TILE TODAY

FULLY ENDORSED BY THE AUSTRALIAN TILE COUNCIL

122

TILE SILICOSIS RULES

LUSSO STONE MAKES LUXURY ACCESSIBLE

STANDARDS FOR PEDESTALS

TRENDS | FEATURED PRODUCTS | TRADE FAIRS | INDUSTRY NEWS

TILE TODAY 122

CONTENTS

@tiletodaymagazine

@tiletodaymagazine

tile-today-magazine

tiletodaydigital.com.au

Affordable

Luxury

Commercial

Residential

Customisable

LUSSO STONE

Derek Anderson from Lusso Stone distinguishes himself with his business nous and ability to execute on his ideas. He saw a big change coming to the industry and did something about it. Not only is he successfully implementing his plans, Derek is focused on growth. At a time when most businesses wait to follow trends, he talks about advancing technologies and is literally ahead of the curve.

Derek Anderson (Lusso Stone) with the first porcelain slab delivery

The story of Lusso Stone fits in well with our latest coverage of silicosis in the tile industry. A matter of public health, Tile Today has been following the developments closely since late 2023 and are proud that we have brought a lot of attention to it.

In this edition, we also celebrate top tile design with Gavin Hepper, winner of the 2024 Housing Industry Association Australian Bathroom Design award. He told Tile Today how he sourced the tiles for the project and his overall approach to design. Gavin is uniquely qualified both as a joiner and interior designer.

Ceramic tile and natural stone consultant Christopher Repeti delivers a paper presented at Qualicer this year on tile installations using pedestals or raised floor systems. He is contributing to an important conversation about creating standards for these types of installations.

To keep up to date on the latest news in the tile industry, just click here:

https://bit.ly/3dJ5EBc

See you next time,

Betty Tanddo

FRONT COVER IMAGE

The Wellness range from Spanish company WOW offers tile solutions for swimming pools, wet and outdoor areas. Traditional blue shades are now joined by earthy colours, exotic marbles and graphite effects. It includes three non-slip collections: Sukabumi which is inspired by Indonesian volcanic stone, Marble, and Aqua that captures the tranquillity of lakes and ponds in shades of sand, grey and green.

TILE TODAY

Proudly produced and distributed in Australia
ELITE PUBLISHING CO PTY LTD
ABN: 27 006 876 419
PO BOX 800, Templestowe, Victoria, Australia 3106
Ph: + 61 3 9890 0815
Fax: + 61 3 9890 0087
Email: info@elitepublishing.com.au
Website: www.tiletodaydigital.com.au
www.elitepublishing.com.au

PUBLISHERS
Georgia Glimour
Michelle Cammiade

EDITOR
Betty Tanddo
betty.tanddo@elitepublishing.com.au

INTERNATIONAL CORRESPONDENT
Joe Simpson
joe.simpson@elitepublishing.com.au

TILE TODAY WEBSITE
Scott Lewis
scott@hnn.bz

GENERAL MANAGER
Georgia Gilmour
Georgia.Gilmour@elitepublishing.com.au

CIRCULATION
For circulation enquiries please email:
info@elitepublishing.com.au

PRODUCTION
For artwork and production enquiries please email: dave@plumpublishing.com.au

ELITE PUBLISHING CO PTY LTD
PUBLISHERS OF: Flooring Magazine, Tile Today Magazine, and Supplier Magazine.

Australian Tile Council Inc.
Leading the Industry

Endorsed by **Australian Tile Council**
www.australiantilecouncil.com.au

Japanese Design

These subway tiles are a vibrant collection of premium-grade products, meticulously selected to connect to the concept of sustainability and slow living. Grounded in a passion for aesthetics, this range evokes the gentle and graceful style of Japanese designs, highlighting delicate patterns and providing a timeless charm. The result is a varied assortment where nature is the inspiring muse.

Arena

The Arena collection offers a refined design, inspired by the eternal charm of terrazzo design. The warm shades of colours, combined with its richly detailed pattern, create elegant spaces that are reminiscent of an aristocratic setting. Available with an In&Out Tech finish suitable for both indoor and outdoor spaces, thanks to its non-slip surface.

GEO

The beauty of GEO range can be found in its details. For example, the small, coloured speckles and light veinings form a well-balanced stone pattern. It is available in four stone-like colours such as Grey, Pearl, Silver and White. The Geo collection is designed to communicate the effects of “delicate movement”. Finishes include Natural, Semi-polished and External.

RLA POLYMERS

New Release

Luminous GROUT

Ultra Vibrant, Efflorescence Free, Rapid Setting Grout

Uniquely formulated to eliminate the chance of efflorescence

Available in 16 traditional & designer colours.

GLOBAL GREEN TAG CERTIFIED
GreenRate | Level C
trust brands

- 1-20mm JOINTS
- INTERNAL / EXTERNAL
- WALL / FLOOR
- WATER REPELLANT
- GREEN TAG CERTIFIED
- 15 YEAR WARRANTY

www.rlapolymers.com.au T. 1800 242 931 TRADIESTRUST

RLA POLYMERS

Available in 16 Colours. Out now.

Luminous GROUT

Ultra Vibrant, Efflorescence Free, Rapid Setting Grout

Uniquely formulated to eliminate the chance of efflorescence

RLA's new Luminous Grout is an advanced, rapid setting ceramic tile grout developed using efflorescence free technology.

Incorporating premium components, the unique formulation offers enhanced shrinkage reduction, abrasion resistance, colour uniformity and long term colour fastness and vibrancy.

Displaying excellent workability and an ultra smooth finish, Luminous Grout ensures high levels of precision and flawless results for general and demanding applications where enhanced durability and long term performance is paramount.

TILE TYPES

- Porcelain
- Ceramic
- Terrazzo
- Slate
- Quarry tiles
- Glass

Long LASTING

Mould & Mildew RESISTANT

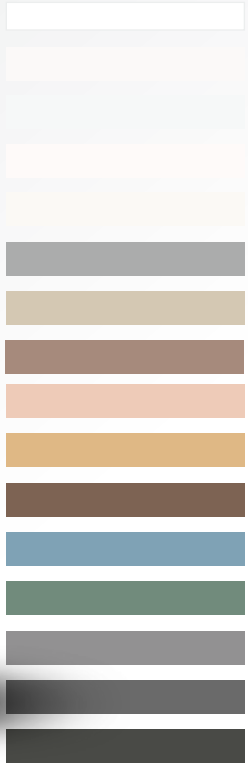
ENGINEERED WITH RESPIRABLE SILICA FREE TECHNOLOGY

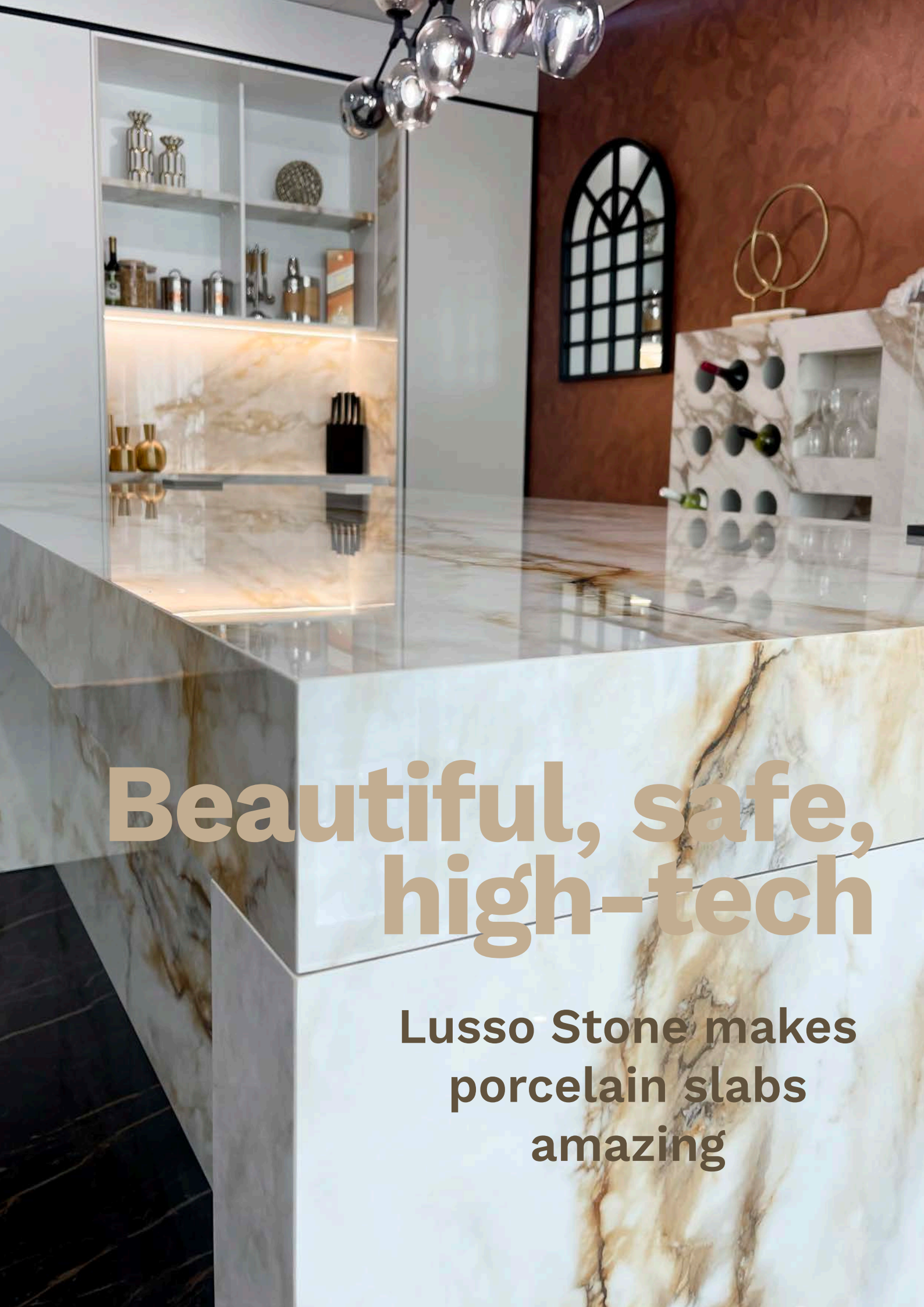
Super Fast DRYTIME

Efflorescence FREE

ISO 13007.3 CG2 WAF

- Efflorescence free formulation.
- Global Green Tag Certified.
- Respirable Silica Free.
- ISO 13007.3 Compliant – CG2 WAF
- Meets the Green Building Council of Australia Green Star IEQ-13 requirements with an extremely low VOC.
- High abrasion resistance.
- Fast setting for colour uniformity.
- Extended colour fastness & anti-fading properties.
- Shrinkage compensated.
- Ultra smooth, silky finish reducing dirt retention and improved stain resistance.
- Suitable for grout joints 1-20mm wide.
- Resistant to mould and water.
- Extended open time.
- Offers excellent workability, making it easy to apply & clean off.





Beautiful, safe, high-tech

Lusso Stone makes porcelain slabs amazing

Lusso Stone has stepped into the gap left by Australia's total ban of engineered quartz stone (EQS) benchtops. Lusso Stone's advanced processing of porcelain slabs offers similar performance to EQS, along with precision processing and an even wider range of design possibilities.

Lusso Stone is one of the few Australian suppliers to fully understand that there is a new and unique market forming for porcelain benchtop surfaces. This is a direct result of the recent complete ban on engineered quartz stone (EQS) surfaces in Australia. The ban came into effect in mid-2024.

It's a market that is going to benefit both retailers, specifiers and installers. As kitchen installers move from EQS to porcelain and sintered stone slabs, the market is set to take off in 2024, and then accelerate through 2025.

The Lusso Stone advantage is that the company, run by Derek and Joanna (Jo) Anderson, has been actively supplying and installing porcelain slabs since 2021. Even before the ban, Derek had reservations about EQS, and saw porcelain slabs as offering a better alternative for real luxury at an affordable price.

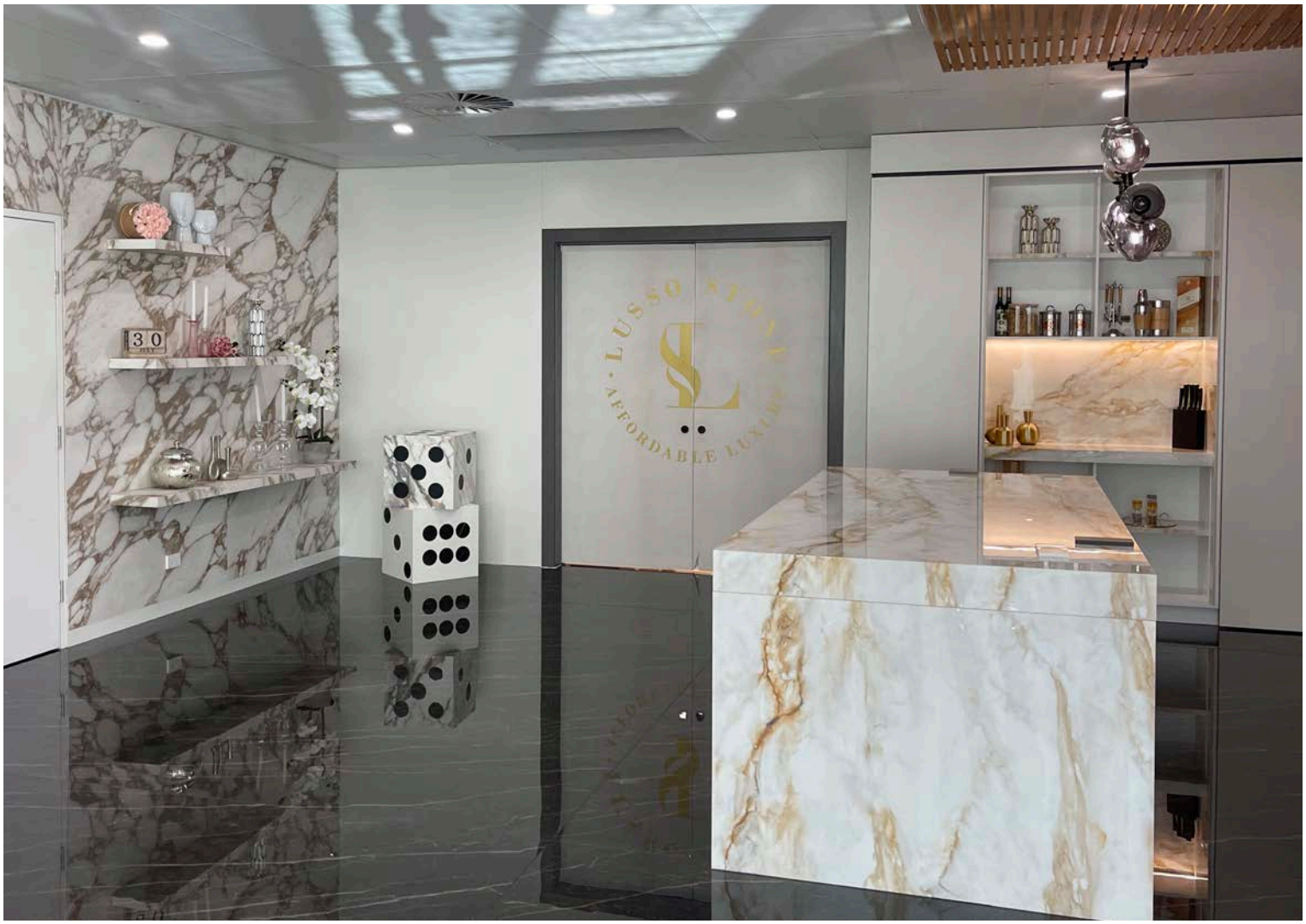
Derek is an experienced hand in an emerging market sector, ready to help others benefit as well from this new potential for growth. One clear sign of growth in both the market and Lusso Stone is that the company is in the early stages of moving to supply Harvey Norman with tops for its vanities.

The solution to silica

Kitchen suppliers are currently coming to terms with the complete ban on EQS benchtops throughout Australia. This came into force on 1 July 2024, though some states and territories have provided a temporary loophole through to 31 December 2024, which allows already contracted work to be completed.

EQS was once popular because it offered a unique combination of attributes. It is nearly as durable as natural granite, can mimic a wide range of beautiful surfaces, and has been relatively cheap to both source and process.


30
JULY


30
LUSSO STYLE
AFFORDABLE LUXURY

The catch is that the high crystalline silica content in EQS means that the dust produced when cutting the material — respirable crystalline silica (RCS) — is deadly. It is the direct cause of an unexpected outbreak in silicosis in Australia since 2010. Silicosis is a deadly, debilitating disease, which destroys the lungs and has no standard cure, outside of a complete lung transplant.

Unfortunately, as the people who work in kitchen installation tend to have little formal training, it has proved impossible to communicate the safety issues that come with EQS. While states such as Victoria explored strict licensing options, the risk of such experiments was just too high. A complete ban was judged the only safe option.

With the new ban in place, as the major renovation season gets underway in the final quarter of 2024, the big question installers and retailers will face is, what can they use to replace EQS?

Solid surfaces, based on DuPont's Corian process, are one option, but they are not as durable, and susceptible to heat damage. Laminate also lacks durability. Stainless steel is durable, but not attractive in a home. Wood has a range of problems, including durability and maintenance demands.

Kitchen installers are starting to realise that the best replacement for EQS is porcelain slabs. Porcelain features most of the attributes of EQS, and is, arguably, even more beautiful. If there is a "catch" to it, it's largely one of reliable supply of a wide range of designs and surface styles — and that's where Lusso Stone comes in.

Lusso — luxury material, affordable price

Lusso Stone is based in Eagle Farm, Queensland. Derek, as the co-founder and co-owner of the company, became seriously interested with porcelain slabs in 2019, and started doing a great deal of research. "For two years, I travelled the world looking at the supply of porcelain slabs," he told Tile Today.

"By 2021, we had engaged with two of the largest suppliers of porcelain slabs in the world and we launched Lusso Stone on the 1st of July of that year."

That involved a change of name. Lusso Stone is a trading name of his original company, Select Stone. As Derek explains:

"The reason why we changed the name is because 'lusso' stands for 'luxury' in Italian. And we wanted the porcelain to be affordable and seen as a luxury material. A luxury material at an affordable price was the motto that my wife had come up with."

Back in 2021, the surfaces industry in Australia didn't really understand porcelain slabs. The industry was generally all about engineered stone. There was also a perception that porcelain was a difficult material to work with. Derek moved to answer the need for better, more reliable information.

"The reason why we changed the name is because 'lusso' stands for 'luxury' in Italian. And we wanted the porcelain to be affordable and seen as a luxury material. A luxury material at an affordable price was the motto that my wife had come up with."

— Derek Anderson, Lusso Stone

"At the time, wholesalers of the engineered or marble and granite didn't have a lot of knowledge. They knew nothing about porcelain slabs, so they could not provide any information to the industry.

"So for the last three and a half years, we have built up stock to be probably the largest stockist [of porcelain slabs] in Brisbane or Queensland. We have over a hundred different colours with five different finishes. We are now one of the leaders, not just in supply, but also in fabricating and installing our product."

At the time, before the ban, Derek as a stonemason had many reservations about EQS.

"Coming from a stone masonry background, we were never in favour of engineered stone because it was never a real stone to work with. It wasn't suitable for carving, and you couldn't do fancy edges.

"It was two and a half years [after we started] before the government made its decision to ban engineered stone. But what we did do was bring 40 years of knowledge working with marble and granite over to the porcelain world. So we were able to adapt to it, and with our connections overseas, we were able to advance the technology and fabrication so that we can now pass that information onto fabricators today."

This type of information is not readily available to the industry, and it is in this spirit of generosity and sharing that the staff at Lusso Stone offer advice

on how to work with porcelain (slabs) to anyone who wants it in the industry. Derek said:

"We give it to everybody. We don't discriminate [against] anybody in the business. We're only here to help. And if you want assistance, we're more than happy to give you the assistance."

Ongoing advantages

As expected, the manufacturers of EQS are, of course, trying to develop surface products that do not contain silica. As Derek points out, there is a lack of information about the characteristics of these new products. As Derek puts it, "Where is all the technological research, the testing that says that the product is going to last for another 20 years?"

He contrasts that with the porcelain manufacturers he deal with, who are ultra-cautions when introducing any new products:

"Now with our porcelain that we have, or sintered stone as it's better known as, our global leaders have got a 20mm porcelain that they don't want to bring into the market until it's been 100% thoroughly tested. Because as global leaders, they don't want to bring a product into the market that is not superior to the current products that they manufacture today."

One sign that even former manufacturers of EQS may be a little uncertain about these new products is that they are selling their own versions of porcelain slabs as well.

Background

Derek's choice of porcelain slab as a safe and effective product for benchtops and other surfaces was based on a lifetime of experience in the industry with high-end projects. Derek is very comfortable and confident with the amount of knowledge he has after spending 40 years supplying and installing marble and granite for some of the largest developments in Brisbane and the Gold Coast.

"I've been around long enough now. The buildings that I've cladded like Admiralty Towers (in the Brisbane CBD), has been pulled down and now it's got a big 50 story, high rise building on it. And only recently we were putting in a one and a half tonne reception desk into it. And we've just done all the onyx bathroom vanities and all the new bars, and all that type of work.

"We have been involved with Q1 [the 'tallest' residential resort tower on the Gold Coast] as well as Versace Hotel [now called The Imperial Hotel] and Soul apartments in Surfers Paradise.

"In Brisbane, we've done the Riparian Plaza where we were responsible for all the stonework down on the ground level. Now, that was a Harry Seidler design, one of his last projects. Before his death he was one of Australia's oldest and leading architects.

"Also, all the Louis Vuitton and Chanel stores and the fit outs in Brisbane City, on Queen Street. We even worked on the original tiles being laid in the Myer Centre, in the CBD which is now closed."

> **"The fabricating yard is entirely digitally-based and makes use of the latest Italian water jet machines. This means that Lusso Stone can deliver very high accuracy and quality."**
>
> — Derek Anderson, Lusso Stone

Making porcelain slabs accessible

Lusso Stone has grown from just Derek and his wife to a business that has an office staff of four, two people who help market to architects and designers, and a further five who work in the high-tech fabrication yard.

The facilities at Eagle Farm look after both a retail and a wholesale business. The retail business includes an extensive showroom, which is a facility that Derek said it geared towards professionals such as architects, builders and

designers as well as the "mums and dads" looking to upgrade their homes.

Derek also wants to emphasise the “friendly and relaxed” environment that greets all customers at Lusso Stone.

“We understand that mums and dads don’t necessarily understand the industry, so we always try to put them at ease.

"What will normally happen is on your first visit, you'll be greeted, you'll be taken ... to our showroom. We've got full kitchens, full bedrooms, vanities, the whole shebang ... it's like walking into a whole house.

"But you'll also go out into our wholesaling yard — you walk through the showroom doors into our wholesaling yard — and that's where you'll get to have a look at the slabs.

"The procedure from there is that you'll usually send us your drawings, which we'll come back and give you a price [based on] those drawings. On acceptance of those drawings, we then send out our templating guy, who goes out and does digital templating. Those templates are then brought back to the office where they're itemised and they're sent down into our fabricating yard."

The fabricating yard is entirely digitally-based and makes use of the latest Italian water jet machines. This means that Lusso Stone can deliver very high accuracy and quality.

"We fabricate your product here in our fabricating yard, on our premises. From there, we will speak with your cabinet maker if there's any extra requirements. And then on completion of the fabrication, we install for you.

"I think the most important thing is that we are there for the journey with you. So we go right from the very beginning, right to the very end, and every job is given that same input of quality. I think that's what makes us different, that we do everything here. Because the way that the industry works with [companies that supplied EQS], they just sell the material. Then it goes out to a fabricator, and then it goes out to an installer. It's all different hands all the way through it. Where with us, as a family business, everything is done here and it's a lifetime of experience that we bring.

At Lusso Stone, there are porcelain slabs where the grain can be seen (along the sides), and what Derek refers to as “grandular” ie. sparkles throughout the slabs, similar to natural stone.

Derek is not about trends because he believes that’s about what his customers want. Instead, he is about the new technologies that drive his business.

"As far as leading the industry, that's what we provide. We provide the latest technology in the world today, and no other company in Australia today have the technology that we are providing to the industry."

> **“Clients are always looking for value, but the kitchen is the heart of the house as well.”**
>
> — Derek Anderson, Lusso Stone

The big curve

A growing trend in Australian kitchens — which actually dates back to pre-pandemic days — is the curved benchtop, especially on kitchen islands. This is part of the move to more organic shapes in the home, as style shifts towards home-as-refuge. This is also one area where Lusso Stone really excels.

"We provide two forms of curves. There's one that we fabricate here in Australia, or we can have our overseas fabricators do it, where it's provided back as a full solid piece, curved bench top and waterfall.

"So there's no joints whatsoever. We actually bend and curve the porcelain slabs. So you've got the first part of the manufacturing of the porcelain slabs, but then we go through a second firing process and that allows us to curve the actual porcelain to suit any curves that

a customer would require."

Derek sees this part of the industry having a bright future largely because the kitchen continues to play an important role in Australian families.

"It's a big investment for anyone ... because it's at the end of the build and it's [the customers'] last real big spend on their construction projects. So clients are always looking for value, but the kitchen is the heart of the house as well. And you're really making a statement on your kitchen benchtop. It doesn't matter whether you are single, doesn't matter whether you're a couple, a family, brother, sister — everyone gathers in the kitchen."

Being able to supply those kinds of curves has opened up further business opportunities for Lusso Stone.

"In the current boom that we're seeing, we've got a lot more boutique apartments being built along the beach fronts, down the Gold Coast or up on the Sunshine Coast, or even the Brisbane lifestyle being close to the water.

"They're more like 10 or 14 story high buildings. They're not big skyscrapers, and they're looking for a higher standard than normal kitchens. And that's where we're able to meet [that need] in the early development stages, and bring something special to the apartment or the penthouse by providing these solid curves that we make."

Expansion

As the business grows, Lusso Stone is also moving into supplying some major retailers with its products to display. That includes the Gold Coast company Builder's World, and as previously mentioned, Harvey Norman. As Derek puts it, "Our overall plan is to be one of the largest suppliers here in Australia over the next two to three years."

He has plans to move beyond his Queensland base into New South Wales and Victoria, and is ready to not just supply, but also provide expertise and guidance to specifiers and retailers seeking to expand the range of surfaces they offer to customers. ■

From left: Phillip, Dan, Ricky and Nezar

RLA POLYMERS

DON'T MISS YOUR CHANCE TO WIN

LEVEL UP

With RLA's new range of products

WIN A 2024 RANGER WILDTRAK

FORD RANGER 2024 WILDTRAK 4X4 DBL CAB 2.0L Bi Turbo

ENTRY IS EASY

SPEND $500

ON ANY RLA OR GRIPSET BRANDED PRODUCT

FOR YOUR CHANCE TO WIN

CONTACT YOUR PARTICIPATING RLA RESELLER TO ENTER

visit www.rlapolymers.com.au for more...

TRADIESTRUST

Design-led bathroom space wins housing industry award

An ensuite bathroom by Concepts by Gavin Hepper won this year's Housing Industry Association (HIA) Australian Bathroom Design award. Gavin spoke to Tile Today about his approach to creating this particular bathroom that combines beauty and functionality.

Tiles take centre stage in the award winning en-suite bathroom that is part of the "Living on Lloyd" new build project in the Sydney suburb of Hunters Hill. When asked about how the tiles fit into his design ideas, creative director Gavin Hepper explains that his business is quite unique. He said:

"I actually started in the industry as a detailed joiner by trade. So on a project like this, phase one for us is design specification. I take on design supervision and am also the joiner on the job. However, the principal contractor was A Cut Above Constructions. When it came to engaging all of the sub trades, except the joinery, because I was the joiner, Grant from Cut Above Constructions looked after that so it was his waterproofer, and his tiler. When it's renovations, quite often I'll get my guys in, but when there's a builder on a brand new build, he will use his guys.

"To answer your question in terms of sourcing the product, it was a unique project in that the client at the time was working in marketing for a building products company. When it came to being connected to a lot of brands, she obviously was very well connected.

"That's where the specifications, a lot of them, actually started. The client was very familiar with Tile Cloud, so I was asked to have a look at its portfolio first and foremost.

"So we did that, and I was happy to include some of the products in their portfolio. But there was also quite a bit of product from Di Lorenzo [luxury tile supplier] as well as Surface Gallery. So it was a bit of a mix."

Not surprisingly, the grout colour selection was very important. "It was mostly custom done for this en-suite [i.e. the pink and terracotta]. I'm pretty sure it was mixing off the terracotta colour for the en-suite. Otherwise everything else was an Ardex grout," he said.

Credit: @ConceptsbyGavinHepper, photos by Mark Burrough Photography

Client focused

The process to specify products such as tiles is basically the same for every project at Concepts by Gavin Hepper. As Gavin explains:

"What we do for all our clients is we sit down and obtain a design brief. That's typically a two or three hour discussion, and it's about what does the home look like, function, how long are you going to be there, who's using the space, the look and the feel, what the atmosphere is, how hectic their days are, and we look at inspiration images.

"As design professionals, we design

Credit: @ConceptsbyGavinHepper, photos by Mark Burrough Photography

and specify, and then we generate 3D computer images that show clients what the space will look like, fully tiled, with bath and tapware, everything in the space. And that visually immerses them in the space.

"Then that gets handed over to the builder. So it's very much about a design brief. The client's handing their vision over to us, then we pitch that back to them. And we have incredible contacts with virtually all of the tile and tapware suppliers … They consistently come into our studio and present new products all the time."

Design credentials

Gavin expanded into interior design as a result of both "passion and frustration" at the time.

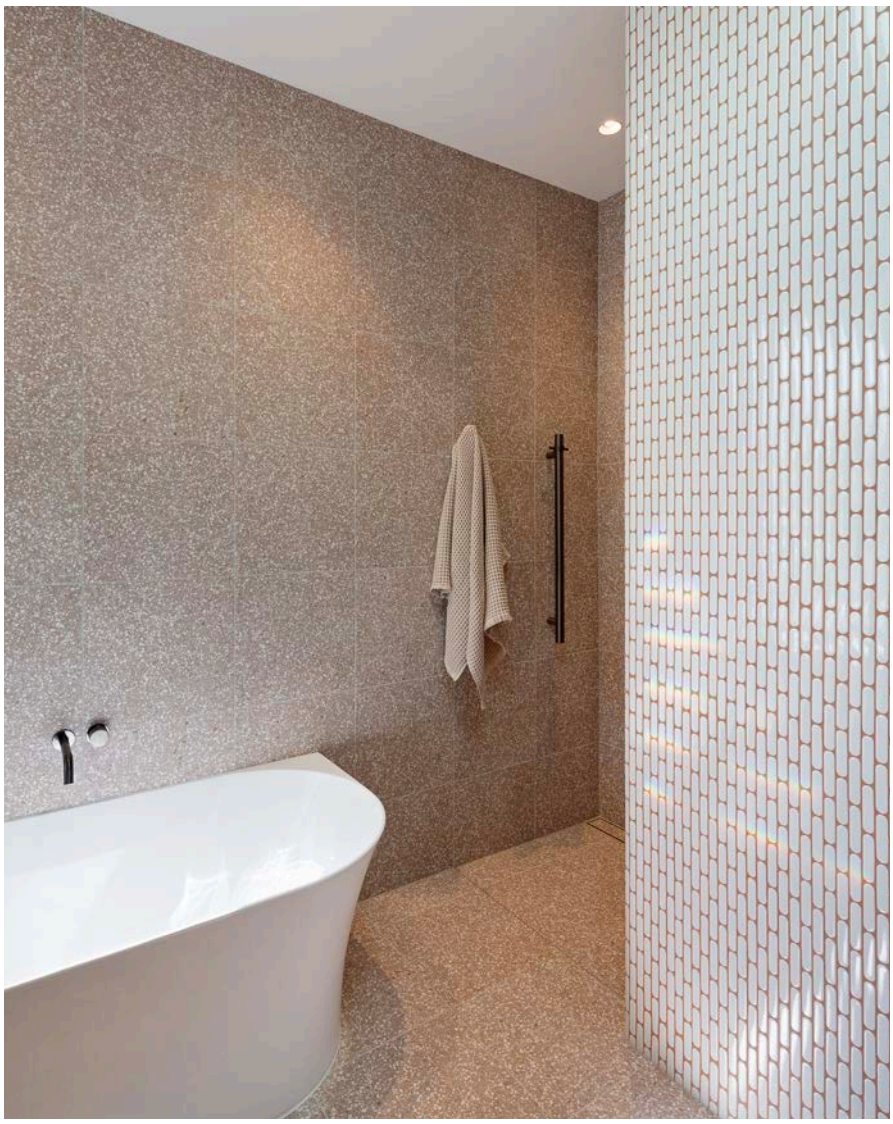
"As a detail joiner and furniture fabricator, I was working for a lot of very substantial joinery shops throughout New South Wales. I was consistently exposed to clients who were not so happy with the product that was being installed in their home. The underpinning of that was that the quality of the product was absolutely beautiful and perfect, but when it actually came to the design detail and the functionality within that design, it was lacking.

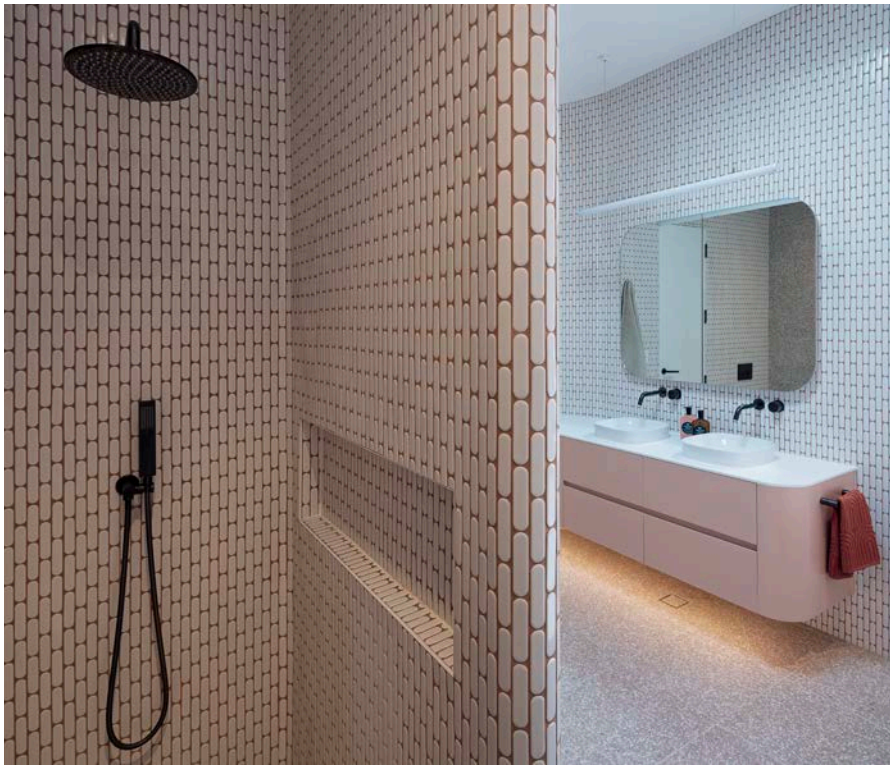
"Because the clients come to the fabricator expecting design and functionality … but joiners were mainly tradespeople who never studied design. When we went to TAFE, we studied how to join bits of timber together and all the technology to do with working with wood, not designing spaces and having those function well. So out of frustration, I wanted to do something about this. I had a passion for design, so I hung up the tool belt or the boots, if you like, and went back to study."

After being self-employed for about four or five years, Concepts by Gavin Hepper was established. It celebrated its 20th year in business in February 2024.

"Now we're a full interior design business that still holds KBL (kitchen and bathroom laundry) renovation and build license, which allows us to be a part of the whole process. That means being on-site during the build … meeting with the tilers and doing the tile set out with the waterproofer there, making sure every grout line and detail lines up with a window and a door and a niche line, and detailing it out to meet our client's expectations.

"[For example] identifying whether that tile is capable of doing a mitre detail or not? If the answer's no, are we





Credit: @ConceptsbyGavinHepper, photos by Mark Burrough Photography

polishing it or nosing it or using a tile trim? I dive really deep into those sorts of details."

Tile trends

In terms of trends in bathrooms and wet areas, Gavin sees an underpinning of what he refers to as "Hotel Luxe".

"Within bathrooms and what I call a master suite, we ask a lot of our clients, 'Can you identify two or three hotels or resorts that if I gave you an open-ended credit card, where would you go for a luxurious week or weekend away?' And that could be in New York City, it could be in Phoenix ... So once we drill into what our client's vision of Hotel Luxe is, that's our starting point.

"If they walk into a master suite or an en-suite, they should feel a little bit unique. You usually start your day there, and end your day there. A lot of our clients are professionals, so they have high pressure careers, and they need a space.

"We are also a bit obsessed with lighting because a lot of Hotel Luxe is quite dark and moody with its actual colours and tile choices. So we need incredible lighting."

From his perspective, Gavin believes clients are also expressing a lot of confidence with extremely large formats. "At the moment, we are using a lot of Neolith which is not necessarily thought of as a tile, but it's a sintered stone or porcelain slab, which is 3.6m by 1.6m. We are cladding the wet areas with Neolith.

"We're having a lot of success with it. There are minimal grout lines, and we can then also clad all the joinery in that as well."

Note: Tile Today reached out to A Cut Above Constructions but they did not reply in time for this story. ■

Origins of luxe bathrooms

Gavin's question about hotels is not only clever, it's really based on the development of luxury bathrooms in Australia. As we discussed back in Tile Today #108, the Australian love of lush bathrooms has its origins in the late 1990s through to the early 2010s, when a range of factors -- an economic crisis and the 9/11 attacks in particular -- led to high availability for cheap vacations at luxury resort hotels in south-east Asia.

The result was that a wide band of the Australian demographic experienced truly luxurious hotel accommodation for the first time in their lives. This had a profound effect on design sensibilities.

Returning to their own houses, the Australian tourists brought with them a sense of their home architecture that was often quite changed. From being a place where interesting things happened, it began to seem more like an experience in itself.

As one hotel manager put it: "The attributes [hotels] seek are seeping into the residential market ... High-tech, low-maintenance, resource saving, durable, timeless and safe for users are all crucial criteria for hospitality designers. But they also need to excite the senses and deliver a resort-like ambiance for guests." ■

Fast setting, vibrant coloured grout for DIY renovators and tilers

RLA Luminous Grout is an advanced, rapid setting ceramic tile grout developed using efflorescence free technology

Luminous Grout uses premium components, and the unique respirable silica free formulation provides significant performance advantages over conventional cement -based grouts. They include enhanced shrinkage reduction, abrasion resistance, colour uniformity, long term colour fastness and anti-fading properties.

Displaying excellent workability and an ultra-smooth finish, Luminous Grout ensures high levels of precision and what can be regarded as flawless results for general and demanding applications where enhanced durability and long-term performance is paramount.

It is available in a range of designer colours, catering for various traditional and contemporary design styles. These colours included White, Alabaster, Misty Grey, Mudberry, Light Beige, Magellan, Travertine, Havana, Salmon, Mustard, Macchiato, Sky, Forest, Slate Grey, Charcoal, and Black.

Other key benefits include:

- Excellent water resistance and reduced water absorption
- Silky finish that reduces dirt retention and improved stain resistance
- Suitable for grouting tile joints up to 20mm wide
- Water and mould resistant, improving hygiene and lasting appearance
- Extended open time
- Suitable for immersed applications
- Global Green Tag Certified with extremely low VOC levels

Luminous Grout can be used for grouting the following tile types: porcelain, ceramic, terrazzo, slate, quarry tiles, glass, natural stone (not moisture sensitive) and mosaics.

The mixing ratio for Luminous Grout is 960mls of water per 4kg bag of grout. This equates to 240mls of water per kg when mixing smaller quantities.

In terms of drying time, light foot traffic is possible in 3-4 hours, full service in 24 hours and immersed areas and chemical exposure in three days.

It is important to note that drying times are based on ambient conditions of 23°C and 50% relative humidity. Users must allow longer for dense tiles, wider joints, cooler temperatures or high relative humidity.

For more information on preparation, mixing, drying time, application and limitations, go to the following link for the Technical Data Sheet:
https://www.rlapolymers.com.au/wp-content/uploads/2024/07/RLA-Luminous-Grout_TDS-23-7-24.pdf ■

XTecGen Materials Testing Services

Supporting progressive outcomes is a significant part of the company's ethos and approach

Building certifiers and authorities have stepped up their watch on compliance of waterproofing products and tiling systems, to keep product suppliers and manufacturers accountable. The key path to compliance is testing to ensure products in the market meet the requirements of AS/NZS 4858 and AS 4654.1, and Australia's internal and external waterproofing standards, AS ISO 13007.5 and AS ISO 13007.6, the standard which tests the system of waterproofing membranes and tile adhesives bonded to ceramic tiles. XTec Gen also tests to AS ISO 13007.2, the test standard for the compliance of tile adhesives and grouts.

XTecGen Materials Testing Services, Australia's only NATA registered laboratory to evaluate waterproof membranes to AS 4858 and AS 4654.1, has full capacity to carry out testing to all the requirements of these respective standards.

Manufacturers, suppliers, distributors, wholesalers and importers of waterproof membranes, tiling systems and building products engage the testing services of XTecGen. They do this to not only ensure their products comply to relevant standards, but also to better understand the performance limitations of their products.

Heightened building activity across Australia is heavily focused on waterproofing to ensure many of the sins of the past few decades are not repeated. Building certifiers and authorities have stepped up their watch on compliance of waterproofing products and tiling systems, to keep product suppliers and manufacturers accountable. The key path to compliance is testing, to ensure products in the market meet the requirements of AS/NZS 4858, AS 4654.1, AS ISO 13007.2, AS ISO 13007.5 and AS ISO 13007.6. XtecGen can also test the compatibility of membranes to different substrates, primers, adhesives, etc. This provides a greater understanding of the performance of the product, outside the scopes of the standards. Waterproofing and tiling systems used in domestic and commercial construction are being assessed more frequently than ever before. That is because the industry is pushing to eliminate the costly problems attributed to inadequate product quality that have contributed to building failures.

XTecGen was created for the building industry and is here to support progressive outcomes. XTecGen helps aid in development of products and RnD for clients, supporting continuous improvement and helps provide better outcomes for the building industry as a whole. This helps drive the industry to better overall quality, which will support the modern movement in building and construction.

Along with providing a full suite of tests and reporting to AS4858, AS4654.1, AS ISO 13007.2, AS ISO 13007.5 and AS ISO 13007.6, XTecGen provides testing to specific requirements. This enables manufacturers and suppliers to test custom requirements that may not need the full scope of testing. XTecGen has a wide range of equipment, versatile to many different standards such as Australian, British, American, European, etc. This means that XTecGen is not limited to the test standards listed previously but has the ability adapt and test to unique client enquiries.

Some of the unique capabilities XTecGen offers through their laboratory testing includes:

- Elongation and Tensile Strength
- Chemical Immersion Testing
- Temperature Resistance Using Heat Chamber and Lab Freezer
- Water Vapour Transmission
- Water Absorption
- Abrasion Resistance
- Cyclic Movement Tests
- UV Exposure and Accelerated Weathering Tests
- Seam Testing and Dimensional Stability Tests for Sheet Membranes
- Puncture and Tear resistance of Sheet Membranes
- Bond strength
- Pull Off Adhesion Test
- Root Resistance Test
- Hydrostatic Pressure Test

Some of the largest global brands operating in the Australasian construction market are now utilising the testing services of XTecGen to have their waterproofing and tiling systems tested to ensure they have products that meet all the demands and requirements of Australian Building Standards.

For more tests, visit the XtecGen website: https://xtecgen.com/.
Enquire at info@xtecgen.com or call on 1300 152 298.

External Waterproofing

Compatibility Testing

Tile Adhesives

Internal Waterproofing

SILICOSIS

As of 1 September 2024, regulations regarding silicosis prevention in construction activities (including tiling) are set to change in Australia.

For the most part, this means that what were once "advisories" become regulations. Now that they aren't just a "good idea", there are consequences for ignoring them.

It's a change from "should" to "must".These regulations apply to working with any material that contains over 1.0% crystalline silica content. That includes just about all tiles.

Safe Work Australia, the federal government body, establishes a "model" set of regulations, which are then copied and modified by the individual states and territories — with the exception of Victoria.

We'll be looking at those model regs, as well as exactly how they are adopted by each state and territory.

SafeWork NSW offers a $1000 small business rebate for the purchase of specific safety-related items. These include:

- air filtering systems for machinery, for example exhaust extraction system for a silica dust vacuum
- dust suppression attachments for tools or machinery, for example water fed attachment for a grinder or polisher
- powered air-purifying respirator (PAPR) AS/NZS1716 compliant

Use these links for further details and information:

INFORMATION APPLICATION TERMS & CONDITIONS

WHAT IS SILICOSIS?

Our lungs are amazing. They are protected from coarser particles starting at the nose, where we expel them by sneezing. Further down are the bronchi and bronchioles. These are lined by cells that produce mucus, which traps dust particles. They also have tiny hairs (cilia) which will move the mucus with the dust back up the airways into the throat, where they can be spat out or swallowed.

Only very small particles (usually less than 6 microns) make it down to the most important and sensitive part of the lung, the Alveoli where blood/oxygen exchange takes place — the whole purpose of breathing. Here dust particles encounter another amazing protective system. To quote from the Canadian Centre for Occupational Health and Safety:

"Dust that reaches the sacs and the lower part of the airways where there are no cilia is attacked by special cells called macrophages... Macrophages virtually swallow the particles. Then the macrophages, in a way which is not well understood, reach the part of the airways that is covered by cilia. The wavelike motions of the cilia move the macrophages, which contain dust, to the throat, where they are spat out or swallowed."

So the lungs can cope with very small particles, like those found in smoke. But when it comes to silica, this system breaks down:

"After the macrophages swallow silica particles, they die and give off toxic substances. These substances cause fibrous or scar tissue to form. This tissue is the body's normal way of repairing itself. However, in the case of crystalline silica, so much fibrous tissue and scarring form that lung function can be impaired."

That is silicosis. Fine particle silica does not occur in any noticeable concentration outside of man-made processes. Our lungs have simply not evolved to deal with this rare threat. As a consequence, it is very deadly.

STOPPING SILICOSIS

A "micron" — or, more correctly, a micrometre — is one-thousandth of a millimetre. Technically, respirable crystalline silica (RCS) is defined as particles below 10 microns in size, and they can range down to just 2 microns. This means that they are effectively invisible. So if you are controlling only visible dust in the workplace, you are not providing adequate silicosis prevention.

One consequence of this small size, is that RCS particles typically remain airborne for long periods after they've been produced. This means that — especially indoors — if you cut tile with a mask on, then take the mask off immediately afterwards, you are still exposed to RCS. Just as importantly, anyone working around you is also going to be exposed to RCS.

4 MAIN WAYS TO STOP SILICOSIS

MASKS

The three basic types of mask are: disposable (P2 or P3); half-mask re-usable; and powered air purifying respirators (PAPRs). On a cost basis, half-masks with replaceable filters work best, and are also easier to fit tightly. PAPRs are the most expensive, but also the most comfortable.

WET PROCESS

For tilers, wet process includes wet-cut saws and grinders with spray attachments. Crystalline silica is hydrophilic, which means it absorbs water easily. The droplets from the spray contact the particles, they become heavier than air, and fall.

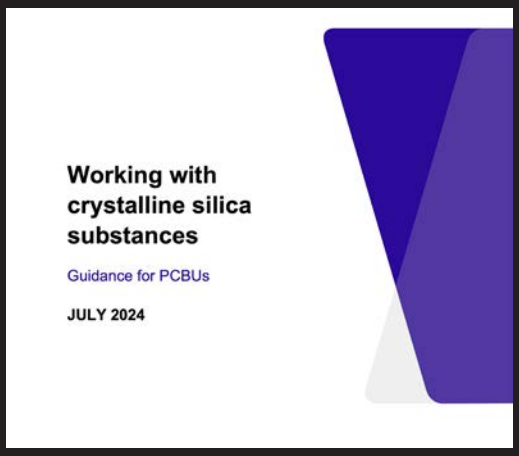
DRY VACUUM

Dry vacuum systems typically rely on a shroud over the grinding/cutting area, hooked up to a vacuum that starts when the tool starts. Tilers can usually use the less-expensive "M" class dust extractors.

VENTILATION

If working silica products in an enclosed space, all workers in the space would need to be protected. Working outdoors, such as under a carport, ensures minimum cross-contamination.

REGULATIONS-1



The core guidance for "a person conducting a business or undertaking" (PCBU) that needs to operate under the new regulations for working with a crystalline silica substance (CSS) is the Safe Work Australia (SWA) publication "Working with crystalline silica substances: Guidance for PCBUs" (WCSS). This lays out the requirements for someone like a tiler as regards reducing the risk from cutting and drilling tiles. (PCBUs include sole traders.)

CLICK TO DOWNLOAD GUIDE.

DO THESE REGULATIONS APPLY TO TILERS?

Yes, these regulations do apply specifically to tilers. The guide specifically includes CSS that are "bricks, blocks, pavers, tiles and mortar", and activities that include:

"The use of power tools or mechanical plant to carry out an activity involving the crushing, cutting, grinding, trimming, sanding, abrasive polishing or drilling of a CSS".

Perhaps the best clarification, and something of an indication of what is expected from tilers, is one of the examples provided for determining the level of risk for exposure to RCS.

This is the excerpt:

Example 1 – Julia's Electrical

Julia is a PCBU who undertakes processing of a CSS when installing power points in kitchens and bathrooms that contain tile backsplashes. The task requires Julia to drill holes into the tiles to facilitate the installation. In conducting an assessment, Julia considers the likely crystalline silica content of the tiles to be 30% w/w.

Due to the variety of electrical work performed Julia estimates the processing of a CSS is undertaken infrequently (up to 10 times per week) and that each processing of a CSS is for short duration (less than 5 minutes per installation). She uses an on-tool dust extraction on the drill as an engineering control to control the release of dust.

When taking into account all of the considerations outlined in regulation 529CA, Julia determines that the processing is not high risk. Julia then documents the risk assessment in accordance with regulation 529CA and ensures that the cutting is controlled in accordance with regulation 529B (Part 4.3 of this guide).

If SWA thinks that a sparkie who drills a few holes in backsplash tiles for powerpoints is at significant risk for exposure to RCS, then this means pretty much every tiler in Australia is also at risk.

REGULATIONS-2

ASSESSING RISK LEVEL: HIGH OR LOW?

At first glance, it might seem evident that just about all tiling work is going to be low risk. When you compare it with, say, concrete grinding or tunnelling, the risk levels just don't match at all.

That said, tiling is not completely excluded from high risk. SWA sets out these three considerations for assessing high risk work:

- it is carried out for long durations, multiple times a day or week
- multiple tasks involving processing of a CSS are undertaken concurrently in the same work area
- the proportion of crystalline silica content of the CSS is high and processing results in the generation of significant amounts of RCS.

SWA does make reference to the percentage of silica in tile products being of concern. As Tile Today has documented, the levels of silica in tiles sold in Australia seem to have increased in recent years.

Tile Today would suggest silica levels of over 26% in tiles could be of some concern for increased risk.

An additional factor to consider is the thickness of tiles: a 11mm thick tile will produce more RCS than a 6mm thick tile when cut with a grinder.

Other factors should also be taken into consideration. Working outdoors, in an unenclosed area, reduces risk. The amount of tile cutting is another consideration.

If a project is high risk, then you should refer to section 5 of WCSS. A number of complex steps will need to be followed.

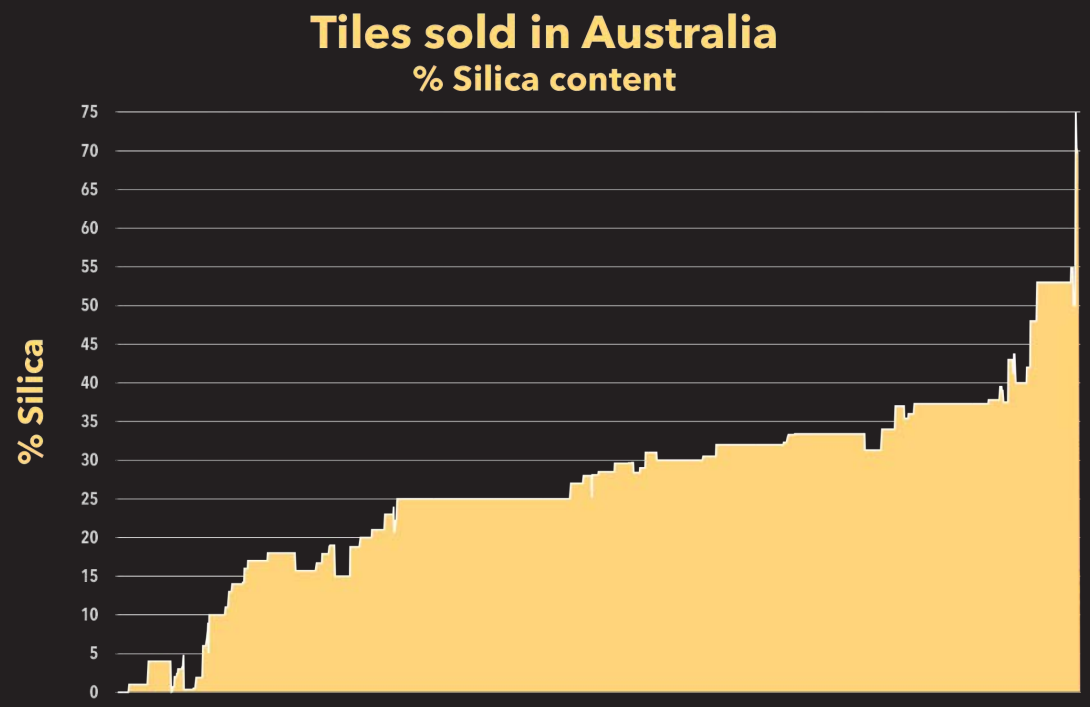


Chart developed by Tile Today. Data is all online SDS from tiles sold by Beaumont Tile and National Tiles, Oct 2023.

REGULATIONS-3

SECTION 4.3: NUTS & BOLTS OF COMPLIANCE

When it comes to any risk associated with RCS, what SWA want tilers and others to understand is the concept of "controlled" work. This means that the risk has to be assessed, and measures are put in place to mitigate any risk from RCS.

At the beginning of Section 4.3 SWA ranks the protective measures that can be used. It divides these into two sections. The first section lists five options, which include:

- an effective wet dust suppression method
- an effective on-tool extraction system
- an effective local exhaust ventilation system

The second section lists just "respiratory protective equipment", essentially just masks.

What is interesting is that SWA states that the main requirement is to implement one of the options in the first section. The second section is backup, and only required when none of the options in the first section is implemented.

One conclusion from this is that, contrary to some expectations, if you use wet suppression or vacuum extraction, you don't necessarily need to use a mask.

This seems to be contradicted by images that SWA provides, and other incidental advice. However, what we are probably looking at here is the difference between suggested and advised precautions, and those measures that are mandated by regulation.

The WCSS states:

"Personal protective equipment is the least effective method for controlling risks. However, it can be effective at minimising residual risk when used in conjunction with higher order controls, or if it is not reasonably practicable to implement higher order control measures."

Left images, Safe Work Australia. Right image, Shutterstock.

SOLUTIONS

DUST EXTRACTION

Setting up dust extraction involves five different pieces of equipment: the extraction vacuum, filters for the vacuum, bags for the vacuum, hoses and the dust shrouds for the tools. For tilers, an "M" rated extraction vacuum will be enough, based on time-weighted average exposures.

There is a good introduction to extraction tools available on the WorkSafe Vic website; click on the image at left or: YOUTUBE VIDEO

WET PROCESSES

Score-and-snap is one of the safest tile-cutting solutions from a silica perspective. Tilers are also familiar with large wet saws. Makita and other suppliers offer portable wet saw solutions as well.

The Hydro-Tail is an attachment for grinders, which adds a water spray to the tool. Sold in the US, this is now available in Australia. If you would like to be contacted by the supplier, just send an email to Tile Today by clicking on the link: HYDROTAIL@TILETODAY.AU

MASKS (RPE)

Half-mask respirators with replaceable filters make more sense then disposable masks. The filters are way better, and as the mask is semi-rigid, the fit is more consistent and tighter.

The best masks have a pre-filter, which protects the main (more expensive) filter, prolonging service life and reducing cost. The SUNDSTROM SR 100 SILICONE HALF FACE RESPIRATORY MASK with Silica Kit is in this category. The complete mask and silica kit is usually on sale for around $140.

STATES

NEW SOUTH WALES

SafeWork NSW offers probably the best silica-related resources of any of the states. These seem to adhere closely to the guidelines established by Safe Work Australia.

Its "Silica dashboard" [LINK] is an online resource that updates with the latest information, and links to a range of resources. Its main silica page [LINK] contains a number of useful resources.

Of special interest is their Small Business Rebate which "makes $1000 available to all eligible businesses and sole traders in NSW who buy and install equipment that makes their workplace safer." [LINK]

To qualify for that rebate, businesses first have to complete a safety course. A course on silica is available from TAFE for $105. [LINK]

SOUTH AUSTRALIA

SafeWork South Australia takes a very sensible approach to its silica content. It refers back to the SWA site for its most complex information, and features videos from SafeWork NSW. This is aided by a reasonable overview provided on their website, along with important local details about state-based notifications and other matters.

Resources

Respirable crystalline silica [LINK]

- Harmful effects of silica
- Exposure levels
- Types of work with potentially harmful exposures
- Employer responsibilities
- Air monitoring
- Health monitoring

Respirable crystalline silica in construction and demolition work [LINK]

- Exposure standards and risks
- Health effects
- Controlling exposure risks
- Engineering controls
- Information, instruction and training
- Safe work method statements
- Construction projects

Respiratory protective equipment [LINK]

WESTERN AUSTRALIA

The best description of information available regarding silica for Western Australia is "terse". The primary reference is SWA's WCSS.

There are two key web pages :

Silica [LINK]

Frequently asked questions [LINK]

STATES

VICTORIA

Victoria does not (ostensibly) follow the model legislation provided by SWA. According to an item in OHS Alert from 30 March 2015:

"Early last year [2014], then Shadow IR and WorkCover Ministers Natalie Hutchins and Robin Scott revealed that Labor was unlikely to enact a mirror WHS Act if it won the November 2014 Victorian election ... because it didn't trust the Federal Coalition Government to maintain the high safety standards of the model Act.

"[Robin Scott], now Finance Minister overseeing WorkSafe Victoria, told OHS Alert that while the Labor Government would 'continue to consider proposals at the national level... we will not harmonise our laws at the cost of workers' safety'." [LINK]

That said, WorkSafe Victoria's website seems to closely follow the SWA information — along with links back to SWA.

WorkSafe Victoria's website does provide some good information, and is a genuine effort to engage directly with sole traders in particular. It does suffer a bit, however, from having the information somewhat dispersed. The best contribution Tile Today can make is to list these resources concisely, with links, to make access easier.

Resources

Overview of crystalline silica [LINK]

- Links to further resources
- Crystalline silica stories
- News and alerts

Overview of crystalline silica in construction [LINK].

- What is crystalline silica?
- Crystalline silica dust
- Workplace exposure standard
- What is a crystalline silica process
- What is high risk crystalline silica work
- Crystalline silica hazard control statement
- Controlling the risk of exposure
- High risk crystalline silica work hiring requirements
- Information, instruction and training
- Atmospheric monitoring
- Health monitoring

Videos

Silica: Hazard identification [LINK]

Controlling risk of exposure [LINK]

Information, instruction & training [LINK]

Air monitoring [LINK]

Health monitoring [LINK]

In general, though, Tile Today would suggest tilers in Victoria would benefit most from referring to the SWA documentation if they need a thorough overview.

STATES

QUEENSLAND

While WorkSafe Queensland (WSQ) ostensibly follows the model legislation provided by SWA, as it stands currently WSQ has something of a maze of regulations regarding silica dust. The main page on the WSQ website is for Construction dust: respirable crystalline silica [LINK]

The regulations are mostly contained in its code of practice entitled "Managing respirable crystalline silica dust exposure in construction and manufacturing of construction elements"[LINK].

However, as this dates from 2022, it will be interesting to see if the underlying legislation is changed to bring it more into conformity with SWA's model legislation that comes into force from September 2024.

The basic difference between the guidance from SWA and WSQ is that the former has a clear description of low-risk silica exposure, while the latter has a more ad-hoc determination. While Tile Today can't be comprehensive, we can offer the three following examples to illustrate the divergences of WSQ.

Use of respiratory protection equipment (RPE — aka masks)

The core problem with this is that if RPE is used more than 30 days by a worker over a 12 month period, this effectively gets the risk level raised to close to that of a high-risk situation, which triggers things such as mandatory health monitoring. That seems to refer to any use of RPE on those days: "In the last 12 months, has the worker done tasks on 30 days that require RPE use according to this Code?"

Use of grinder for cutting tile

If you operate a grinder using dust extraction to cut tile indoors for more than 4 hours, then RPE is mandatory. If you are cutting outdoors there is no time limit.

Use of H-class over M-class dust extractors (vacuums)

While H-class dust extractors meet the maximum requirements, for the more limited exposures of tilers, based on the correct time-weighted averages, M-class really should work fine. Nonetheless the requirements state:

"Dust extractors or vacuums for power tools should be H class where it is practicable, as these are much more effective at capturing dangerous dusts like RCS. M class vacuums are only permissible when it is not reasonably practicable to use an H class vacuum."

There doesn't seem to be a definition for "reasonably practicable". As we've said, we may see these requirements updated after the revised guidelines from SWA.

STATE/TERRITORIES

TASMANIA

WorkSafe Tasmania has put together a "guidance note" entitled "Managing silica dust at construction sites". [LINK]

As its introduction notes, "This guide is not legal advice". It offers a very approachable guide to silica protection, and draws heavily on SWA documentation. The one area where it seems to differ is in regards to respiratory protective equipment, where it states:

"Workers should use a full-face respirator with a P2/P3 filter for tasks that create low to medium levels of dust, such as abrading or drilling."

There is nowhere else in the SWA documentation where this is listed as a requirement, and as the risk is to the lungs and not the eyes, this is a little perplexing.

NORTHERN TERRITORY

Much like WorkSafe Tasmania, NT WorkSafe has put together its own guide to silica protection, which it states is largely based on the SWA documents. It is entitled "Guide to working with crystalline silica and crystalline silica containing products". [LINK]

This does seem to mostly correspond to the SWA documents, except for this statement as regards personal protective equipment:

"You should never rely solely on PPE to protect workers from RCS as it does not prevent dust generation. It is the least effective form of controlling dust exposure and relies on correct fit and use by the worker, as well as adequate supervision."

AUSTRALIAN CAPITAL TERRITORY

As with Tasmania and the Northern Territory, Worksafe ACT has put together its own "guidance note", entitled "Managing Silica Dust At Construction Sites" [LINK].

This closely follows the SWA documents. However, it does also include a helpful section on "What will Worksafe ACT inspectors be looking for when they visit my site?", which details expectations. There is also a "Managing the risks of silica dust: Checklist" which is helpful.

There are also two main webpages for silica content.

Silica and Silicosis [LINK]

Silica dust [LINK]

RESOURCES

MILWAUKEE TOOL

Dust management

https://www.milwaukeetool.com.au/accessories/concrete-drilling-and-chiselling/dust-management/

Dust extractors

https://www.milwaukeetool.com.au/power-tools/job-site-clean-up/dust-extractors/

DEWALT

Dust management

https://www.dewalt.com.au/products/power-tools/dust-management

Dust extractors

https://www.dewalt.com.au/products/power-tools/dust-management/dust-extractors

BOSCH

Dust extraction systems

https://www.bosch-pt.com.au/au/en/dust-extraction-systems-197448-ocs-c/

TOTAL TOOLS

Dust extractor accessories

https://www.totaltools.com.au/vacuum-cleaners/dust-extractor-accessories?srsltid=AfmBOog5rydWck-RM43pDCO0Gsz40RVSRUFe6xdRYM2pRXelz45KR690o

INTEX PROTECX® P2 DUST & MIST MASKS

The pre-formed nose-bridge minimises the risk of leaks and is fitted with a moulded aluminium nose-piece for additional sealing. Inner foam bridge provides superior comfort.

Soft textile elastic two-strap design with dual point attachment provides a comfortable and secure fit, eliminating the tight and tacky feel experienced with traditional rubber straps.

Anti-heat & moisture large exhalation valve provides increased air flow making breathing cooler and more comfortable. [LINK]

Sundström

A COMPLETE, SIMPLE AND MODULAR RESPIRATORY EQUIPMENT PROTECTION RANGE SUITABLE FOR ALL CONSTRUCTION INDUSTRY TYPES

Select the respirator with increased protection factor
to meet the new Australian workplace exposure standards

1. CHOOSE YOUR RESPIRATOR

SR100 HALF-MASK


SR200 FULL-FACE MASK


SR500 GAS & PARTCLE PAPR


SR700 PARTICLE PAPR

2. CHOOSE YOUR HEAD-TOP FOR SR500 & SR700 PAPR


SR200 FULL-FACE MASK


SR570 FACE SHIELD


SR580 HELMET WITH VISOR


SR530 SOFT HOOD

Available as complete systems (fan unit + head-top + filters)

3. CHOOSE THE CORRECT FILTERS AGAINST CONTAMINANTS

SR510 HIGH EFFICIENCY P3 PARTICLE FILTER

Protection against wet & dry particles

FITS ALL SUNDSTROM RESPIRATORS & PAPR

GAS FILTERS

SR100 & SR200


A1

ABE1

SR500


A2

ABE1

Other gas filter types available

sea.com.au

SEA.Enquiries@sea.com.au

1800 655 129
+61 2 9910 7500

The S.E.A. Group

Sundström SR100 half face respirator ideal for tiling

This half mask provides respiratory protection against airborne pollutants, such as particles, micro-organisms, biochemical substances, gases/vapours and combinations of these substances to a user. The SR 100 is tested and certified to comply to AS/NZS 1716:2012.

The respirator consists of a mask body made of silicone, that covers the user's nose, mouth and chin. It is equipped with inhalation and exhalation valves, an easily adjustable elastic head harness designed as a V-shaped loop that holds the respirator in place, and a filter attachment for connecting standard Sundström filters.

For tilers, the main benefit of this half mask is the single filter and is suitable for heavy-duty work during extended periods if required.

The inhaled air flows through a filter and inhalation membrane into the mask. The exhaled air is discharged from the face piece through two exhalation valves.

The half mask is used either as a filtering device in combination with filters from the Sundström range, or in combination with the SR 307 compressed air attachment which then serves as a breathing apparatus designed for continuous flow for connection to a compressed air supply. Additional features include:

- Silicone mask (low allergenic, superior facial seal)
- Deep chin cup and broad nose rim
- Two exhalation valves
- New valve caps with air diffusion (no clogging during spray jobs)
- Continuous head strap or cradle harness
- Can easily be fitted with optional SmallTalk microphone and loudspeaker
- It comes in a small/medium, medium/large and large/extra-large size (XL comes in black)
- It weighs 162g for the small/medium size, 176g for medium/large and approximately 180g for the large/extra-large size
- The head harness is a single strap headband that is easy to detach for cleaning

The SR100 half mask in use

The SR100 half-mask accepts all all Sundström Class I Gas Filters and compressed air attachments.

Of particular interest to tilers, the Sundström SR510 particle filter is a high-performance particle filter class P3. The filter flange features an O-ring that optimises the seal to the front rim of Sundström gas filters. It is made from plastic polypropylene and there are no metal parts.

Used against all types of wet and dry particles, such as dust, smoke, aerosols, spray, asbestos, bacteria, viruses and mould, this filter fits into Sundström half and full-face masks, as well as the SR700 particle PAPR.

In terms of size, the largest diameter of the SR510 particle filter is 107mm, thickness is 31mm and weight is 44g. The particle filter contains about 1,300 sq cm (200 sq inches) hydrophobic fibreglass paper.

Other key features include:

- Filtration efficiency: Paraffin oil aerosol: >99.997% (tested by INSPEC).
- Pressure drop

  At 30 l/min: 40 Pa (standards requirement: <120 Pa)

  At 95 l/min: 120 Pa (standards requirement: <420 Pa)

The filter should be stored at room temperature in clean, dry place. If the seal has been broken, store away from contaminants in an air-tight container. Its shelf life is 10 years if the seal is unbroken. The expiry date printed on filter.

For more information on the SR 100 half face respirator including limitations, installation and maintenance, go to the following link, and see page 28:
https://www.sea.com.au/wp-content/uploads/2023/03/L17-2010-SR-100-Rev-17.pdf ■

Sundström

The S.E.A. Group

SR100 HALF MASK

3 sizes

Certified Product
Australian Standard

Can be used in combination with Sundström filters or with SR307 compressed air attachment

BUY A PRODUCT - GET A SYSTEM

Excellent fit

Low inhalation & exhalation resistance

Single adjustable strap

Twin exhalation valves

Moulded in one silicon piece

Minimal replacement parts
Same spare parts for all sizes

sea.com.au | sea.enquiries@sea.com.au | 02 9910 7500

QUALIFICATIONS
THAT FIT WHAT YOU DO

WORK SMARTER	Have your team **work smarter**, learn up-to-date skills.
TRAIN AN APPRENTICE	Help them **learn the skills** and become qualified.
ALREADY HAVE THE EXPERIENCE?	Get **skills recognised** with a formal qualification.
GROW YOUR BUSINESS THROUGH TRAINING	Training an apprentice is an **investment in your business** and the industry.

CALL BCITO TODAY
0800 4 BCITO (422 486)

bcito.org.nz

BCITO
He Hunga Hanga Mātou
building people

TILE-2150

Rapid setting adhesive with DUST LESS® technology

SikaTile®-440 Opti-Cure is a multi-purpose, cement-based tile and stone adhesive with patented technology that reduces airborne dust in the mixing phase by up to 80%, improving air quality, less mess and faster clean up

The rapid setting formulation for SikaTile®-440 Opti-Cure means that it is suitable for grouting and light foot traffic after 2-3 hours — with timing impacted by climate and environment.

It is ideal for laying most types of tiles including ceramic, porcelain, glass and mosaics, natural stone* (marble, granite, limestone, basalt etc.), agglomerates*, terrazzo*, and man-made stone*.

**Class A & B tested stone in accordance with EN14617-12.*

**Sika recommends conducting a site test to evaluate compatibility of the stone with the adhesive due to influences beyond its control.*

This adhesive is exceptionally smooth and creamy to spread with high performance non-slump capabilities for large format tile and stone applications, according to Sika. It also provides C2TFS1 flexible performance, is useful for early aged screeds and is low VOC.

SikaTile®-440 Opti-Cure can be used for thin-bed tile and stone applications and medium-bed applications up to 10m bed thickness — for both walls and floors, both internal and externally.

Suitable substrates include concrete, cement-based screeds and renders, compressed cement boards*, cement sheeting* or ceramic tile underlay*, existing tiles with SikaTile 015 Prep n Prime, lightweight construction boards suitable for tiling applications*, appropriate Sika under tile waterproofing membranes, under tile heating systems, gypsum plasterboard (internal only), and Sika approved acoustic underlayments.

**Refer to board manufacturer instructions for further details and load limits.*

All substrates under loads must not exceed L/360 for tile & L/720 for stone applications. They must be properly cured, structurally sound, free from friable particles, clean, dry, and free from contaminates such as dirt, dust, oil, curing compounds, laitance or efflorescence.

Depending on the substrate condition, it is recommended to perform adequate preparation techniques such as water blasting, scarification etc. to remove all traces of contaminates.

For tiling wet areas, a suitable Sika approved waterproof membrane can be used prior to tiling and allow to dry prior to application.

For concrete floors, allow 28 days for concrete to cure. Concrete should be left with an open surface — steel trowel finishes are generally sufficient if they accept water. Users should remove all traces of curing compound, surface sealers, dirt, oil, and any other contaminate that may inhibit the adhesion.

Cement-based screeds must be installed as per AS 3958 "The installation of ceramic and stone tiles".

For sheeted substrates, all boards or underlays must be installed as per the manufacturer's instructions and specifically designed for tiling.

All technical data is based on laboratory tests. Actual measured data may vary due to circumstances beyond Sika's control. For more information including limitations of use, go to: **https://aus.sika.com/dam/dms/au01/2/sikatile-440-opti-cure.pdf**

SikaTile® 440 Opti-Cure is featured in Tile Today's Adhesives Buying Guide at the following link. **https://tiletodaydigital.com.au/adhesives** ■

Australian Tile Council Inc.

Leading the Industry

Australian Tile Council

Supporting the tile industry

Become a member today

Member benefits:

- Industry support from the Australian Tile Council (ATC)
- Technical and Industry related information and support
- Free access to the Tile and Tiling Guide
- Free access to the Tile Reference Manual
- Member Benefits programme with exclusive offers
- Tiling literature, brochures and notices
- Professional recognition as a member of the only recognised national body industry

For further information visit australiantilecouncil.com.au

Assessing the challenges and identifying solutions for porcelain tile installation on pedestal or raised flooring systems in the absence of international standards

Porcelain tiles, with their superior durability, aesthetics, and versatility, have become a popular choice for various architectural and construction projects. In recent years, the utilisation of porcelain tiles on pedestals has gained significant attention due to their benefits in enhancing exterior spaces. Porcelain tile and its superior technical performance, lower cost and reduced thicknesses and weights used over pedestal or raised floor constructions is attractive when compared to traditional concrete or natural stone products or ceramic/porcelain installed over mortar or adhesive. However, the absence of relevant or current installation guidelines and standards poses several challenges to achieving optimal, safe installations.

This technical paper aims to address the issues faced when specifying and installing porcelain tiles on pedestals worldwide, where the lack of specific guidelines or standards leaves professionals navigating uncharted territory. The article discusses the implications of relying on outdated or generic standards for ceramic tile installation and explores the risks associated with inadequate impact and load-bearing capacities, insufficient wind-uplift resistance, and potential thermal expansion problems.

Drawing from international best practices and experiences, including previous papers published at Qualicer, this paper presents a comprehensive overview of the key considerations for successful porcelain tile installation on pedestals. It highlights the importance of accurate load calculations, pedestal system selection, and perhaps most importantly how to safeguard installations and ensure the safety of the end-user. This paper explores innovative technologies

and materials that can address the unique challenges encountered in these installations.

Through an examination of case studies and expert insights, the paper also provides practical recommendations for architects, engineers, and contractors involved in porcelain tile installations on pedestals. It emphasises the need for proactive collaboration among industry stakeholders to develop robust local standards and guidelines that align with emerging trends and evolving construction practices.

In conclusion, this paper identifies the challenges and proposes practical solutions, it aims to contribute to the ongoing dialogue within the industry, promoting safer and more efficient practices in this rapidly growing field.

INTRODUCTION

In the past 4-6 years, there has been a marked increase in the use of porcelain on pedestal or raised flooring systems in both domestic and commercial applications.

The growth in commercial availability of gauged or calibrated porcelain tiles in 20mm (0.78inch), coupled with their enhanced technical characteristic, particularly related to vastly increased breaking loads compared to porcelain thicknesses used in traditional bonded floor systems of 6-11mm (0.23-0.43inch).

The use of 20mm porcelain in Australia, and other countries in raised floor applications in lieu of other building products is advantageous from a commercial perspective due to the following factors:

- Significant cost saving of using porcelain tile compared to natural stone or concrete products
- Reduced material thicknesses allow for both easier/safer handling and also in the case of minimum termination heights for membranes or finished floor levels, more flexibility during construction.
- Where tiles are manufactured in EN, ANSI, ISO standards, accurate calibration facilitates easier installation compared to other products.
- Inert nature of porcelain is desirable as it is viewed as a long-term application with little maintenance required compared to natural stone or concrete materials.
- Lower weight and the elimination of potential efflorescence problems stemming from tile beds.

Since the identification of issues with installing porcelain on pedestal and raised floor systems, my research has identified significant steps taken both by manufacturers and tiling authorities and organisations in mitigating risks relating to such systems.

Whilst work has been done in progressing such systems safely, there are still significant issues relating to the safety of such systems. Manufacturers providing incorrect, inappropriate or misleading information, coupled with designers or specifiers concluding 20mm porcelain is “fit for purpose” on a raised floor systems by referencing existing ceramic and porcelain tile test methods are resulting in increased numbers of problems with these systems.

There are a multitude of considerations that need to be made when specifying or installing pedestal and raised floor systems, this paper comments on the system as a whole, and focused on perhaps the most crucial aspect being health and safety. By extension, it also emphasises sustainability concerns specifically as a result of impact resistance limitations of porcelain in raised floor applications.

CONCERNS WITH PORCELAIN ON RAISED FLOOR SYSTEMS

Past papers submitted to Qualicer have accurately identified the following issues that specifically relate to using porcelain on pedestal of raised floor applications1:

- Wind resistance, where high-rise or external use is concerned, what industry requirements need to be met to prevent up-lift of tiles, is there a need for specific wind resistance requirements where porcelain tile is used on raised floors.
- Maintenance of the pedestal systems including potential for lippage issues over time through repeated traffic and vibrations and also responsibility allocations for membrane maintenance and cleaning where such products are used.
- Maintenance of the pedestals themselves and degradation due to UV exposure and exposure to the elements on the membrane and pedestal needs to be mitigated through correct product selection.
- Fire rating, similar to wind resistance, whilst porcelain itself is non-combustible, does the system as a whole require confirmation of adequate or expected resistance to fire.
- Ponding water on surfaces of the tile. Where tiles are installed ‘flat’ (with sub-surface drainage) it can result in ponding issues which may increase the risk of slips, trips and falls.
- Durability. Porcelain is durable but brittle in nature, and impact damage poses a safety risk where raised flooring systems are employed.

The main concern of this paper is breaking strength and impact resistance, which has been commented on by others yet overlooked by many that still refer to inapplicable or incorrect standards.

ISO 10545-4 Modulus of Rupture and Breaking Strength of Ceramic Tiles and ISO 10545-5 Determination of Impact Resistance by Measurement of Coefficient of Restitution are commonly referenced by porcelain manufacturers to determine suitability

of their products for use across ALL applications, including pedestal application.

This information is entirely relevant to the tiles' expected performance where 20mm or thicker porcelain is used in a correctly installed, bonded application. Breaking strength testing provides an indication of the tiles ability to withstand static load when supported on two edges only. However there is no test that covers sudden impact of any kind apart from ISO 10545-5 which is irrelevant in raised floor applications due to the test method encompassing a test specimen bonded to a concrete substrate using epoxy adhesive.

This standard provides useful information on tiles in a bonded system; however, manufacturers are using such successful testing to this standard as justification for advertising porcelain for raised floors.

Some manufacturers go so far as to provide misleading information to the consumer with conflicting information of which only a person with specific knowledge of test methods relating to ceramics may identify.

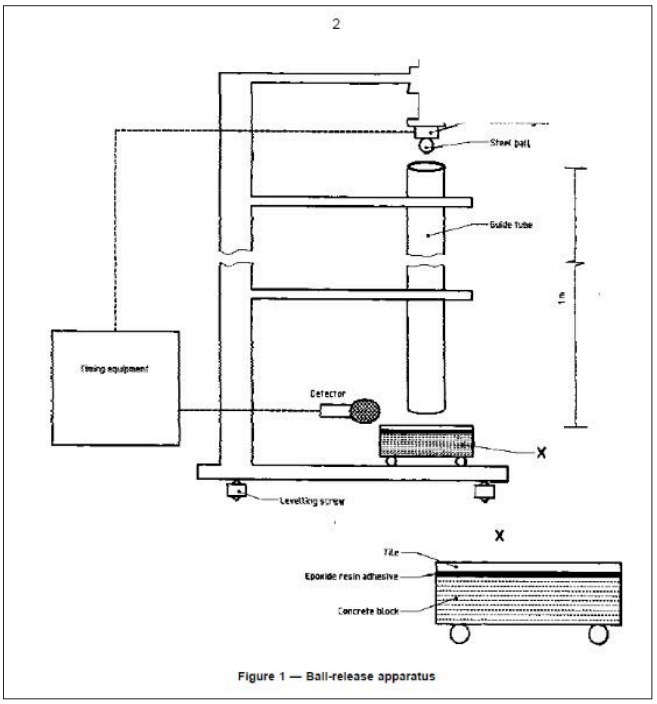


Figure A. Reproduced from ISO 10545-5

The image above is a gross misrepresentation of information, the image shows a masonry brick being dropped on a 20mm porcelain tile over pedestals, but the literature on the right details impact resistance testing to ISO 10545-5. The impact testing result advertised by this manufacturer is completely irrelevant to the tiles ability to withstand impact from a brick.

Incorrect use of test method ISO 10545-4 "Determining of modulus of rupture and breaking strength" as the main evidence of determining suitability of a 20mm porcelain tile over a raised floor system is a starting point. However more guidance is needed to ensure a safe and successful installation.

I have worked on projects where 20mm porcelain tiles are breaking under foot traffic (a primary school application) where a structural engineer had signed off on the tile as suitable for use due to the breaking strength of 11792N according to ISO 10545-4 as the result was determined as exceeding the engineering authorities' factor of safety requirements.

Although the tile can withstand over 1000kg(2200lbs) of force before rupturing, there were children falling through tiles that were sporadically broken by impact, sometimes to a depth of 300mm+ given the height of the pedestals in this particular application.

The limitations of length in this paper do not allow further expansion of this point, however my investigations determined a gross shortfall in design when considering potential risks from impact on porcelain tiles which resulted in significant safety concerns.

In Australia, it could be argued that impact resistance for raised floor systems has not been considered due to a lack of applicable standards. This may be true at present, however EN 12825: Raised Floor Systems was adopted basically like for like in Australia as AS 4154/4155 up until it was withdrawn in 2017.

The scope of EN 12825 specifies the characteristics and performance requirements of raised access floors which the main intended use is internal fitting out.

Whist designed as an internal standard only, the test provides absolutely critical testing information relevant to both soft and hard impact resistance as well as the intended performance expectations of the system as a whole particularly:

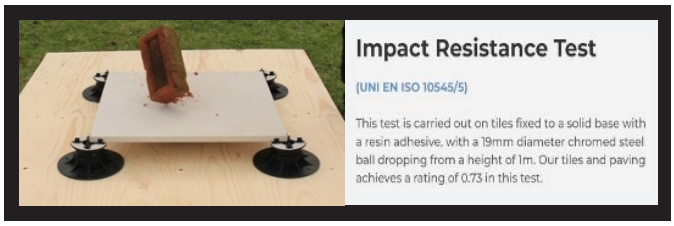


Photo 1. **Reproduced from a supplier's website.**

The majority of porcelain manufacturers in Australia advertise their 20mm porcelain as suitable for all types of flooring, including raised floor application and when questioned on their impact resistance, fall back on compliance to ISO 13006.

From my research, products sold in Europe also qualify as suitable based on compliance to ISO 13006, however, they sometimes pick and choose what test results from EN12825 to publish. An example can be found in Photo 2 below.

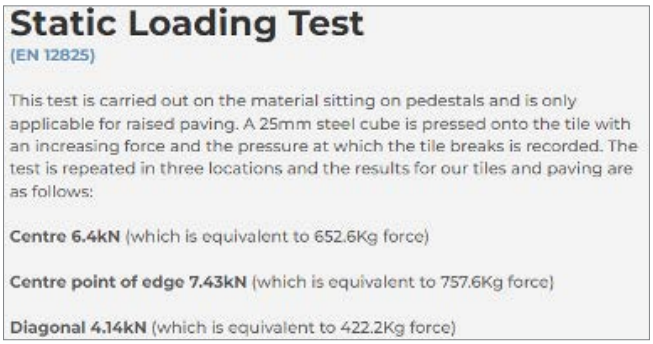


Photo 2. **Reproduced from a porcelain manufacturer's website.**

As shown above, the tile has been tested to static loading as per EN 12825 and achieves a high level of static load resistance, but I could find no information relating to dynamic impact testing undertaken to the same standards.

Although the limiting information from this manufacturer is problematic, there are other manufacturers that seemingly understand the issues related to impact resistance of 20mm porcelain on pedestals or raised floors. They aim to assist the general public or consumer with providing guidance. See photo 3 below.

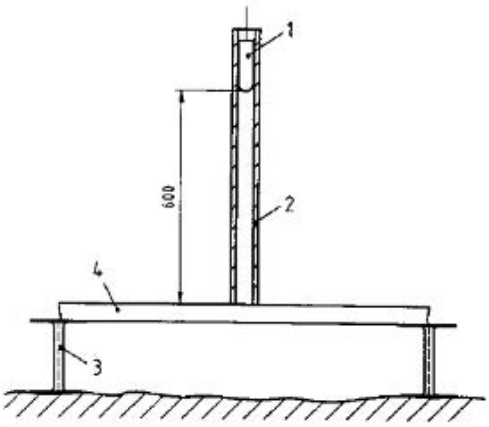
> *'The raised access floor shall be designed and manufactured in such a way that it provides mechanical resistance and stability and that the loading is liable to act upon it during its intended use will not lead to deformation or collapse'*

Extract B. **Reproduced from EN 12825:2001**

This statement directly correlates to the hard and soft body impact tests that the system needs to pass in order to be deemed successful.

- Absorption of hard body impacts – a 4.5 kg steel indenter with a hemispherical end of 50 mm is dropped at a height of 600 mm inside a tube of 55 mm diameter onto three (3) specified locations on the test panel.
  - Centre of the panel
  - Centre of one edge of the panel
  - Any other point which is the weakest point of the element
- Absorption of soft body impacts - a flat bottomed canvas bag with dry sand of 2 – 4 mm particles size with mass of 40 kg and a maximum diameter of 300 mm is dropped at a height of 1000 mm onto two (3) specified locations on the test panel.
  - Centre of the panel
  - Centre of one (1) edge of the panel

The requirement being that the element sustain the impact and not cause any parts of the element to collapse or crack after any impact.



Key
1 4,5 kg indentor
2 Guide tube, 55 mm diameter
3 Support
4 Load bearing layer

Figure 3 – Hard body impact test

Extract C. Reproduced from EN12825 Description of soft/hard impact tests and Dynamic Hard Impact drawing shown.

The above information is the only information I have been able to find where a manufacturer states unequivocally that ANY tile in 20mm thickness will fail the Dynamic Hard Impact Test and that strengthening, or reinforcement of the material is required depending on the system used, regardless of the manufacturer or quality of the porcelain body at a 20mm thickness.

Based on my investigations and analysis of porcelain tile fracture on raised floor systems and my own independent testing of 20mm porcelain tiles on pedestals, this information is very relevant when considering safety of the system for its intended use.

Photo 4. Screen shot from a video where I was able to break a 20mm porcelain tile dropping a 906g (2lbs) claw hammer from 600mm).

The hammer load above was dropped from 600mm however the weight was less than 4× the load as designated by the Dynamic Hard Impact Test in EN1825. The tile that I broke had been independently tested for a breaking strength of over 11000N under ISO 10545-4, a strength which the nominated engineering authority deemed safe for this application.

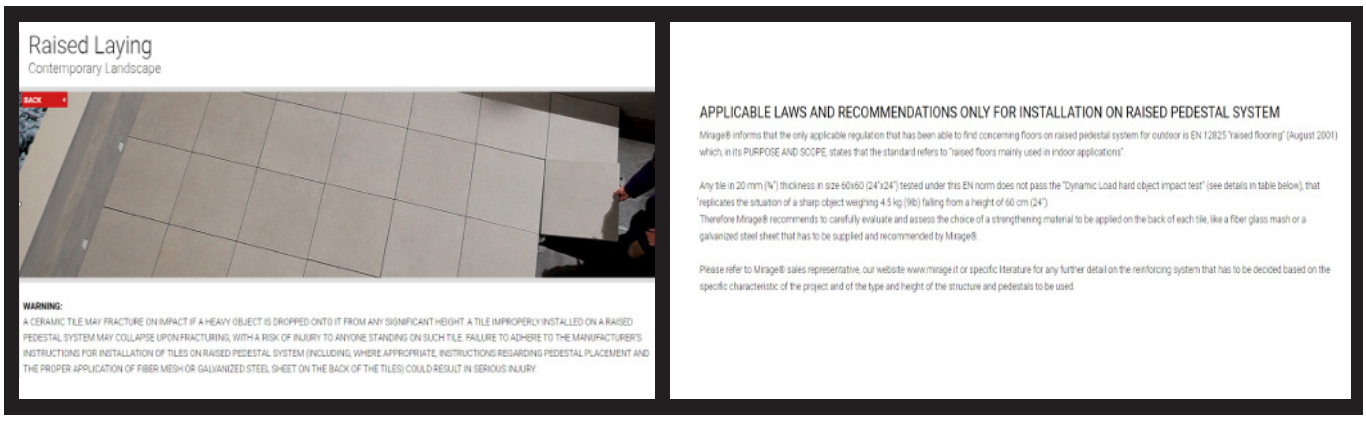


Photo 3. Reproduced from the Mirage Ceramics website viewed in June 2022.

Common sense dictates that any hard impact can result in a broken tile, and that propensity for impact damage to occur is situational. The main concerns I had were that a lack of common sense and very little consideration to perhaps the most critical factor of how to mitigate impact damage has led to serious injury due to the large void created by the porcelain fractures. This can result in injury and damage which could have been avoided if appropriate considerations were made.

It is evident that similar concerns have been identified by the TCNA (Tile Council of North America) in the 2022 edition of ANSI 137.3 American National Standard Specifications for Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs. It provides useful information specifically related to requirements of porcelain used on raised floor or pedestal systems.

This standard includes traditional test methods such as modulus of rupture, breaking strength and impact resistance. And where 20mm+ tiles are concerned on floors, it also includes their own soft and hard body impact testing.

Table 6 (continued)

Property	If Specified for Floors		If Specified for Walls/Countertops	
	Minimum	Maximum	Minimum	Maximum
Allowable Nominal Thickness	20 mm (0.79 in)	N/A	20 mm (0.79 in)	N/A
Average Difference from Nominal Thickness (ASTM C499)	-1.0 mm (-0.04 in)	1.0 mm (0.04 in)	-1.0 mm (-0.04 in)	1.0 mm (0.04 in)
Thickness Variation[9] (Thickness range within a measured sample, tested per ASTM C499)	N/A	Range: 1.5 mm (0.06 in)	N/A	Range: 1.5 mm (0.06 in)
Soft Body Impact Resistance (Section 8.6)	Pass[10]	N/A	N/A	N/A
Hard Body Impact Resistance (Section 8.7)	Pass[10]	N/A	N/A	N/A

Extract D. Reproduced from ANSI 137.3.

The test methods for the Hard Body Impact Test are similar in procedure between EN 12825 and ANSI 137.3 when used on raised flooring/pedestals. The main noticeable differences between the tests are:

From review of the test methods, correlated to my own independent testing, the EN12825 may be too onerous with regards to porcelain tile as 4.5kg steel dropped from 600mm would crack all porcelain tiles and most masonry products apart from concrete in excess of 60mm thickness. The ANSI test method, however, may not be onerous enough given I was able to break a tile on pedestals with a steel hammer dropped form 600mm, a force which would be considered expected and akin to a bottle of champagne dropped from waist height or the leg of a piece of furniture placed unintentionally heavy handedly on tiles on raised flooring.

The ANSI standard does consider reinforcement backing where the EN does not. I have tested varying types of backing to support the tile and tested large loads (10kg/22lb+) and found particular fiberglass-based products capable of allowing a 20mm tile on pedestals to remain completely load bearing even where fractured or broken in multiple pieces. This significantly reduces if not eliminates safety risks of otherwise unreinforced systems. See photo 5 below.

Photo 5. Tile fractured on pedestals, reinforced with a fiberglass matting adhered with cementitious adhesive. Load used to break the tile was a 10kg steel weight with a diameter of 60mm.

Standard	Type/Weight	Height of test	Test Criteria	No: of specimens
EN12825	Hemispherical indenter 4.5kg (9.92lbs), 50mm in diameter	600mm (24inch) Centre/centre edge/ weak point.	Any collapse or fracture is a failure	3
ANSI 137.3	Chrome steel ball bearing 51mm, 1.2lb (540g)	18+1 inch (46cm). Centre of each specimen	Breakage in 2 or more pieces, is reported as a failure.	3

The idea of incorporating reinforcement on porcelain used on pedestal applications, is not to eliminate potential from cracking or impact, as this would be difficult or impossible. The aim is to change how the system performs so when the porcelain invariably breaks or fractures due to accidental or unexpected impact, it does not collapse, but rather the reinforcing acts as a laminate that is self-supporting that allows the broken tile to remain load bearing. This prevents a person falling into an open void, potentially resulting in serious injury.

The tile would perform similarly to a cracked tile in a bonded system, the tile in both systems should be replaced to eliminate laceration risk. Obviously this is a far more desirable outcome than injury or even death in extreme cases from persons falling through elevations up to 400mm deep or greater depending on the system employed.

CONCLUSIONS

The problem relating to impact resistance, specifically hard impact on porcelain tile used in raised floor applications is a critical issue that poses a great risk to public safety and health if not identified and mitigated through correct design practices.

In the absence of a robust standard or document that covers the various aspects and considerations needed to be made with regards to raised flooring or pedestal applications, it appears that manufacturers or suppliers are able to interpret information at their behest and in some cases either intentionally or unintentionally mislead the end-user by claiming certain technical performance may relate to a raised flooring application when it in fact does not.

In a world where product innovation that results in cheaper and faster construction times, we seemingly have begun to run before we can walk, where porcelain on pedestals is concerned.

As a tiling consultant responsible for review and specification of systems in addition to defect assessment, I am grateful there has been some good progress made in relation to assessing and identifying the risks of using 20mm porcelain tile on pedestal and raised flooring applications, most recently with ANSI 137.3.

Moving forward, there is still a disparate gulf of information needed to ensure all appropriate considerations are made when specifying or designing raised floor or pedestal systems using porcelain tile.

These considerations are critical not only from a technical aspect such as waterproofing and/or fireproofing, but potentially more importantly to avoid injury or hazards to the public due to safety concerns surrounding impact resistance and slip resistance of tiles.

There is potential at the international level (ISO) to create a global standard that encompasses the following criteria for porcelain used in pedestal/raised floor applications.

A performance-based scope or standard for raised flooring/pedestal application could include the following:

- Measurement, deviation, thickness tolerances for porcelain, potentially manufacture convex porcelain to facilitate drainage in a flat floor finish application.
- Fire resistance/wind resistance table with specific requirements dependent on local codes/standards.
- Long term slip resistance expectations on tiles, if tiles can harbour standing water, does this result in a safety issue over time.
- Correct waterproofing selection (where required) including compatibility in the system and stability to exposure were pertinent.
- Durability requirements for the pedestal or raised flooring system itself and expected lifespan of the products.
- Clear guidelines for maintenance requirements of the pedestals to ensure the system performs as intended and no latent issues due to WP damage, pedestal degradation occurs, including who may be responsible for such maintenance.
- Information outlining the requirement for porcelain to withstand hard impact (and breakage) without losing its capability to be load bearing, including specific information for reinforcement and a performance criterion based on the area of installation.

The above is purely a preliminary scope that can be expanded on or modified by respected members of the ANSI, EN, and by extension ISO community in order to create a robust document that not only allows for sustainable installation of porcelain tile in raised floor and pedestal applications, but also protects the public and consumers. It is necessary to assist manufacturers, specifiers, engineers, and designers where such systems are used to prevent the current lack of applicable and meaningful standards causing distrust of this innovative and potentially large market for ceramics. ■

About the author

Christopher Repeti is a ceramic tile and natural stone consultant with over 17 years' experience in the industry. Techtile Consulting works on some of the largest stone and tile projects in Australia

Email: chris@techtileaustralia.com.au

BIBLIOGRAPHY

[1] Christopher, T, 2022: Podium tile installations – Potential problems due to lack of applicable standards. Qualicer, Castellon, Spain

[2] International Standards Organisation ISO 10545-4 (2020) – Method 4 Determination of Modulus of Rupture and breaking strength.

[3] International Standards Organisation ISO 10545-5 (1996) – Method 5 Determination of impact resistance by measurement of coefficient of restitution.

[4] Mirage, 1/06/22 https://www.mirage.it/en/special-solutions/evo_2e/laying-systems/installation-on-raised-pedestal-system/technical-characteristics-america/

[5] European Norms 12825 (2001), Raised Access Floors.

[6] American National Standards Institute, American National Standard Specifications for Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs, ANSI 137.3 (2022).

1 Qualicer 2022, Podium Tile Installations.

Eterno Ivica: Setting a benchmark in the pedestal market

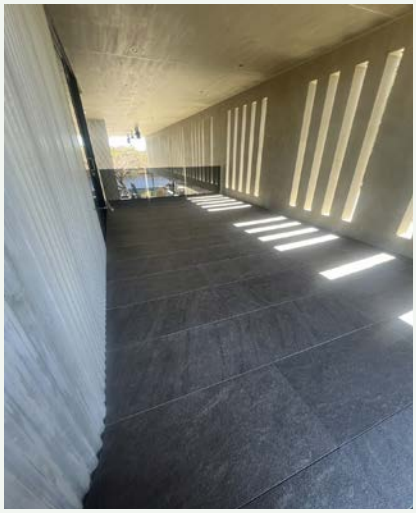
Eterno Ivica pedestals first arrived in Australia in 2013. While it wasn't the first to enter the market, and certainly not the last, it quickly established itself as a key player. Back then, there were only three competitors, today, there are at least 13.

The company has introduced innovations such as the self-levelling head and the rubber "White Head" that helps absorb the sound of footsteps. As often happens in many industries, once a good product hits the market, it quickly gets copied.

Eterno Ivica is 100% made in Italy, manufactured to high standards by skilled Italian craftsmen. It distributes the product in Australia through Osborne Tile Centre on the west coast and Keksia on the east coast. Its focus is on high-quality markets, and has supplied a prestigious villa in Ascot, Perth. However, it has largely supplied commercial projects, most notable include 272 Hedges Avenue (Mermaid Beach, QLD), Fremantle Hospital (WA), and Questacon – National Science and Technology Centre (ACT). For the Questacon project, Eterno Ivica used grates that ensure greater safety and ease of installation.

The latest addition to its range is the Prime Pedestal. Unlike traditional systems, the Pedestal Prime® doesn't require rings, tubes, or additional extensions — the extension is already integrated. With three different sizes to fit perfectly with the three bases, this system covers heights from 30 mm to 420 mm.

The Australian market is, without a doubt, one of the most competitive in the world, not just because of the number of players but due to the wide usage of this product. Among Italian manufacturers, Eterno Ivica considers itself one of the few, if not the only, to maintain a stable and significant market presence in Australia.



Eterno Ivica gets used as part of a villa construction in Ascot, Perth

Questacon – National Science and Technology Centre in the ACT

While other imported products have flooded the low to mid-range market with highly competitive prices, Eterno Ivica has maintained its niche. It has loyal Australian partners who appreciate and remain dedicated to providing the Eterno Ivica solution. ■

advertiser
index

What you might have missed on *Tile Today* Digital

If you missed a number of stories that were featured in Tile Today's recent e-newsletters, here is an overview on a number of them and some useful links that will take you directly to the story page.

Renovations and housing market growth

The tiling industry relies heavily on the renovation and updating of dwellings. It has long been thought that renovation spending increases when house markets decline. However, in today's changing markets, that is no longer always the case.

https://tiletoday.au/articleGeneral/2024-31-1722455970482-006/general

Decoratori Bassanesi's handmade tiles

The latest collections from Decoratori Bassanesi includes Segments which takes the idea of classic corrugated panels and reinterprets them as subtly sophisticated interior wall tiles.

https://tiletoday.au/articleGeneral/2024-31-1722455970481-005/general

Rapid setting adhesive with DUST LESS(r) technology

The rapid setting formulation for SikaTile®-440 Opti-Cure means that it is suitable for grouting and light foot traffic after 2-3 hours — with timing impacted by climate and environment.

https://tiletoday.au/articleGeneral/2024-31-1722455970479-001/general

First Nations brand expands into tiles

The Miimi & Jiinda brand has expanded its offering through a collaboration with Jatana Interiors for a limited-edition encaustic tile range.

https://tiletoday.au/articleGeneral/2024-26-1719453844086-004/general

Tile collection by designer Greg Natale

Comprised of ten original designs, the Dimora tile collection is a collaboration between well-known interior designer Greg Natale and Kaolin. It is the first time Natale has produced porcelain tiles.

https://tiletoday.au/articleGeneral/2024-26-1719453844086-003/general

Swimming pool system for summer

Hydralite is a multipurpose, flexible, polymer-modified, tile adhesive suitable for permanently immersed applications using lightweight technology. Used together with Liquid Flash 2 and Kemgrout Sanded, they make an effective swimming pool system.

https://tiletoday.au/articleGeneral/2024-26-1719453844085-002/general

Coverings 2024

Nearly 25,000 industry professionals attended Coverings 2024 as it returned to Atlanta (USA) for the first time in six years. Tile Today's international correspondent, Joe Simpson writes the event was more colourful, dynamic, and more European than in previous years.

https://tiletoday.au/issues/Tile-Today-Coverings2024.pdf