these options. For example, there may be cutbacks in staff employed across all the sectors who would be involved in any future pathway.

While a total ban would remove risk regarding new imports, the RACP notes additional measures for product already in the country (legacy products) will be required. There will be stone already imported into the country, held in storage which will pose a level of risk to workers who then go on to fabricate this product. In anticipation of a potential ban there may be stockpiling of product.

14. How would a full ban on import, supply, and use of engineered stone impact you or the industry you work in/support?

There could potentially be delays, increased compliance costs, supply chain issues, increased costs and delays for customers. But the upshot would be Occupational and Environmental Health physicians would see less kaimahi put at grave risk, potentially suffering and dying a slow and painful death with huge social, economic and industrial costs.

17. Do you have a preferred option or package of options?

As outlined, there is strong evidence of risk of harm from working with engineered stone with high crystalline silica content and businesses are not consistently using effective controls to reduce the risk of harm.

The RACP supports **Option 5A**. A complete ban should be considered as evidence shows regulation and prevention is not effective enough to protect workers. Aotearoa NZ should follow Australia's lead to **implement a complete** ban on imports and fabrication of engineered stone to halt further harm to workers. This is the best option in terms of overall prevention of disease (by removing exposure/harm) and consistent with the precautionary approach (in the face of emerging evidence about this disease).

We still need a way of monitoring (and responding to) the health of those exposed to date (pre-ban), as well as ensuring ongoing follow-up and support. The RACP therefore supports **options 4B and 4C** in addition to any other option decided upon – to ensure that workers and their health is prioritised, not the industry.

To improve and support health monitoring for workers, **the RACP calls for an official national registry of people with workplace silica dust exposure** (not just those diagnosed with disease) to be established. This registry should **facilitate long-term health monitoring, track exposure, and support research on disease progression**. This should be accessible to relevant clinicians and integrated with existing health systems **to ensure continuous follow-up and support**.

19. If there is anything else you would like us to know or add?

As part of a co-ordinated and expert-led response to silica, the RACP also calls for a **National Occupational Health and Wellbeing Service, a consideration missing from this document**. We know that workers change jobs frequently. A service responsible for regular mandatory follow-up of exposed workers, and occupational health and wellbeing more generally, is also urgently needed.

In closing

The RACP thanks MBIE for the opportunity to provide feedback on this consultation.

To discuss this submission further, please contact Di Cookson, Senior Policy & Advocacy Officer, at policy@racp.org.nz.

Nāku noa, nā



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