SUBMISSION

Public consultation on the prohibition on the use of engineered stone

Instructions

To complete this online submission:

- Download and save this submission document to your computer.
- 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.
- Once you have completed your submission, save it and upload it using the upload your submission link on the Engage submission form.

Submissions will be accepted until **11.59 pm on 2 April 2023.**

Additional documentation

Up to three additional documents can also be uploaded when you submit your response. Relevant documents to upload could include cover letters or reports with data and evidence supporting your views.

Help

If you are experiencing difficulties making your submission online, please contact us at occhygiene@swa.gov.au.

Respondents may choose how their submission is published on the Safe Work Australia website by choosing from the following options:

- submission published
- submission published anonymously
- submission not published

For further information on the publication of submissions on Engage, please refer to the Safe Work Australia Privacy Policy and the Engagement HQ privacy policy.

Please note the following are unlikely to be published:

- submissions containing defamatory material, and
- submissions containing views or information identifying parties involved in hearings or inquests which are currently in progress.

Your details

(Please leave blank if you wish to remain anonymous)

1. Name or organisation

ASTA world-wide – the Agglomerated Stone Manufacturers Association

2. Email used to log into Engage

[redacted]

Consultation questions

Opening statement:

- A.St.A supports any government initiatives to manage airborne crystalline silica dust levels in processing all silica products.
- A.St.A considers that licensing together with periodic and tight enforcement of relevant regulations in stonemasons' workshops is essential to increase compliance and subsequently improve worker practices and health.
- A.St.A would like to assist both in the implementation of regulatory changes and through the provision of global industry information that may inform considerations in improving fabrication and cutting practices.

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

    a) ASTA does not support a prohibition on any type of engineered stone.

    b) It is acknowledged that all these products can be handled safely provided proper safety equipment and procedures are used.

    c) Furthermore, a ban on engineered stone would not address the issue of silicosis in the fabrication industry – and the same is even said by supporters of a ban, for as Kate Cole said as part of the NSW law and justice committee hearings: "banning manufactured or engineered stone does not solve the problem of silicosis" We agree that is the case, and therefore handling silica with care is the right way to address the issue.

    d) A ban on dry-cutting still not adopted across all jurisdictions in Australia should be immediately implemented. It can dramatically reduce the risk of silicosis and if

accompanied by other control means and medical monitoring can ensure no one is adversely affected,

e) Unfortunately, cases are indicative of a long period of poor focus on H&S in the fabrication industry, and a ban now would not be effective in either stopping the future cases – or preventing same to happen once fabricators use natural stone or other silica containing materials.

f) In NSW alone, about half of all silicosis cases reported in the year to 30 June 2021 – 42 per cent – are from industries outside of engineered stone. These include tunnelling, construction and home-building, where the stone encountered by workers contains similar or higher levels of silica than engineered stone, including natural sandstone (70-95% silica), fibre cement sheeting (up to 60%), concrete and bricks (50-60%).

g) A ban on engineered stone would result in the substitution of different materials for benchtops, possibly natural stone or other silica containing materials, which pose same risks. For that reason, only a comprehensive national approach – through banning risky processes (such as dry cutting) education, licensing and most importantly enforcement – will address this issue across all materials.

h) ASTA's submission will reference relevant research and expert opinion including Dr Michael Fanning, who submitted as follows:

It is well known that all silica materials are hazardous if the proper precautions are not taken when cutting, grinding or polishing. The recent devastating increase in silicosis cases has resulted from poor workplace practices including dry cutting, poor ventilation, lack of personal protective equipment and complacency regarding the risks of working with silica containing materials.

Calls for a ban on artificial stone products containing high levels of silica due to the emotional toll of silicosis cases may not be the most effective solution. A ban on artificial stone alone **would not eliminate the risk of exposure to RCS even in the benchtop fabrication induration** because many alternative materials, including natural stone can generate dangerous levels of RCS if not handled correctly.

Instead, effective dust control measures, such as wet cutting, proper ventilation, and the use of personal protective equipment, should be implemented regardless of the material used.

i) Its broadly accepted by experts (such as Dr Michael Fanning) that the most important factor in preventing silicosis, stating that "**safe work practices play a far more important role in the fabrication of stone products rather than the material type**". Our evidence shows that adopting wet cutting along may reduce exposure by at least 10-fold, far greater than any changes in materials. By adding

to the wet cutting improvements in of local exhaust ventilation further reductions of 0.2 - 0.69 mg/m3 are achievable.

j) This has been the case in the past prior to the adoption of engineered stone, and a ban on this products would only revert to (even if at smaller numbers) past cases of silicosis. There has been neoumerous studies on various exposures to RCS demonstrating its risks in stonecutting well before engineered stone. for example this 40 yr study: Ogawa S, Imai H, Ikeda M. A 40-year follow-up of whetstone cutters on silicosis. Ind Health. 2003;41(2):69–76.

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.

   Click or tap here to enter text.

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.
   a) A higher percentage of silica may correlate to higher risk only if basic safety measures are not implemented. Simply adding water suppression may dramatically reduce the risk, so when combined with other means, the silica content of any material becomes irrelevant. On the other side, the risk of silicosis still exists if lower silica materials including natural stone are being cut without implementing safety measures.
   b) The safety measures that should be implemented when cutting natural stone would allow fabricators to safely cut and polish any type of engineered stone. , apply and be required to cutting and polishing a much lower percentage silica materials (such as granite or porcelain) let alone high silica containing materials such as sandstone. You don't want workers inhaling respirable dust even with no RCS.
   c) Ms KATE COLE, President, Australian Institute of Occupational Hygienists stated in the hearing that: '*This is not just an issue in engineered stone but, indeed, across other industries, highlighted most recently with 42 per cent—or almost half—of cases of silicosis reported to 30 June 2021 being from industries outside of engineered stone.'*
   d) Dr Graeme Edwards, Senior Consulting Physician, Occupational and Environmental Medicine, acknowledged 'that the product can be fabricated safely'.

4. How many businesses work with engineered stone only?

For these businesses, please provide where possible:

   a) the number of sole traders and small businesses (1-20 employees), medium businesses (21-200 employees), large businesses (>200 employees)

b) the number of workers in these businesses, by business size
c) the average annual revenue, by business size
d) the proportion of business activity with engineered stone containing 40% or more crystalline silica content, by business size
e) the proportion of business activity with engineered stone containing less than 40% crystalline silica content, by business size.

Please use the table below to enter this information.

Business type	**Description**	**Sole traders and small business**	**Medium business**	**Large business**
Business working with engineered stone only	Number of businesses			
	Number of people employed			
	total annual revenue (approximate, rounded to nearest $10,000)			
	Proportion of business activity involving ES with ≥ 40% silica			
	Proportion of business activity involving ES with <40% silica			

Click or tap to enter text.

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

For these businesses, please provide where possible:

a) the number of sole traders and small businesses (1-20 employees), medium businesses (21-200 employees), large businesses (>200 employees)
b) the number of workers in these businesses, by business size
c) the average annual revenue, by business size
d) the proportion of their business activity with non-engineered stone products, by business size
e) the proportion of their business activity with engineered stone containing 40% or more crystalline silica content, by business size
f) the proportion of their business activity with engineered stone containing less than 40% crystalline silica content.

Please use the table below to enter this information.

Business type	Description	Sole traders and small business	Medium business	Large business
Business working with both engineered stone and non-engineered stone products	Number of businesses			
	Number of people employed			
	Average yearly revenue (approximate, rounded to nearest $1000)			
	Proportion of business activity involving ES with ≥ 40% silica			
	Proportion of business activity involving ES with <40% silica			
	Proportion of business activity involving non-engineered stone products			

Click or tap here to enter text.

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?
    a) ASTA is aware of some studies – such as *Characterizing and comparing emissions from natural and artificial stones when cutting and polishing* – found that certain volatile organic compounds were released when temperatures reached up to 120C cutting engineered stone containing resin. However, as referenced below, these temperatures are far beyond those reached in fabrication when a wet-process is implemented.

    b) Alan Rogers, Certified Industrial Hygienist and Retired Certified Occupational Hygienist, says there has been “unproven speculation” that the organic chemical breakdown products arising from frictional heating of the resin matrix during cutting, grinding and polishing have been responsible for the rapid onset of accelerated silicosis in engineered stone fabricators. However, under the best practices required by SWA Code of Practice - wet-cutting and dust control conditions, the spot cutting temperature on the slab is reported at only 35-45 Celsius, which would lead to only minor resin breakdown and release of irritants (Hall et al, 2022).

    c) The Hall et al study result also suggests that silica particles released during the processing of the resin-artificial stones are not bonded to the resin material. In factor, another study suggested that resin can significantly reduce the reactive pathways of RCS, hence toxicity, in the lungs by acting as a ‘protective’ coating for the particles. In their earlier studies, Pavan et al. subjected RCS particles to a thermal treatment to remove the polymeric resin and reported a significant

increase in cytotoxicity, suggesting that resin partially covers the particle surface from interaction with cellular membranes.

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

ASTA notes that there have been significant improvements in the regulation of workplace safety in the stone industry in the past five years, including lower workplace exposure standards, bans on uncontrolled dry cutting, new codes of practice and significant industry education and awareness.

ASTA supports the position taken by WHS Ministers in recommending stronger regulation of high-risk crystalline silica processes for all materials (including engineered stone) across all industries, as well as improvements in areas such as education and awareness, and air monitoring and reporting.

However, it is well known that poor compliance is the problem of the industry. any new regulations must be accompanied by adequate funding for work safety bodies to conduct regular audits and enforce penalties for non-compliance. The main benefit of a licensing scheme is the ease of enforcement. If all PCBUs handling stone require a licence, anyone found dealing with an unlicensed PCBU – either a stone manufacturer or builder – can be easily identified and penalised.

Asta would like to refer to Mr Rogers opinion, which accurately describe the benefits of proper licensing scheme:

> "Current experience in parts of Australia such as Victoria and NSW is that an **intense inspection regime and or a mandatory licencing system is by far more effective in controlling exposures than a the historical system** which is reliant on the user having to interpret the acceptable level of risk and then attempt to assess the level and type/s of controls which are necessary.
>
> What is required is an umbrella effect where all aspects of managing dust exposure in the industry is brought under one roof. This focuses on a mandatory system of education and implementation of the necessary components of control and surveillance along with the frequency of testing of compliance.
>
> **The best and most thorough approach is licensing which focuses the understanding of the users / fabricators that they are required to conduct their business to work in a required and controlled manner**. Licencing will remove the 'cowboys' from the industry who defile or fail to comply best practice controls. Licensing will set a certain standard and frequency of inspection by licenced testing personnel to test control systems, monitor dust exposures, and perform medical monitoring of the workforce, all stages of the system then need to be subject to routine independent reporting of the findings.

The basics principles of licencing of the industry, ongoing dust control, dust exposure monitoring, medical surveillance and oversight by the regulator from coal mining, metalliferous and extractives mining, and construction industries **can be readily applied to a model regulatory system** for the engineered stone industry and to other segments of industry where there is risk silica expose and associated risk of silica related disease

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.

Click or tap here to enter text.

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

A strict ban on dry cutting practices should be implemented.

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?

Click or tap here to enter text.

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?

Click or tap here to enter text.

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

Click or tap here to enter text.