



PRODUCT MANUAL



INTRODUCTION

Linnstone is excited to deliver exceptional Zulite Crystalline Silica Free Surfaces to your one-of-a-kind space. Incorporating recycled materials and minerals, each piece of Zulite is meticulously crafted and inspected to meet and surpass customers' expectations. A distinct and diverse design style gives you additional options for ornamental effects. Linnstone provides a Residential Lifetime Warranty and a Commercial Limited Warranty to the end users purchasing benchtops from certified fabricators regarding the quality of slab. Any failure by a fabricator to comply with the recommended methods of fabrication of benchtops from slabs may result in the refusal of an end-user claim.

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This manual is not intended for wide distribution.

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Zulite Crystalline Silica Free Surfaces Product Manual

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BASIC INFORMATION

Applications

Linnstone is excited to bring premium Zulite Crystalline Silica Free Surfaces to your one-of-a-kind space. Zulite surfaces are premium materials that incorporate recycled materials and minerals, making them ideal for residential and commercial interiors. Applications include kitchen benchtops, bathroom vanities, office desks, wall panelling, tiles, and more.

Zulite Crystalline Silica Free Surfaces are not suitable for outdoor use, excessive heat over 150°C, or direct exposure to ultraviolet radiation.

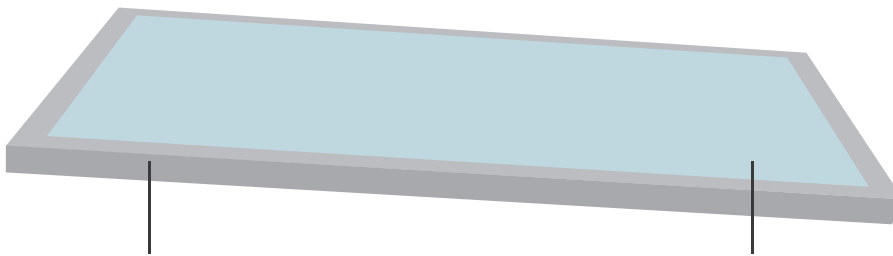
Measurement

Zulite surfaces are available in the following sizes:

Slab	Nominal Size	Actual Size	Thickness
Mega	3500 × 2000mm	3530 × 2030mm	20mm
Jumbo	3200 × 1600mm	3230 × 1630mm	20mm

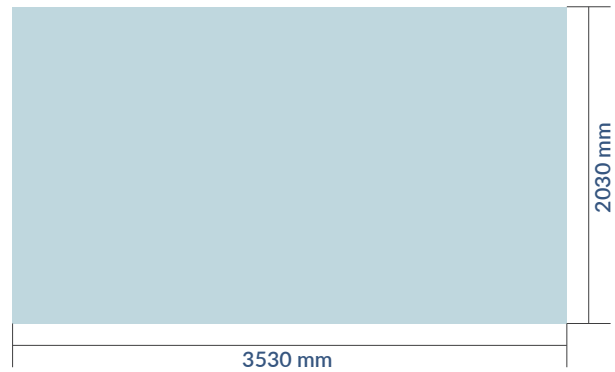
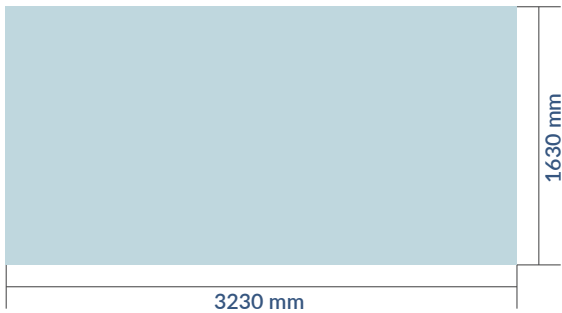
NOTE: Not every colour is available in every size and thickness.

The slab dimensions are for storage and transportation purposes only. Actual availability varies by slab. The grey area around the perimeter should be checked for colour, polish, transportation damage, or any other visible defect for maximum availability width and length of the slab. If the slab is found to be insufficient, it should be replaced before cutting.



Use caution when using the slab's grey-shaded area. Before fabrication, it should be thoroughly inspected. The area may vary from slab to slab and side to side.

The blue area represents the slab's primary usable area.



Handling

The slabs should be loaded and unloaded from a container or truck using a forklift or lifting equipment capable of handling at least 900kg. Because of the weight, proper safety boots and gloves should be worn. The weight of 20mm material is 344kg.

Handle slabs individually or in multiples of two. Lift the slabs face-to-face with clamps or lifting straps. When face-to-face, grab the slabs from the back side for a better grip.

Vehicle Loads

It is the driver's responsibility to ensure that the load does not exceed the vehicle's legal weight limit. We are unable to determine this on our premises. Allow approximately 344kg per 20mm slab, plus the weight of any other items already loaded on the vehicle, as a guideline.

Keeping the Load Secure

It is the driver's responsibility to ensure that the goods are adequately supported and securely restrained to the vehicle before leaving our premises.

Storage

Storing slabs in a way that keeps them from warping. To keep the slabs in place, use at least two support beams. Each rack should hold no more than 15 slabs, stored face-to-face and back-to-back.

It is critical to secure slabs with straps early to prevent warping and maintain a safe worksite. Additionally, polished slabs should not be exposed to sunlight, as UV rays can damage the internal structure of the slab.



The last slabs in each rack must be kept in a position with the backside facing out. Temperatures in storage should not exceed 55 °C.

Visual Slab Inspection

Before cutting Zulite Crystalline Silica Free Surfaces, a visual inspection for defects or colour matching is required.

- Cracks
- Colour Variation
- Pits
- Thickness Tolerance

- Flatness
- Polishing Marks
- Scratches
- Residual Colour

- Gloss
- Black Dots
- Voids
- Colour Pigments

If the slab is altered in any way, we will not accept any of the above claims. It is the fabricator's responsibility to determine whether the slabs are fit for use. If it is not, it should be exchanged before being cut or modified.

Colour Match & Pattern Irregularity

Checking for a colour match before cutting is a fundamental aspect of slab inspection. Slabs for colour variations may result from different production cycles due to the innate and complex mixture of natural minerals. Visual inspection is necessary to ensure colour consistency.

Zulite Crystalline Silica Free Surfaces are distributed randomly across each slab. If the slab has an irregular grain distribution, the fabricator must determine whether the slab is fit for purpose. If this is not the case, the slab should be replaced before cutting.

Product Technical Data

No.	Test item(s)	Test method(s)	Test result(s)
1	Absorption by Weight	Refer to ASTM C97/C97M-18	0.04 %
	Density		2137 kg/m ³
2	Mohs' Hardness	Refer to EN 15771:2010	5
3	Load Test	Refer to CSA B45.5-17/IAPMO Z124-2017 Section 5.8.6	0.02mm
4	Point Impact Load Test	Refer to CSA B45.5-17/IAPMO Z124-2017 Section 5.7	No cracks or chips
5	Stain Resistance Test	Refer to CSA B45.5-17/IAPMO Z124-2017 Section 5.11	Passed
6	Cigarette Test	Refer to CSA B45.5-17/IAPMO Z124-2017 Section 5.14	No visible damage
7	Chemical Resistance Test	Refer to CSA B45.5-17/IAPMO Z124-2017 Section 5.15	Unaffected
8	Heated Pan Test	Refer to CSA B45.5-17/IAPMO Z124-2017 Section 5.23	No effect
9	Light Ageing Test-Xenon-arc Exposure	CSA B45.5-17/IAPMO Z124-2017 section 5.10 & ASTM D2565-16	Passed

Note: This document draws upon and is based on findings from a test report provided by SGS, with the report number XMIN2401000030CM01_EN, dated 2024-01-23.

GUIDELINE FOR RESPIRABLE CRYSTALLINE SILICA HEALTH RISKS AND PROTECTION

Introduction to Guide

As a responsible silica free surface manufacturer, we at Linnstone prioritise providing a risk-free environment for all employees and adhering to all local laws.

Zulite Crystalline Silica Free Surfaces are manufactured without any crystalline silica when transported, shipped, or used by the end consumer. However, fabricating and processing the slabs generates respirable crystalline silica dust.

Therefore, this guideline aims to:

1. Provide information on the risks and hazards associated with working in an environment with respirable crystalline silica are created.
2. Provide certain information to assist in reducing workers' exposure to respirable crystalline silica dust, including guidance on the safe use and protective measures available for products containing crystalline silica in the workplace.

What is Silica?

Silica (also known as crystalline silica) is silicon dioxide. It is naturally occurring and can be found in rocks, soils, sand, concrete and mortar.

Where is Silica Used?

Silica is used to make products including:

1. Composite stone used to fabricate kitchen and bathroom benchtops
2. Bricks
3. Tiles
4. Some plastics

There are non-crystalline and crystalline forms of silicon dioxide. The most common type of crystalline silica is quartz.

When is Silica Dangerous?

Silica becomes hazardous when airborne and inhaled by workers. Silica dust is generated in workplace processes such as:

1. Crushing
2. Cutting
3. Drilling
4. Grinding
5. Sanding

Silica dust can be generated and found:

1. During manufacturing and construction
2. When mining or tunnelling
3. In waste or sand-based products
4. In materials brought to your worksite
5. During fabrication and installation of composite (engineered or manufactured) stone benchtops
6. Excavation, earthmoving and drilling plant operations
7. Clay and stone processing machine operations
8. Paving and surfacing
9. Mining, quarrying and mineral ore treatment processes
10. Tunnelling
11. Construction labouring activities
12. Brick, concrete or stone cutting; especially using dry methods
13. Abrasive blasting (blasting agent must not contain greater than 1 percent of crystalline silica)
14. Foundry casting
15. Angle grinding, jackhammering and chiselling of concrete or masonry
16. Hydraulic fracturing of gas and oil wells
17. Pottery making
18. Concrete cutting
19. Dry sweeping respite facilities
20. Demolition activities

Some dust particles can be so small that they are not visible, these are referred to as respirable particles. Respirable silica dust particles are small enough to breathe in and penetrate deep into the lungs causing permanent damage that can lead to serious illness or death.

Silica-related Diseases

If a worker is exposed to silica and breathes it in they can develop:

1. Chronic bronchitis
2. Emphysema
3. Acute silicosis

* Can develop after a short exposure to very high levels of silica dust, within a few weeks or years, and causes severe inflammation and an outpouring of protein into the lung.

4. Accelerated silicosis

* Can develop after exposures of 3 to 10 years to moderate to high levels of silica dust and causes inflammation, protein in the lung and scarring of the lung (fibrotic nodules).

5. Chronic silicosis

* Can develop after long-term exposure to lower levels of silica dust and causes fibrotic nodules and shortness of breath.

* Can include progressive massive fibrosis where the fibrotic nodules in the lung aggregate.

6. Lung cancer

7. kidney disease

8. Scleroderma

* A disease of the connective tissue of the body resulting in the formation of scar tissue in the skin, joints and other organs of the body.

What Duty Holders Need to Do

Employer Responsibility

Persons conducting a business or undertaking (PCBUs - employers) or duty holders need to implement control measures to eliminate or minimise generating silica dust in the workplace.

Officers, such as company directors, have a duty to ensure the business or organisation has and uses appropriate resources and processes to eliminate or minimise the risks of working with silica and silica containing products. This includes:

1. Identifying the hazard of silica dust
2. Controlling the risk of exposure to silica dust
3. Conducting air monitoring
4. Providing health monitoring for workers

As an employer, when discussing health and safety matters with workers, you should take a consultative approach to allow workers a fair opportunity to express views before any decision is made.

Worker Duties

Workers have a duty to take reasonable care for their own health and safety and they must take reasonable care that their actions or omissions do not adversely affect the health and safety of other people.

As a worker, you must:

1. Comply, as far as reasonably able, with any work health and safety instruction from the employer.
2. Cooperate with any reasonable policy or procedure relating to work health and safety that your employer puts in place.

3. Wear personal protective equipment as instructed by the employer and participate in health monitoring, if you have been told about it beforehand. If you refuse, the employer may take action to meet its duties under work health and safety laws – including removing you from the source of exposure.

Workplace Exposure Standards

Exposure to substances or mixtures in the workplace can occur through inhalation, absorption through the skin or ingestion. Most exposure occurs through the inhalation of vapours, dusts, fumes or gases. For some chemicals, absorption through the skin may also be a significant source of exposure.

Exposure standards have been established in Australia for around 700 substances and mixtures. The standards are updated occasionally and may not always reflect the latest research or state of knowledge on the hazardous effects of chemicals.

Exposure standard means an exposure standard listed in the Workplace Exposure Standards for Airborne Contaminants (WES) and represents the airborne concentration of a particular substance or mixture that must not be exceeded. There are three types of exposure standards:

1. Eight-hour time-weighted average (TWA)
2. Short-term exposure limit (STEL)
3. Peak limitation

The WES for respirable crystalline silica in the Comcare jurisdiction is a TWA of 0.05 mg/m³. The exposure standard was halved from a TWA of 0.1 mg/m³ on 1 July 2020, following agreement by jurisdictional work health and safety ministers and an extensive review by Safe Work Australia.

Hierarchy of Controls

Managing risks and worker exposure to silica can be achieved by the following controls:

1. Substitution – such as sourcing engineered stone benchtops with a lower percentage of silica
2. Isolation of the hazard – using principles of safe work design to designate areas for tasks that generate dust and appropriate worker positioning during these tasks, using enclosures and automation to conduct dust-generating tasks
3. Engineering controls—that minimise the risk of exposure to generated dust, for example, local exhaust ventilation, misting or halo sprays water suppression (wet cutting) or using tools with dust collection attachments
4. Administrative controls (should a risk still remain) – including good housekeeping policies, shift rotations and modifying cutting sequences

5. Personal protective equipment (should a risk still remain) – including appropriate respiratory equipment (generally a minimum of a P2 efficiency half face respirator) that has been fit-tested by a competent person and work clothing that does not collect dust

More than one control will normally be required to adequately protect workers.

Disclaimer

The information on Respirable Crystalline Silica Health Hazards & Protection mentioned above is an excerpt from Australia Government Comcare. It is impossible to cover all the details regarding crystalline silica dust in the workplace. In addition, none of the content in this guide may be construed as a recommendation for using any product or tool in violation of any any laws, safety practices, or other applicable terms. Laws and regulations of silica dust vary from country to country. We suggest you check and observe local legislation related to working in environments containing hazardous dust. Local regulations shall take precedence over these guidelines.

NOTE: This guideline is excerpted from Australia Government Comcare for reference. Fabricators can operate according to the actual situation of respective countries and regions.

FABRICATION INSTRUCTIONS

Tools and Safety Equipment

To efficiently produce finished products, all fabricators must have essential tools and safety equipment. The following are a list of tools that are either required or recommended:

Basic Tools

- Bridge saw
- Electric/pneumatic polisher (variable speed preferred)
- Diamond grinding wheel
- Diamond polishing pad
- Grinding stone
- Core bits
- Diamond contour blade
- Wet profiling machine (edge router)
- Stone trolleys
- A-Frame/storage racks
- Fabrication stands
- Air compressor
- Seaming clamps
- Water source

Advanced Tools

- Water jet
- CNC
- Automated profiler
- Diamond jigsaw

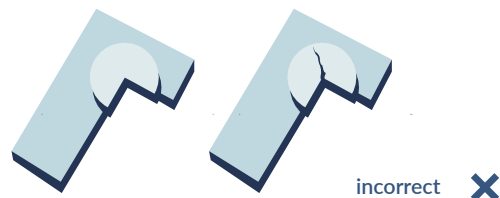
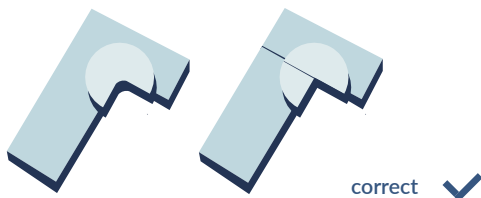
Basic Safety Equipment

- First-Aid kit
- Safety glasses
- Dust masks
- Safety gloves
- Steel-capped boots
- Aprons
- Earplugs

Basic Fabrication Guidelines

The following guidelines should be followed to ensure high-quality products:

1. Only water-cooled tools should be used for cutting, drilling, and polishing Zulite Crystalline Silica Free Surfaces to avoid overheating the slab.
2. Do not alter the original surface finish of the slabs by re-polishing, honing, sealing, or otherwise altering the factory finish.
3. To avoid damaging the corner area with the cutting disc, use a core bit when cutting inside corners. A stress point will form if the radius area is damaged.
4. Do not cut square corners (cross-cut) as this will create stress points in the slab and may result in cracking.
5. Any angled internal corner must be radiused. Cut with the saw up to the drilled hole's joint, leaving the drilled hole intact. Dry grinding/polishing the corner should be avoided because overheating the area may result in a crack.

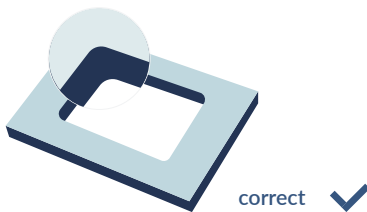


Insider Corners

In the case of an angular-shaped kitchen (L- or U-shaped), the benchtop surfaces should be made from a single slab. The interior corners must have a minimum radius of 10mm.

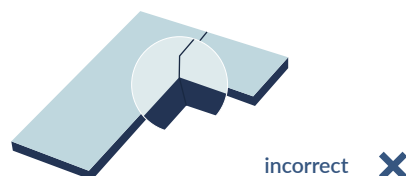
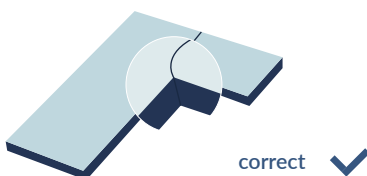
Cutouts

1. The area must be supported if the distance between the cutout and a joint is less than 150mm. This can be accomplished by ensuring that all joints are placed at the base cabinet joint or by installing a solid slat beneath the joint.
2. Damage to the drilling area can cause minor cracks at stress points. To avoid overheating and causing hairline cracks, all cuts should be made with wet diamond cutting tools.
3. Always leave an extra 3mm between the device and the cutout edge for expansion.
4. It is best to avoid cross-cutting. When preparing a cutout, always use a core bit.



Seams

1. Adjusting the material before the adhesive sets levels all seams.
2. Do not surface polish seams to make them even/level.
3. Any internal angled corner in the seam must have a 9.5mm radius if a straight seam is not used.
4. Using a cutting-edge seam setting tool, keep the seams as narrow and unobtrusive as possible. The width of the seams shall not exceed 1.5mm.



Edge Detail

1. All exposed edges must be finished in the same way as the surface and have a minimum edge profile of 3-4mm.
2. The top and bottom edges must be rounded or bevelled, and we prefer a Pencil Round edge detail.

3. The greater the surface area of the edge, the greater its resistance to chipping.
4. Linnstone recommends that edge details have a minimum of 5mm radius on both top and bottom, and a minimum of 6mm radius on outside corners for areas with high traffic/abuse.

Polishing Edge Profiles

Only granite or marble diamond polishing pads should be used to polish the edge profile of any Zulite Crystalline Silica Free Surfaces. Linnstone recommends using a superior pad and plenty of water for the best polishing results. Zulite Crystalline Silica Free Surfaces should be polished to be smooth, clean, and free of residual adhesive. It is important not to over-polish the edges beyond the factory surface polish.

Zulite Crystalline Silica Free Surfaces polishing procedure:

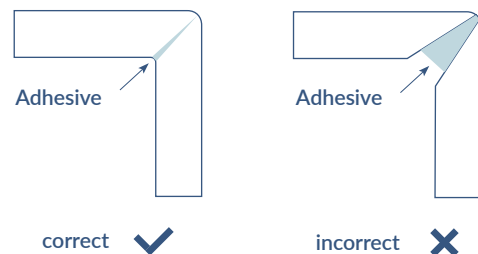
1. Honed finish 100, 200, 400-grit diamond pad
2. Polished finish 100, 200, 400, 500–800, 1500–2000, 2000–3000-grit diamond pad

These guidelines are intended to help you achieve a polish that is comparable to the factory surface polish. The polishing results will be affected by the tools, manufacturing techniques, and diamond pads used. When polishing the edge profile, use water-cooled tools because the dry-polishing profile can cause overheating and chipping. Overheating weakens the slab's physical structure; micro-cracks that are invisible to the naked eye, resulting in chipping on impact, discolouration, and an uneven polish. Here are some ideas to get you started.

1. Do not use stone “buff” pads on Zulite Crystalline Silica Free Surfaces.
2. Do not over-polish edge details beyond factory surface polish.
3. When using 1000-grit or higher diamond polishing pads, use lower RPM on polishers.

Mitred Edges

1. To ensure maximum strength, mitred edges should be made at a 45° angle. Clean, flush, and parallel joints are preferred.
2. Chipping occurs most frequently when the adhesive is not applied evenly throughout the joint.
3. Mitred edges have the most vulnerable areas of weakness and are prone to chipping. (We recommend a minimum edge profile of 1/8" bevel.) A 3-4mm Pencil Round edge is our preferred minimum edge profile.
4. Because the larger the edge profile, the larger the visible joints, incorrect angles limit the type of edge that can be created.



5. Do not cut edges at less than 45° because this exposes the edge to physical damage such as chipping.
6. For maximum strength, ensure that the adhesive is evenly distributed throughout the joint.

The Practice of Polishing Finish Edges

Here are some procedures to achieve the best-textured appearance:

1. Cut the surface into the required pieces/segments before polishing.
2. Attach all pieces required for the final design to a suitable working surface using clamps.
3. If necessary, glue the edges before polishing.
4. Cut or shape the necessary edge profile.
5. Smooth and polish the edge shape using standard polishing procedures and levels - up to a maximum of 100-120 grain.
6. Using a large amount of water to polish texture finish surfaces.
7. It will take about the same amount of time to polish a texture finish edge as it will to polish a regular edge.
8. Using a suitable manual, electric, or pneumatic angle grinder with a low RPM of 600–1200. Connect it to the water source with a 60-grain special texture brush.
9. When polishing the textured finish, use movements similar to those used when polishing a regular edge.
10. Switch to a 120-grain brush and polish until no visible marks of the 60-grain brush remain.
11. Repeat with 400, 800, and 1600 grain brushes above until the edges match the texture of the surface.

Adhesives

It is critical to use flexible adhesives, such as 100% clear silicone adhesive, to secure the benchtops to the cabinets, substrate, or splashbacks to the wall. This will allow for limited thermal expansion. Epoxies, liquid nails, construction adhesive, and other non-flexible adhesives do not compensate for thermal expansion. Zulite Crystalline Silica Free Surfaces will not honour any claims for cracks caused by tops being bonded to base cabinets with non-flexible adhesives. As a result, follow the manufacturer's instructions for stone adhesive. Maintain good stoneworking and safety practices at all times.

Seaming & Laminations

Linnstone requires all fabricators to follow the individual manufacturer's instructions for using their seaming adhesives, including the minimum working temperatures for their product. Failure to follow the instructions will void the warranty on the Zulite Crystalline Silica Free Surfaces. Linnstone recommends a polyester resin knife-grade adhesive for all seaming and laminations, as well as the Integra Estone 101 & Tri-Bond 30 cartridge system.

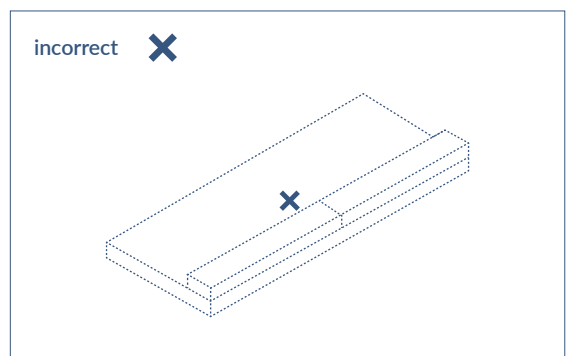
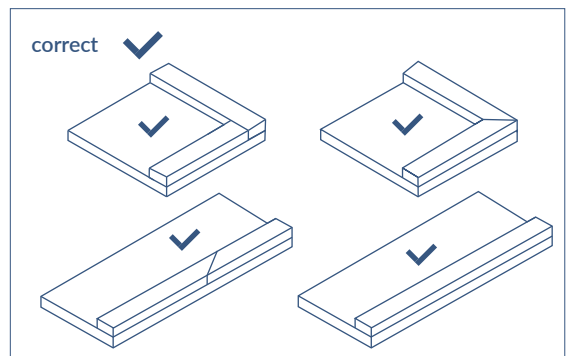
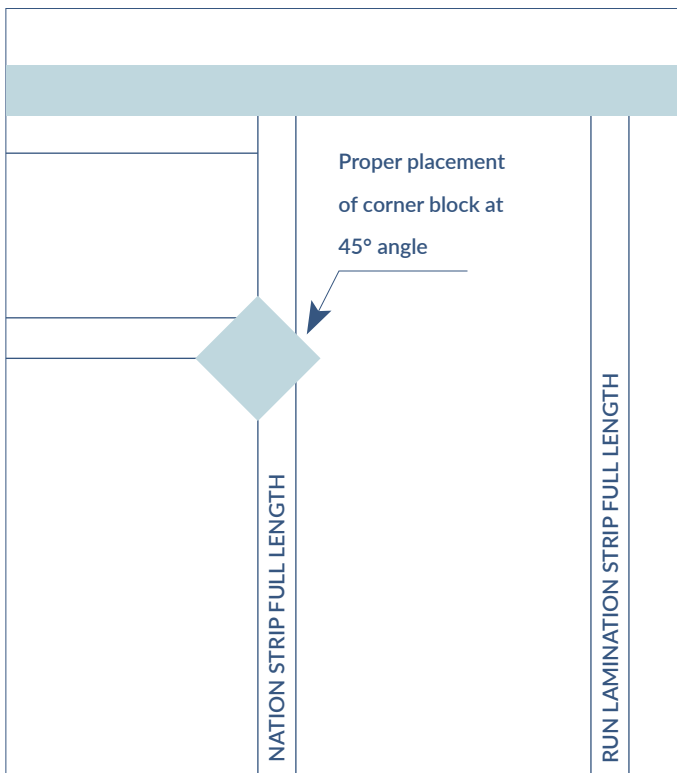
Joint Adhesives

The adhesive must be pigmented to match the colour of the material being installed, which can be accomplished by combining colour paste pigments with the adhesive.

Laminations/Double Edges

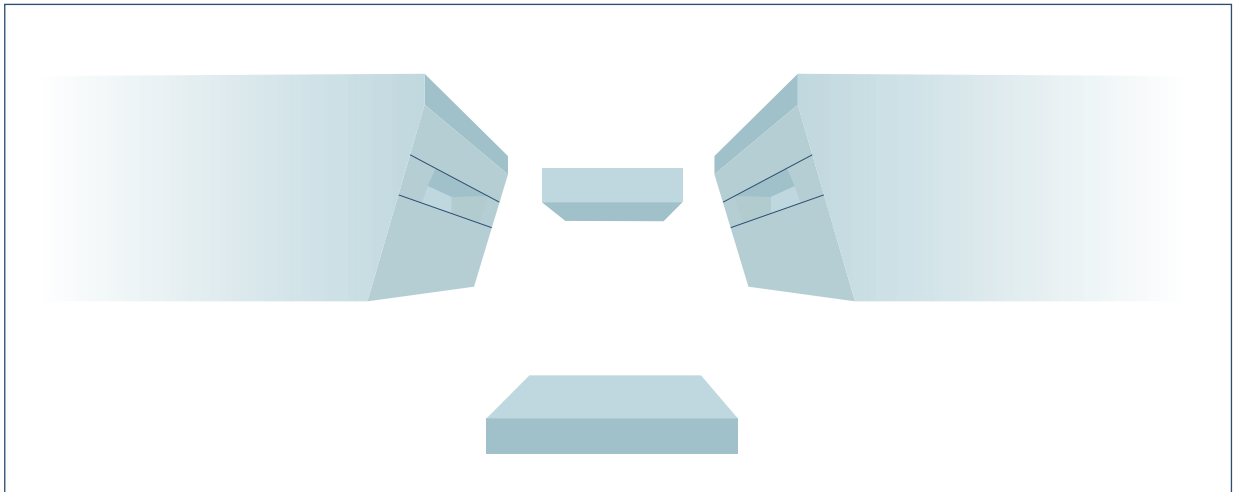
When laminating, make sure the lamination piece is the full length of the top piece and cut at 45° on the corners. If this is not possible and a joining of the lamination pieces is required, the joint must be cut at a 45° angle. Mitred end cuts can be used to reduce stress on the material, which can result in stress fractures. To ensure consistent colour, the laminating strips should be cut from the same slab as the benchtops surface material. When cutting the laminated piece, add the lamination piece size to your cutting measurements to ensure you have the same colour piece and length for your lamination.

1. Full-length lamination pieces should be used.
2. To reduce stress on corners, a 45° corner joint is recommended.
3. To reduce stress points, ensure that the joint in the lamination piece is at 45° for very long benchtops that require a joint.



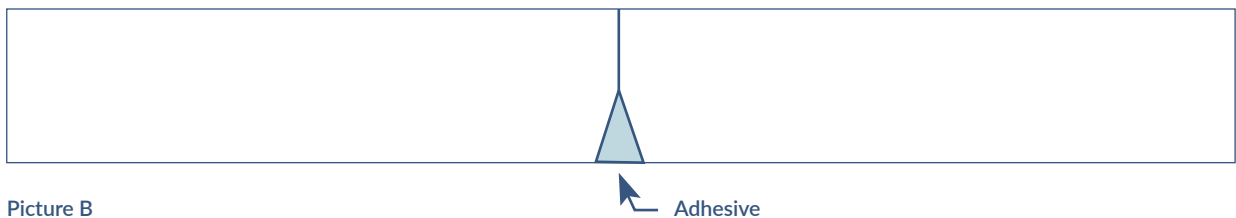
Seaming

1. All seam surfaces should be smooth and debris-free.
2. To reduce seams, use the advanced seam setter tool. Seams should be no wider than 1.6mm wide.
3. Zulite Crystalline Silica Free Surfaces necessitate the use of coloured glue for all seams, which can be accomplished by using one of the pre-mixed Integra colours or by manually tinting your preferred glue.
4. Mechanical fasteners (screws, nails, etc.) should never be used on Zulite Crystalline Silica Free Surfaces.
5. Surface polishing of seams on Zulite Crystalline Silica Free Surfaces should be prohibited.
6. To make room for glue, grooves should be cut into the surfaces to be attached. Extra glue should be applied to all corners and around joints. Please see images A and B for more information.



Picture A

To reinforce the seam, the illustration shows the use of a bevelled edge and a biscuit joint. When using this method, make sure to only bevel the seaming edge up to 1" behind the exposed surfaces.

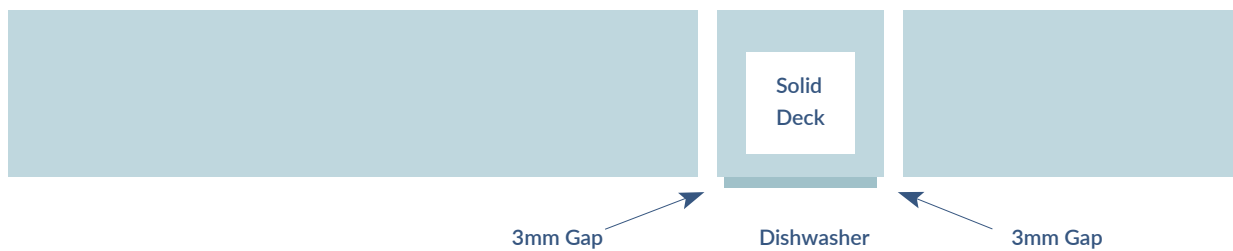


Picture B

Joint Positions

Seam over dishwasher (not recommended)

1. Full deck-isolated support is required if the seams must be located above the dishwasher. This will allow for adequate support and thermal movement.
2. The plywood subtop over the dishwasher must be isolated from the rest of the subtop when installing 20mm material. Allow 3mm clearance on either side of the full deck support to accomplish this.
3. On seams, mitres, and lamination areas, notches or grooves must be ground into the surfaces to be bonded together. Zulite Crystalline Silica Free Surfaces are nonporous and will not absorb the adhesive; these notches allow the adhesive to spread throughout the joint.



Transportation

Because the stone is so heavy and fragile, portability must be considered when packaging and transporting it. Here are some points to consider:

1. Brace all cutouts to avoid flexing of the seams and corners.
2. Ensure that the slabs' surfaces are always protected and that they do not come into contact with metal or the backs of other slabs.
3. Transport Zulite Crystalline Silica Free Surfaces that are face-to-face or back-to-back.
4. A removable "A" frame that can hoist off the delivery vehicle can be used for stone slab transportation.
5. Straps should be used to secure the slabs to the rack.
6. A protective layer should be placed between the rack and the Zulite Crystalline Silica Free Surfaces to prevent damage during storage and transportation.
7. The delivery vehicle requires at least two people to move the product to the site.

INSTALLATION INSTRUCTIONS

Preparing Base Units/Cabinets

Check the cabinet installation to ensure that the cabinet is fully installed and level. Cabinet tops must be flat and no more than 1.5mm wider than 457mm. The cabinets should be attached and then fixed to the back wall. In the case of a dishwasher, ensure that the surrounds of the bench opening have adequate support. To better match the kitchen, the front edge of any benchtops over a dishwasher should always be supported with material matching the installed cabinets.

NOTE: If the cabinets do not meet the minimum standards, the installer should notify the homeowner or project manager that they must be present at the job site before installing tops.

Support

Here are some guidelines for installation, material, and type of supports:

1. Zulte Crystalline Silica Free Surfaces require a strong perimeter frame.
2. Every 600mm, front-to-back cabinet support should be provided.
3. Plan for 2.5" wide (40mm-100mm) front-to-back support strips to coincide with cutouts and periodic support.
4. There is a need for support across the top of a dishwasher space and over an under-bench oven.
5. Under all benchtop joints, support must be provided.

Overhangs

Zulte Crystalline Silica Free Surfaces overhangs necessitate support. The following guidelines apply to standard 600mm deep cabinets:

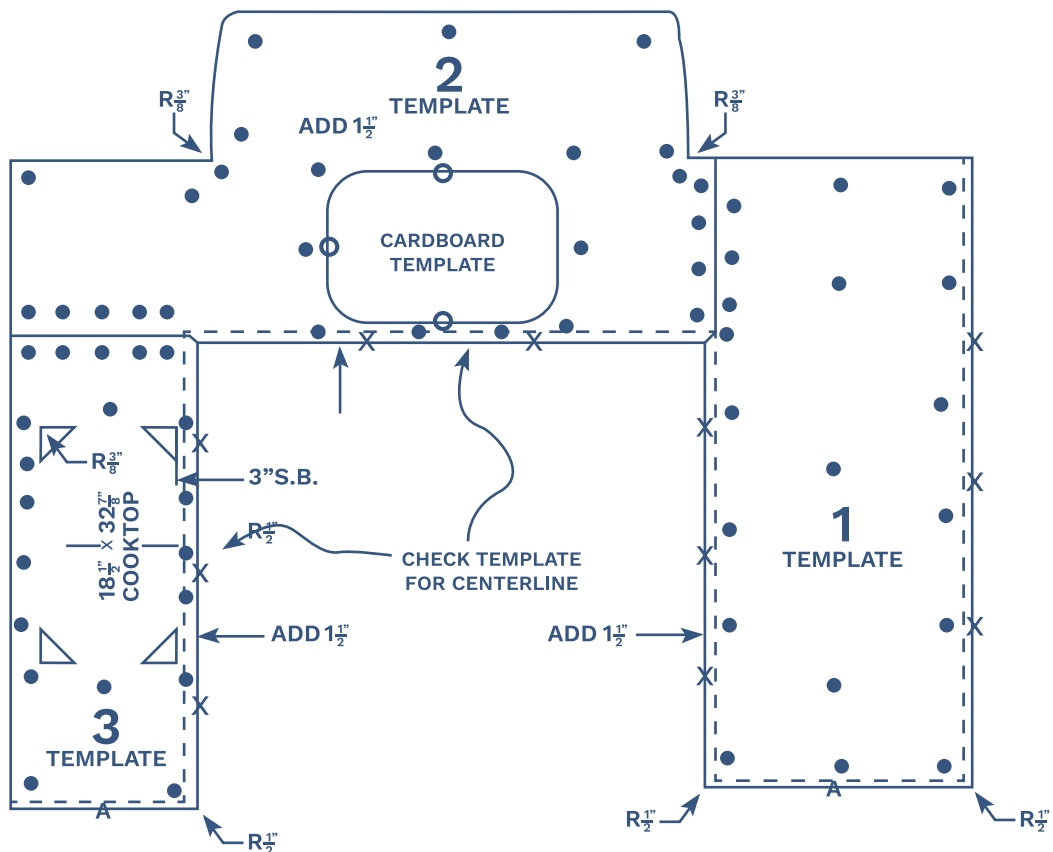
20mm (3/4")	20mm (3/4") with 16mm (5/8") Sup Top	Material Support Required
Less than 8" (200mm)	Less than 12" (300mm)	No additional support required.
8-16" (200-400mm)	12-20" (300-500mm)	Brackets required at 24" (600mm) intervals.
Over 16" (400mm)	Over 24" (500mm)	Legs, Columns or Panels required at 24" (600mm) intervals.

Fitting

1. Zulite Crystalline Silica Free Surfaces require space to expand, so there should always be enough. Each benchtop requires at least 3mm of expansion and contraction in each wall.
2. Mechanical fasteners (screws, nails, etc.) should never be used to attach mechanical fasteners to Zulite Crystalline Silica Free Surfaces. Bolted connections are permitted.
3. Use only dabs of flexible silicone 200-300mm apart to attach the Zulite Crystalline Silica Free Surfaces to the supports. Extra adhesive should be applied to all joints and cutouts.

Benchtops Adhesive

For affixing the Zulite Crystalline Silica Free Surfaces to the cabinets and all supports, we only recommend using 100% silicone adhesive.



Securing Benchtops

1. Apply dabs of silicone 200-300mm apart to the top.
2. Overhangs over 200mm require support for 20mm thick slabs.
3. Apply extra silicone to all corners, joints, and cutouts.
4. Using a colour-matching adhesive, sew the seams together.
5. Radius all cutouts' inside corners.
6. Allow for adequate space between the tops and the walls.
7. Avoid cutting corners.
8. All cabinets must be levelled and supported before installing the tops.
9. If the cabinets have adjustable legs, make sure that all of them are evenly tensioned to prevent movement.

Sinks and Basins

We recommend that you follow the sink manufacturer's recommendations for all sink or basin installations, whether top-mount or under-mount.

1. To reduce the risk of chipping in undermount installations, adhere to the minimum edge profile recommendations around the cutout. A 3mm bevel is our recommended minimum edge profile. A 1/8" (3-4mm) Pencil Round edge is our preferred minimum edge profile.
2. Twin basin installations (top-mount or under-mount) with the tap hole in the benchtops necessitate extra care to ensure that there is enough material left for strength.
3. To avoid stress points in the top, all sink cutouts must have drilled radius corners (minimum 10mm).
4. All sink installations should be fully supported independently of the top of Zulite Crystalline Silica Free Surfaces. Use a professional sink-setting or support rail system. Plan for 2.5" wide (40mm-100mm) front-to-back support strips to correspond with cutouts and periodic support. The joints on all benchtops must be supported.
5. Mechanical fasteners (screws, nails, etc.) should never be used on Zulite Crystalline Silica Free Surfaces.

Under-mount sink installations

1. On the benchtops, all under-mount sinks should be sealed with 100% silicone.
2. The inside edges of all under-mount sink cutouts must be polished to match the surface.

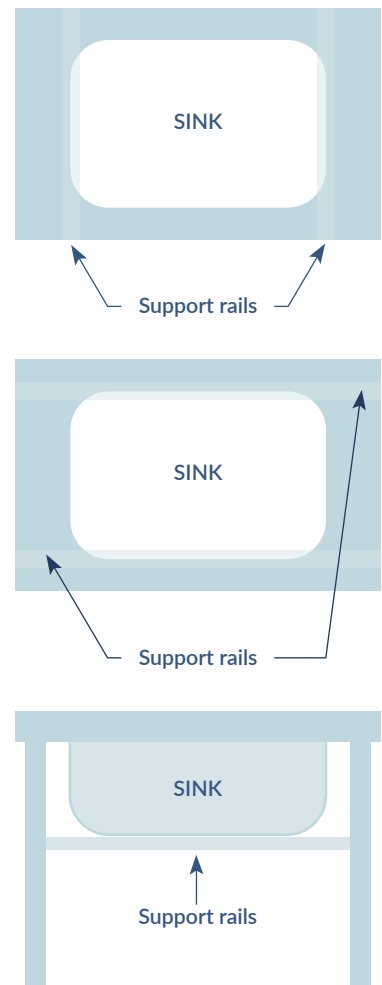
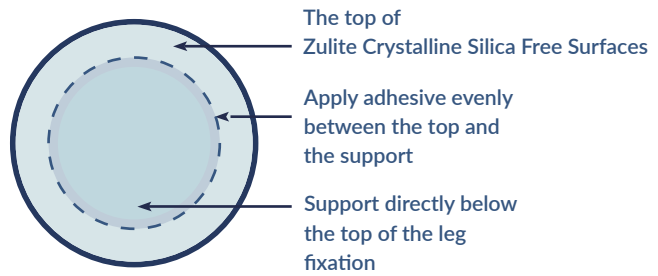


Table Tops

If you're using Zulite Crystalline Silica Free Surfaces as a freestanding tabletop, pay close attention to how the top is attached to the base. This is especially important when the table only has one central leg to support it. The top of Zulite Crystalline Silica Free Surfaces may be too flexible to be adequately secured to the base with a silicone adhesive. Linnstone would recommend using a stronger, harder adhesive such as polyurethane [Sika-Flex] that is strong but still flexible to ensure that the top is properly secured to the base.



Wall Applications

Zulite Crystalline Silica Free Surfaces structural requirements require that the walls covered be strong, safe, and hard, as well as comply with all applicable laws and engineering practices. Linnstone recommends that all wall applications use only latex thin-set mortar adhesive or epoxy adhesive and grout. Weather-resistant, frost-resistant, shockproof, and chemical corrosion-resistant bedding and grouting mortar must meet the following physical requirements:

Compressive Strength	Thick-bed mortar	3000 PSI Minimum
Compressive Strength	Thin-bed, bonding, grouting mortars	500 PSI Minimum
Tensile Strength	Thin-bed, bonding, grouting mortars	500 PSI Minimum
Water Absorption		4%
Ozone Resistance	200 hrs @ 200ppm	No loss of strength
Smoke Contribution Factor		0
Flame Contribution Factor		0

1. Always use good stoneworking and safety practices, and follow all applicable building codes and regulations.
2. Zulite Crystalline Silica Free Surfaces are appropriate for properly prepared concrete, block, and masonry-type surfaces, gypsum wallboard, plasters, cement backer board, plywood, asphalt, and steel.
3. Urine, diluted acid, dilute alkali, sugar, brine, and food waste products should all be resistant to the finished mortar and grout.

4. Zulite Crystalline Silica Free Surfaces, as well as the mortar used to set and grout them, do not form a waterproofing barrier and should not be considered as an alternative waterproofing membrane. Please contact your preferred supplier for more information on thin, load-bearing waterproof membranes.
5. Dust, oil, grease, paint, tar, wax, curing agents, primers, sealers, form release agents, and any other harmful substances that can act as bonding barriers must be removed from bonded Zulite Crystalline Silica Free Surfaces.
6. It is the installer's responsibility to ensure that any such contaminants are removed prior to the installation of Zulite Crystalline Silica Free Surfaces.
7. To ensure compatibility, all mortar additives, epoxy adhesives, and grouts should come from the same manufacturer.
8. All Zulite Crystalline Silica Free Surfaces must be treated without fragmentation, breakage, or foreign matter intrusion.
9. Handle, store, mix, and apply all set and grouting materials exactly as directed by the manufacturer.

Finishing Touches

It is critical to inform your customers that subsequent trades must not use the new benchtops as a workbench, stepping platform, or standing platform, and that any trades using solvents or adhesives must take precautions to avoid and/or remove any spills caused by their solvents or adhesives. Furthermore, if additional construction work is to be done at the work site after the surface installation is finished, make sure that the entire top of the Zulite Crystalline Silica Free Surfaces is covered with corrugated cardboard or other protective material to properly protect the Zulite Crystalline Silica Free Surfaces. Linnstone recommends that during the finishing touches, your customer confirm in writing their satisfaction with the material and workmanship to protect you from third-party damage.

Returning Slabs

Before altering any slab that does not fit, it should be returned for credit or exchange. If returned within seven days, there is no restocking fee. A restocking fee may apply after seven days.

Requirements for Drivers

1. Drivers are responsible for ensuring that the slabs are properly loaded.
2. Which orders are to be picked up should be communicated to contract drivers. This is especially important when multiple orders are awaiting pickup or delivery. Any additional costs incurred as a result of missing goods during the initial delivery will not be borne by the distributor.
3. Drivers are not permitted to roam the warehouse unless accompanied by an authorised individual.

CARE AND MAINTENANCE INSTRUCTIONS

Zulite Crystalline Silica Free Surfaces are high-quality, solid, non-porous products that are highly resistant to stains caused by fruit and vegetable juices, liquid food colouring, coffee, tea, wine, soft drinks, and olive oil. To keep your Zulite surfaces looking great, simply clean them with a damp cloth or paper towel and, if possible, a small amount of mild detergent. After cleaning, thoroughly rinse and dry the surface. To avoid a dull surface, use a non-abrasive cleaner and thoroughly rinse after use. Zulite Crystalline Silica Free Surfaces require minimal upkeep, and adhering to the care and maintenance guidelines will help to keep the surface in good condition for years.

REGULAR CLEANING

1. Cleaning Dried Spills or Stubborn Stains

If necessary, apply non-abrasive household cleaners to the affected area for a few minutes. Soak the affected area in paper towel pads for 5 to 10 minutes. Scrub the area gently in a circular motion with a non-scratch pad. Thoroughly rinse any cleaner with clean water. Then thoroughly dry with a soft cloth or paper towel. As a final step, use streak-free Windex to remove any gel residue.

2. Getting Rid of Adhered Materials

Adhered materials include gum, nail polish, paint, and any other foreign matter. Scrape away the excess material with a plastic putty knife or a razor first. Then, using a damp cloth, clean the surface to remove any remaining marks and dirt. Also, avoid using abrasive pads to remove tougher dirt because they can damage the finish/sheen of your benchtops. Household cleaners and ordinary scouring pads can be used to remove any grey marks left by the blade. If necessary, rinse and clean any gel residue with streak-free Windex.

3. Cleaning and Maintenance of Textured Finishes

Texture Finishes refer to finishes other than polishing finishes, such as honed finishes, leathered finishes. These finishes are more difficult to clean than our polished finish. Fingerprints, grease, wet spots, metalmarks, and other signs of daily life appear more prominently on these surfaces. The majority of these marks are easily removed with little effort and non-abrasive cleaning products like Soft Scrub Liquid Gel. These finishes are not suitable for high-traffic areas.

CAUTION

1. Avoid Using Chemicals and Solvents (Cleaners)

Prolonged exposure to harsh chemicals and solvents can permanently damage surface. It is best to avoid exposing Zulite Crystalline Silica Free Surfaces to chemicals with PH levels higher than 5-8, such as grill cleaners, floor strippers, paint removers/furniture strippers, toilet bowl cleaners, products containing pumice, oil soaps, tarnish or silver removers, furniture cleaners, drain products, battery acid, dishwasher detergent, and so on. If your Zulite surfaces are inadvertently exposed to potentially harmful products, immediately rinse with water to neutralise the effect.

Use abrasive or strong alkaline/acid cleaners, free radicals, oxidizers, or the like (whether high, neutral, or low PH). Various chemicals have the ability to corrode and/or erosively attack any structure, including Zulite Crystalline Silica Free Surfaces. Be mindful of these potential product damages.

2. Avoid Scratching and Hitting

Zulite Crystalline Silica Free Surfaces are more resistant to surface damage and wear than other stones. All stones, however, can be damaged by force, and no stone is chip-proof. Objects striking edges, especially near sinks or dishwashers, can cause chips. A minor knife slip will dull the knife but will not harm the Zulite Crystalline Silica Free Surfaces, but no stone surface is scratch-proof. Surface markings on mono stone designs are more visible than on multi-coloured surfaces. When working with sharp knives, always use a cutting board. When moving heavy objects, use caution and avoid dropping heavy kitchen tools, especially on the edges of sinks or dishwashers.

3. Caution: Heat

Zulite Crystalline Silica Free Surfaces are designed and manufactured to be heat resistant, but they are not heatproof. Zulite surfaces, like any other composite material, can be damaged by sudden or prolonged exposure to high temperatures, resulting in cracks, particularly at the product's edges and cutouts. When placing hot objects on the surface, insulating pads must be used to prevent thermal shock, discolouration, or other damage. Avoid prolonged contact with very hot pots and keep Zulite Crystalline Silica Free Surfaces away from open flames. A hot pad or trivet is always recommended, especially when using cooking units such as electric frying pans, griddles, crock pots, or toaster ovens. Hot cookware should not be placed directly on the surface of Zulite Crystalline Silica Free Surfaces.

4. Avoid Direct Sunlight

Reduce direct sunlight exposure on Zulite Crystalline Silica Free Surfaces. Long-term direct sunlight exposure may discolour the surface finish. Zulite Crystalline Silica Free Surfaces are only suitable for interior use.

ATTENTION

1. Colour Uniformity and Consistency

Zulite Crystalline Silica Free Surfaces are made from recycled materials and minerals. Natural variations in colour, pattern, size, shape, and shade may occur, reflecting the unique characteristics of the material. These have no bearing on the product's performance.

Many products contain colour blotches in order to enhance natural beauty. Samples are small select cuts from a slab that do not exhibit all of the design's characteristics and thus are not fully representative of what will be installed. Because of these variations, the product will not be replaced.

2. Support

Zulite Crystalline Silica Free Surfaces are not designed to provide structural support. Zulite surfaces with a thickness of 20mm or are only suitable for benchtops and must be supported. Zulite surfaces with a thickness of less than 20mm are used for surface finishes such as walls, tub and shower surrounds, and fireplaces. Horizontal applications, such as a tub deck, require full support.

3. Installation

When walls and cabinets are properly prepared for installation, the installation of Zulite Crystalline Silica Free Surfaces is optimised. This includes, but is not limited to, structurally sound, straight, level, and square walls and cabinets, the absence of which may result in poor installation and seam fit, as well as inconsistent benchtop overhang and placement.

The installation of Zulite Crystalline Silica Free Surfaces does not include the qualification of any sink or stove cutouts (any cutouts), faucet hole locations, or cabinet sizes. Linnstone is not responsible for ensuring that sinks, stoves, and other cutout appliances, cabinets, and tap hole locations fit well or at all. This is the owner's, general contractor's, or similar responsibility. Linnstone will create cutouts based on the model/template information provided. Linnstone does not guarantee the accuracy of the information provided.

The owner and/or other users are responsible for the proper care and maintenance of goods. The Care and Maintenance Guidelines can be found at www.Linnstone.com.au.

Linnstone reserves the right to change the guidelines at any time. Following the most recent guidelines is highly recommended in order to keep your Zulite surfaces in good condition for many years.

"Linnstone" AND "Zulite" (INCLUDING THEIR RESPECTIVE LOGOS) ARE REGISTERED TRADEMARKS OF Linnstone PTY LTD OR ITS AFFILIATES.

Special Care Considerations Form



Special Care Considerations for Textured Finishes

Linnstone provides various colours with different textured surface finishes. Texture Finishes refer to finishes other than polishing finishes, such as honed finishes, leathered finishes. Please keep in mind that these finishes require more maintenance than our polished finish. Fingerprints, grease, wet spots, metal marks, and other signs of daily life are more visible on these surfaces. The majority of these marks are easily removed with little effort and non-abrasive cleaning products like Soft Scrub Liquid Gel. These finishes are not suitable for high-traffic areas.

By signing this document, you acknowledge that you have been fully informed about the characteristics of these one-of-a-kind finishes. You also understand that, while Zulite Crystalline Silica Free Surfaces have a Residential Lifetime Warranty, this warranty only covers failures caused by product defects when the material is installed by a certified fabricator of Zulite surfaces. Our Zulite Crystalline Silica Free Surfaces warranty does not cover temporary marks that are common on these finishes.

Please see the Residential Lifetime Warranty and Care and Maintenance section of the Linnstone website at www.Linnstone.com.au for more information.

NAME OF PURCHASER		NAME OF DEALER/FABRICATOR	
SIGNATURE OF PURCHASER		SIGNATURE OF PURCHASER	
DATE		DATE	

Note: Please keep in mind that copies of our Residential Lifetime Warranty are available from the authorised fabricator. Some restrictions apply to the Residential Lifetime Warranty. For more information, go to www.Linnstone.com.au.

LIFETIME RESIDENTIAL WARRANTY

Linnstone warrants that its material will be repaired or replaced if it fails due to a manufacturing defect when fabricated and installed by a Certified Fabricator within one year of the original date of installation. This warranty only covers the repair or replacement of failed materials that have been permanently installed in your home. Linnstone has the sole discretion to repair or replace the material. This warranty does not cover the cost of installation or fabrication.

The ORIGINAL OWNER of a single-family residence in which Zulite Crystalline Silica Free Surfaces were originally installed is eligible for this Residential Lifetime Warranty. This warranty is available to the "first" owner of a newly constructed single-family residence who purchases the residence with Zulite surfaces permanently installed.

This warranty is officially published at www.Linnstone.com.au Linnstone reserves the right to update the warranty clause at any time at its sole discretion. However, you and Linnstone are bound by the specific version of the warranty published on the original date of installation.

Terms and Conditions

1. This warranty applies only to Zulite Crystalline Silica Free Surfaces and does not apply to any other products, including other surfacing products manufactured or supplied by any other party.
2. This warranty only applies to Zulite Crystalline Silica Free Surfaces that have been permanently installed in the interior of single-family homes and have not been moved or altered since their initial installation. If you decide after or during installation that you do not like the colour or finish you chose, that subjective decision is not covered by this warranty.
3. This warranty excludes materials and/or services that have not been fully paid for.
4. This warranty only applies to materials that have been properly cared for in accordance with the Zulite Crystalline Silica Free Surfaces Care & Maintenance guidelines. The Care & Maintenance instructions can be found at www.Linnstone.com.au.
5. To request service under this warranty, contact the company that sold you the Zulite Crystalline Silica Free Surfaces or Linnstone directly within thirty (30) days of the failure of the surfaces.
6. After installation, you must register your product at www.Linnstone.com.au within thirty (30) days to activate your warranty. If there is no record of your warranty on file, you must provide proof of purchase in the form of a copy of your original receipt or invoice that includes the owner's, authorised dealer's, and Linnstone certified fabricator's names. Even if no register is on file, Linnstone will fully honour this warranty upon receipt of your

original receipt or invoice. You must agree to assist Linnstone or its authorised agents in inspecting the product and assisting us in performing our obligations under this warranty.

7. If Zulite Crystalline Silica Free Surfaces fail due to a manufacturing defect, Linnstone will repair or replace such materials at its sole discretion. Linnstone will strive for the best outcome possible, whether we decide to repair or replace your product. An exact colour match, on the other hand, is never guaranteed.

8. All decisions regarding this warranty are made solely at the discretion of Linnstone and are final and binding on all parties. Linnstone does not authorise any representative, dealer, salesperson, distributor, fabricator, or other person to make any warranty or promise on its behalf.

9. This warranty expires when the property is transferred to subsequent parties. This warranty is not transferrable and does not cover claims made by subsequent homeowners.

Exclusions

1. This warranty excludes use for commercial purposes. Commercial use includes, but is not limited to, use in a shop, rental properties, offices, or other commercial establishments.

2. This warranty excludes products installed in outdoor areas.

3. This warranty does not apply to products used as flooring.

4. This warranty does not cover incorrect or abusive use. Improper use or abuse includes, but is not limited to, product mishandling, excessive heat or uneven exposure to weather conditions, physical or chemical abuse, and improper care and maintenance. Cleaning products such as oven cleaner, paint remover, and other similar products should not be used because they may damage the surface.

5. This warranty does not cover product chips or other excessive impact damage.

6. This warranty excludes scratches. Zulite Crystalline Silica Free Surfaces are extremely hard and scratch resistant, but not scratch-proof. Proper care and maintenance must be exercised, including the use of a cutting board.

7. This warranty excludes routine maintenance. Minor conditions such as removing stains and water spots by following the techniques specified in the Zulite Crystalline Silica Free Surfaces Online Care & Maintenance Guidelines at www.Linnstone.com.au are examples of routine maintenance.

8. This warranty does not cover failures caused by fabricators/installers failing to follow the Linnstone-recommended fabrication and installation procedures. Fabrication and/or installation errors are solely the responsibility of the fabricator and/or installer.

9. This warranty does not cover any defects that were visible during fabrication and could not be avoided. Fabricators are required to inspect all materials visually before fabrication and again before installation.

10. This warranty excludes adhesives, caulk, and other accessory items, as well as seam appearance and performance. The shifting or movement of the substrate, cabinets, or foundation, as well as thermal shock, are the primary causes of seam separation or cracking after the product has been installed. When a hot pan, dish, or other receptacle or object is left on the benchtops for even a short time, thermal shock can occur. Trivets or hot pads should be used at all times. These issues are not considered material defects and are subject to the owner's proper care and maintenance.

11. This warranty excludes chemical damage.

12. This warranty excludes any abnormal use of the material, such as bending or curving.

13. This warranty does not apply to material that has been milled or thinned.

14. The installation of sinks, other plumbing fixtures, or appliances is not covered by this warranty.

15. This warranty does not cover mechanical fasteners inserted directly into the material.

16. This warranty does not cover any failures caused by insufficient installation support. This includes overhangs over Linnstone's recommended support guidelines or an unsupported base.

17. This warranty does not cover any chips or cracks caused by "dry" cutting or polishing, as well as failing to meet the minimum requirements for edge details.

18. This warranty does not cover mitred edges where the joint has been improperly cut.

19. The alteration of any Linnstone factory-applied finish is not covered by this warranty. Only colours marked "honed" in our brochure, sample book, or on our website are covered by this warranty. Any problems that arise as a result of "in-shop" honing are the sole responsibility of the fabricator.

20. This warranty does not cover temporary marks common to honed finishes, such as metal marks, fingerprints, or other signs of normal wear and tear. To receive coverage under this warranty, a signed "Special Care Considerations for Zulite Crystalline Silica Free Surfaces Textured Finishes" form must be submitted to Linnstone or its authorised representatives. The end-user/owner of the completed installation must sign this form.

21. This warranty does not cover any additional modifications or supplemental repairs that may be required to repair or replace the Zulite Crystalline Silica Free Surfaces covered by this warranty, such as structural changes, plumbing, electrical installation, tiling, cabinets, flooring, and so on. The customer is responsible for the supply of these materials as well as the labour costs.

22. This warranty excludes natural variations in the colour, size, shape, and distribution of the pattern, as well as natural variations in background tone. These characteristics are inherent and distinctive to the product. Colour samples provided to consumers, dealers, and fabricators are provided for reference purposes only and are not an exact replica of what will be installed in your home. We recommend that customers inspect the actual slabs to ensure that they receive the correct colours.

23. This warranty does not cover spots or blemishes smaller than 10 mm in size. A certain level of spots or blemishes is inherent in the manufacturing process and has no effect on the material's structural integrity.

24. On the back of each slab of Zulite surfaces, there may be important product information. The warranty will be void if this product information is removed.

25. Linnstone is not liable for any damage or injury caused by force majeure, job site conditions, architectural/engineering design or changes, structural movement/degradation, acts of vandalism, or accidents, in whole or in part.

26. In either contract or tort, Linnstone shall not be liable for any direct, indirect, consequential, incidental, special, exemplary, or punitive damages arising from the use or inability to use the products covered by this warranty. Because some states do not allow the exclusion or limitation of incidental damages, the limitations or exclusions listed above may not apply to you.

27. This warranty only applies to slab purchases and does not apply to prefabricated benchtops. The purchaser is solely responsible for thoroughly inspecting the prefabricated benchtops prior to fabrication. Linnstone will not accept any claims after pre-fabricated benchtops have been installed.



THE FOREGOING IS Linnstone'S COMPLETE WARRANTY AND SUPERSEDES ALL OTHER WARRANTIES AND REPRESENTATIONS, ORAL OR WRITTEN.

EXCEPT AS EXPRESSLY STATED ABOVE, NO OTHER WARRANTIES CONCERNING Linnstone ARE MADE BY WORDS OR CONDUCT.

Linnstone EXPRESSLY DISCLAIMS ALL WARRANTIES NOT EXPRESSLY STATED HEREIN, INCLUDING ANY WARRANTY THAT MAY EXIST UNDER NATIONAL, STATE, PROVINCIAL, OR LOCAL LAW, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME JURISDICTIONS OR LOCATIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO THESE LIMITATIONS MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY BY LOCATION.

THIS WARRANTY IS INCLUDED IN THE SALES CONTRACTS YOU SIGNED.

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LIMITED COMMERCIAL WARRANTY

Linnstone warrants that its installed products will be free of manufacturing defects in an interior, commercial use situation for ten (10) years after installation. If a manufacturing defect occurs during the warranty period, the warranty only covers the repair or replacement of the faulty Zulite Crystalline Silica Free Surfaces.

This warranty covers the repair or replacement of defective slab material. Linnstone is not liable for any additional labour costs associated with material repair or replacement, including but not limited to the removal, disposal, fabrication, installation, repair, or replacement of collateral items.

There is no warranty provided for materials produced or provided by other manufacturers.

Linnstone shall make all decisions regarding the existence of manufacturing defects or affecting this warranty, which shall be final and binding on all parties. Linnstone does not authorise any representative, dealer, salesperson, distributor, fabricator, or other person to make any warranty or promise on its behalf.

Linnstone shall have sole discretion whether to repair or replace the defective material in the event of a defect covered by this warranty. This warranty does not cover the cost of installation or fabrication. Without deviating from the preceding, replacement of a defective Linnstone slab will be limited by stock availability. Furthermore, the replaced slab may not be identical to the defective slab.

Any location open to the general public for business use is considered commercial property, as are private properties subject to residential or commercial rental or lease, or properties designated as hotels, motels, or other temporary residence applications.

This warranty is officially published at www.Linnstone.com.au Linnstone reserves the right to update the warranty clause at any time at its sole discretion. However, the specific warranty version published on the original date of installation is binding on you and Linnstone.

Conditions and Terms

1. This warranty applies only to Zulite Crystalline Silica Free Surfaces and does not apply to any other products, including other surfacing products manufactured or supplied by any other party.
2. This warranty only applies to Zulite Crystalline Silica Free Surfaces that have been permanently installed in the interior of a commercial structure and have not been moved or altered since their initial installation.
3. The ORIGINAL OWNER of the commercial property who purchased and installed Zulite Crystalline Silica Free Surfaces is the recipient of this warranty. This warranty expires when the property is transferred to subsequent

parties. This warranty is not transferrable and does not cover claims made by subsequent commercial property owners.

4. This warranty only applies to materials that have been fully paid for.

5. Unoccupied structures are not covered by this warranty.

6. Zulite Crystalline Silica Free Surfaces must be cared for and maintained in accordance with the Zulite Crystalline Silica Free Surfaces Care & Maintenance Guidelines. The Care & Maintenance instructions can be found at www.Linnstone.com.au.

7. Only polished finishes are covered by this warranty. It is not applicable to honed or textured surfaces.

8. Colour samples provided to owner customers, fabricators, and installers may not be accurate representations of the actual stone. Natural materials and minerals are used to create Zulite Crystalline Silica Free Surfaces Colour, shade, pattern movement, and grain size variations are quite common on this natural product. Samples are small pieces cut from a slab; they do not display all the characteristics of the actual slab. These properties are inherent in silica free stone. Colour samples are provided for reference purposes only and are not an exact replica of what will be installed on your property. We recommend that customers inspect the actual slabs to ensure that they receive the correct colours.

9. If Zulite surfaces fail due to a manufacturing defect, Linnstone will repair or replace such materials at its sole discretion. Linnstone cannot guarantee an exact colour match to a previously purchased product. Linnstone is not liable for any direct or indirect, consequential, incidental, punitive, or other similar damages arising from the use or inability to use the product covered by this warranty, including but not limited to lost use, lost profits, business interruption, and/or other losses.

10. The laws and regulations governing the design, engineering, and construction of installations vary greatly. Linnstone accepts no responsibility for the installation's selection, design, engineering, or construction.

11. In order to obtain service under this commercial warranty, the customer must provide proof of purchase in the form of a sales contract that shows the name of the commercial property's owner. Without proof of the original contract, this warranty is void.

12. To activate your warranty, you must register your product within thirty (30) days of installation. Visit www.Linnstone.com.au to complete the online warranty registration form. You must agree to assist Linnstone or its authorised agents in inspecting the product and assisting us in performing our obligations under this warranty.

Exclusions

1. Zulite Crystalline Silica Free Surfaces installed in outdoor areas are not covered by this warranty.
2. This warranty does not apply to Zulite Crystalline Silica Free Surfaces used as flooring.
3. This warranty excludes adhesives, caulks, and other accessory items, as well as seam appearance and performance. The shifting or movement of the substrate, cabinets, foundation, or thermal shock are the main causes of seam separation or cracking after the product is installed. When a hot pan, dish, or other receptacle or object is left on the benchtops for even a short time, thermal shock can occur. Trivets or hot pads should be used at all times. These issues are not considered material defects and are subject to the owner's proper care and maintenance.
4. This warranty does not cover any fabrication work performed by someone who is not a Linnstone certified fabricator.
5. This warranty does not cover any abnormal use, conditions, or abuse. Damage from mishandling or misuse, damage from excessive heat or exposure to weather conditions, exposure to ultraviolet light, physical or chemical abuse, and damage from improper care and maintenance or failure to follow proper installation practices are all examples of abnormal use or conditions. Never use paint removers, strong alkaline, acidic, or oxidising substances, or pumice-containing products.
6. This warranty does not cover any additional modifications or supplemental repairs that may be required to complete the repair or replacement of Zulite Crystalline Silica Free Surfaces covered by this warranty, such as structural changes, plumbing, electrical installation, cabinets, tiles, and so on. The owner of the commercial property is responsible for the supply of these materials and labour costs.
7. Chips, scratches, thermal shock, impact damage, and chemical damage are not covered by this warranty. Zulite Crystalline Silica Free Surfaces are highly scratch resistant, but not scratch proof. A cutting board must always be used when cutting directly on the surface. The Zulite Crystalline Silica Free Surfaces Care & Maintenance Guidelines, available at www.Linnstone.com.au, must be followed at all times.
8. This warranty does not cover mitred edges where the joint has been improperly cut.
9. The alteration of any Linnstone factory-applied finish is not covered by this warranty. Any problems that arise as a result of "additional and/or in-shop honing" are solely the responsibility of the fabricator who performed the process and/or the owner who purchased the original Zulite surfaces.



10. This warranty excludes any abnormal adjustments made to the material, such as bending, curving, thickness reduction, surface finish variation, or any other change to the original Zulite Crystalline Silica Free Surfaces.

11. This warranty does not cover any failures caused by insufficient installation support. This includes overhangs over Linnstone's recommended support guidelines or an unsupported base. Fabrication and/or installation errors are entirely the responsibility of the fabricator/installer.

12. The installation of sinks, other plumbing fixtures, or appliances is not covered by this warranty.

13. A product that has been moved from its original installation location is not covered by this warranty.

14. Linnstone is not liable for any damages or injuries resulting from force majeure, job site conditions, architectural/engineering design or changes, structural movement/degradation, vandalism, or accidents.

15. On the back of each slab of Zulite Crystalline Silica Free Surfaces, there may be important information. The warranty will be void if this product information is removed.

16. This warranty does not cover spots or "beauty marks" that are smaller than 16mm (5/8 inch). A certain amount of spots or "beauty marks" are inherent in the manufacturing process and have no effect on the material's structural integrity.

17. In order to receive service under this limited warranty, a Linnstone authorised agent must be granted access to inspect the Zulite Crystalline Silica Free Surfaces being claimed. Linnstone requires complete cooperation from its agent in order to service this limited warranty. The findings of Linnstone shall be final and binding on all parties.

18. Except as expressly stated herein, Linnstone makes no other express or implied warranty, representation, or guarantee regarding its products. This is the only warranty offered by Linnstone for its surfacing materials.

19. No one, other than Linnstone, is authorised to make any warranty or promise on Linnstone's behalf regarding its materials.



THE FOREGOING IS Linnstone'S COMPLETE WARRANTY AND SUPERSEDES ALL OTHER WARRANTIES AND REPRESENTATIONS, ORAL OR WRITTEN.

EXCEPT AS EXPRESSLY STATED ABOVE, NO OTHER WARRANTIES CONCERNING Linnstone ARE MADE BY WORDS OR CONDUCT.

Linnstone EXPRESSLY DISCLAIMS ALL WARRANTIES NOT EXPRESSLY STATED HEREIN, INCLUDING ANY WARRANTY THAT MAY EXIST UNDER NATIONAL, STATE, PROVINCIAL, OR LOCAL LAW, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME JURISDICTIONS OR LOCATIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO THESE LIMITATIONS MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY BY LOCATION.

THIS WARRANTY IS INCLUDED IN THE SALES CONTRACTS YOU SIGNED.

"Linnstone" AND "Zulite" (INCLUDING THEIR RESPECTIVE LOGOS) ARE REGISTERED TRADEMARKS OF Linnstone PTY LTD OR ITS AFFILIATES.

All decisions regarding this warranty are to be made by Linnstone. No distributor, fabricator, installer, or any person is authorised to make any warranty statements and promises regarding Zulite Crystalline Silica Free Surfaces.

Linnstone makes no other warranty, representation, or guarantee, express or implied, with respect to its products, except as expressly stated herein.

MATERIAL SAFETY DATA SHEET

1 Identification

Product identifier

Trade name: Crystalline Silica Free Surfaces

Recommended use of the chemical and restrictions on use:

Application of the substance / the preparation: Benchtops, Floorings, etc

Details of the supplier of the safety data sheet

Manufacturer/Supplier: Linnstone

Full address: Unit 2, 113 Belmont Ave, Belmont WA 6104

Email: info@linnstone.com

Further information obtainable from: Linnstone

Emergency telephone number: 08-9478-2075

2 Hazard(s) identification

Classification of the substance or mixture

Classification according to WHS



Health hazards

Inhaled	Inhalation of the product may produce adverse health effects or irritation of the respiratory tract following discomfort.
Ingestion	Accidental ingestion of the product may be harmful to the health of the individual.
Skin contact	Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
Eye	This product may cause temporary discomfort following direct contact with the eye.

3 Composition/information on ingredients

Substance/mixture

Mixture

Component	CAS No.	EC No.	Concentration (weight percent, %)
Kaolin	1332-58-7	310-194-1	0-70
Nepheline syenite	37244-96-5	609-369-8	0-70
Silica, vitreous	60676-86-0	262-373-8	0-70
1,3-Isobenzofurandione, polymer with 2,5-furandione and 2,2'-oxybis(ethanol)	26123-45-5	859-762-5	0-15
Titanium dioxide	13463-67-7	236-675-5	0-1
3-trimethoxysilylpropyl methacrylate	2530-85-0	219-785-8	0-1

4 First-aid measures

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Skin contact	No harm in general situation. First aid is not needed.
Ingestion	Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
Inhalation	Fresh air, rest.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

Indication of any immediate medical attention and special treatment needed

1. Treat symptomatically.
2. Symptoms may be delayed.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Use extinguishing media suitable for surrounding area.
Unsuitable extinguishing media	There is no restriction on the type of extinguisher which may be used.

Specific hazards arising from the substance or mixture

1. Development of hazardous combustion gases or vapor possible in the event of fire.
2. Not considered a significant fire risk, however containers may burn.

Special protective equipment and precautions for fire-fighters

1. As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
2. Fight fire from a safe distance, with adequate cover.
3. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

1. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
2. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
3. Use personal protective equipment, do not breathe dust/fume.

Environmental precautions

1. Prevent further leakage or spillage if safe to do so.
2. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

1. Cut off the source of the leak as much as possible.
2. Keep leaks in a ventilated place.
3. Isolation of contaminated areas and restrictions on access.
4. It is recommended that emergency personnel wear dust masks.
5. Collect the spill with a clean shovel and place it in a clean, dry, loosely closed container and move the container away from the leak.
6. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7 Handling and storage

Precautions for safe handling

1. Handling is performed in a well ventilated place.
2. Wear suitable protective equipment.
3. Avoid contact with skin and eyes.
4. Keep away from heat/sparks/open flames/hot surfaces.

Conditions for safe storage, including any incompatibilities

1. Keep containers tightly closed.
2. Keep containers in a dry, cool and well-ventilated place.
3. Keep away from heat/sparks/open flames/hot surfaces.
4. Store away from incompatible materials and foodstuff containers.

8 Exposure controls/personal protection

Control parameters

Component	Country/Region	Limit value - Eight hours (mg/m ³)
Kaolin	Australia	10
	Canada - Ontario	2
	Canada - Québec	5
	France	10(respirable aerosol)
	New Zealand	10
	South Korea	2
Nepheline syenite	Canada - Ontario	10
Silica, vitreous	Canada - Ontario	0.1
	Canada - Québec	0.1
	Germany (AGS)	0.3(respirable aerosol)
	Germany (DFG)	0.3
	New Zealand	0.2
	South Korea	0.1
Titanium dioxide	Australia	10
	Canada - Ontario	10
	Canada - Québec	10
	France	11(inhalable aerosol)
	Germany (DFG)	0.3(eight hours)/2.4(short term)
	New Zealand	10

Biological limit values: No relevant regulations

Monitoring methods

1. EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
2. GBZ/T 300 series standard Determination of toxic substances in workplace air.

Engineering controls

1. Ensure adequate ventilation, especially in confined areas.
2. Ensure that eyewash stations and safety showers are close to the workstation location.
3. Set up emergency exit and necessary risk-elimination area.
4. Handle in accordance with good industrial hygiene and safety practice.

Personal protection equipment

General requirement	No special requirements, please see the description below.
Eye protection	In general situation, eye protection is not needed. In the production process, when contacting with vapour or dust, tightly fitting safety goggles.
Hand protection	In general situation, hand protection is not needed.
Respiratory protection	In general situation, respiratory protection is not needed. If exposure limits are exceeded or if irritation or other symptoms are experienced, wear dust proof mask or gas defence mask.
Skin and body protection	In general situation, skin and body protection are not needed.

9 Physical and chemical properties

Physical and chemical properties

Physical state	Solid
Colour	No information available
Odor	Odorless
Odor threshold	No information available
pH	No information available
Melting point/freezing point(°C)	No information available
Initial boiling point and boiling range(°C)	No information available
Flash point(Closed cup,°C)	Not applicable
Evaporation rate	Not applicable
Flammability	No information available
Upper/lower explosive limits[%(v/v)]	Upper limit: No information available; Lower limit: No information available
Vapor pressure	Not applicable
Relative vapour density(Air = 1)	Not applicable
Relative density(Water=1)	No information available
Solubility	No information available
n-octanol/water partition coefficient	No information available
Auto-ignition temperature(°C)	No information available
Decomposition temperature(°C)	No information available
Kinematic viscosity	Not applicable
Particle characteristics	No information available

10 Stability and reactivity

Stability and reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	No information available.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	No information available.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

Acute toxicity: No information available

Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
Kaolin	Not Listed	Not Listed
Nepheline syenite	Not Listed	Not Listed
Silica, vitreous	Not Listed	Not Listed
1,3-Isobenzofurandione, polymer with 2,5-furandione and 2,2'-oxybis(ethanol)	Not Listed	Not Listed
Titanium dioxide	Category 2B	Not Listed
3-trimethoxysilylpropyl methacrylate	Not Listed	Not Listed

Others

Crystalline Silica Free Surfaces	
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Based on available data, the classification criteria are not met
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-single exposure	Based on available data, the classification criteria are not met
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met

12 Ecological information

Acute aquatic toxicity

Component	Fish	Crustaceans	Algae
3-trimethoxysilylpropyl methacrylate	LC ₅₀ : >100mg/L (96h)(Fish)	EC ₅₀ : >100mg/L (48h)(Daphnia magna)	ErC ₅₀ : >100mg/L (72h)(Desmodesmus subspicatus)

Chronic aquatic toxicity: No information available

Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
Kaolin	High	High
Titanium dioxide	High	High
3-trimethoxysilylpropyl methacrylate	High	High

Bioaccumulative potential

Component	Bioaccumulative potential	Comments
Kaolin	Low	BCF=10
Titanium dioxide	Low	BCF=10
3-trimethoxysilylpropyl methacrylate	Low	BCF=34

Mobility in soil

Component	Mobility in soil	Soil Organic Carbon-Water Partitioning Coefficient (Koc)
Kaolin	Low	23.74
Titanium dioxide	Low	23.74
3-trimethoxysilylpropyl methacrylate	Low	2029

Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Kaolin	No information available
Nepheline syenite	No information available
Silica, vitreous	No information available
1,3-Isobenzofurandione, polymer with 2,5-furandione and 2,2'-oxybis(ethanol)	No information available
Titanium dioxide	Not applicable
3-trimethoxysilylpropyl methacrylate	Not PBT/vPvB

13 Disposal considerations

Disposal considerations

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

14 Transport information

Label	
Transporting Label	Not applicable
Sea transport (IMDG-Code / GGVSee)	
IMDG-CODE	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
Air transport (ICAO-IATA / DGR)	
IATA-DGR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
Land transport (ADG-Code)	
UN-ADR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
Special precautions for user	
	<p>Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing.</p> <p>The transport unit must be placarded and marked in accordance with relevant transporting requirements.</p>
Transport in bulk according to IMO instruments	
Transport in bulk according to Annex II of MARPOL and the IBC code	No information available
Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code	No information available
Transport in bulk in accordance with the IGC Code	No information available

15 Regulatory information

International chemical inventory

Component	EC inventory	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AIICS	ENCS
Kaolin	√	√	√	√	√	√	√	√	×
Nepheline syenite	×	×	√	√	√	×	×	×	×
Silica, vitreous	√	√	√	√	√	√	√	√	√
1,3-Isobenzofurandione, polymer with 2,5-furandione and 2,2'-oxybis(ethanol)	×	√	√	√	√	√	√	√	×
Titanium dioxide	√	√	√	√	√	√	√	√	√
3-trimethoxysilylpropyl methacrylate	√	√	√	√	√	√	√	√	√

[EC inventory] European Inventory of Existing Commercial Chemical Substances

[TSCA] United States Toxic Substances Control Act Inventory

[DSL] Canadian Domestic Substances List

[IECSC] China Inventory of Existing Chemical Substances

[NZIoC] New Zealand Inventory of Chemicals

[PICCS] Philippines Inventory of Chemicals and Chemical Substances

[KECI] Korea Existing Chemicals Inventory

[AIICS] Australian. Inventory of Industrial Chemical (AIICS)

[ENCS] Japan Inventory of Existing & New Chemical Substances

Note: "√" Indicates that the substance included in the regulations.

"× No data or not included in the regulations.

16 Other information

Abbreviations and acronyms

CAS	Chemical Abstracts Service
PC-STEL	Short term exposure limit
PC-TWA	Time Weighted Average
MAC	Maximum Allowable Concentration
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
NOEC	No Observed Effect Concentration
LC ₅₀	Lethal Concentration 50%
LD ₅₀	Lethal Dose 50%
EC ₅₀	Effective Concentration 50%
EC _x	Effective Concentration X%
P _{ow}	Partition coefficient Octanol: Water
BCF	Bioconcentration factor
ED	Endocrine disruptor
G2A	Probably carcinogenic to humans
G3	Not yet classified as carcinogenic to humans
UN	The United Nations
OECD	Organization for Economic Co-operation and Development
IMDG-CODE	International Maritime Dangerous Goods CODE
IARC	International Agency for Research on Cancer
ICAO	International Civil Aviation Organization
IATA	International Air Transportation Association
ACGIH	American Conference of Governmental Industrial Hygienists
NFPA	National Fire Protection Association
NTP	National Toxicology Program
PBT	Persistent, Bioaccumulative, Toxic
vPvB	very Persistent, very Bioaccumulative
CMR	Carcinogens, mutagens or substances toxic to reproduction
RPE	Respiratory Protective Equipment
G1	Carcinogenic to humans
G2B	Possibly carcinogenic to humans
G4	Probably not carcinogenic to humans

Disclaimer

This Safety Data Sheet (SDS) was prepared according to WHS and ADG. The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.



RECEIPT FORM

Please complete and return this page to:

LINNSTONE PTY LTD

Unit 2, 113 Belmont Ave, Belmont WA 6104

Receipt Form

The undersigned has received the Zulite Crystalline Silica Free Surfaces Product Manual and acknowledges receipt.
Fabricator's Company Information:

Company Name: _____

Address: _____

Country: _____

Telephone Number: _____

Name: _____

Signature: _____

Date: _____

Please carefully read the Zulite Crystalline Silica Free Surfaces Product Manual. You must strictly adhere to all applicable local laws and regulations. We also recommend that you consult with your local occupational health professional and other advisors about the applicable laws, regulations, and recommended safety precautions.



linnstone 8039



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