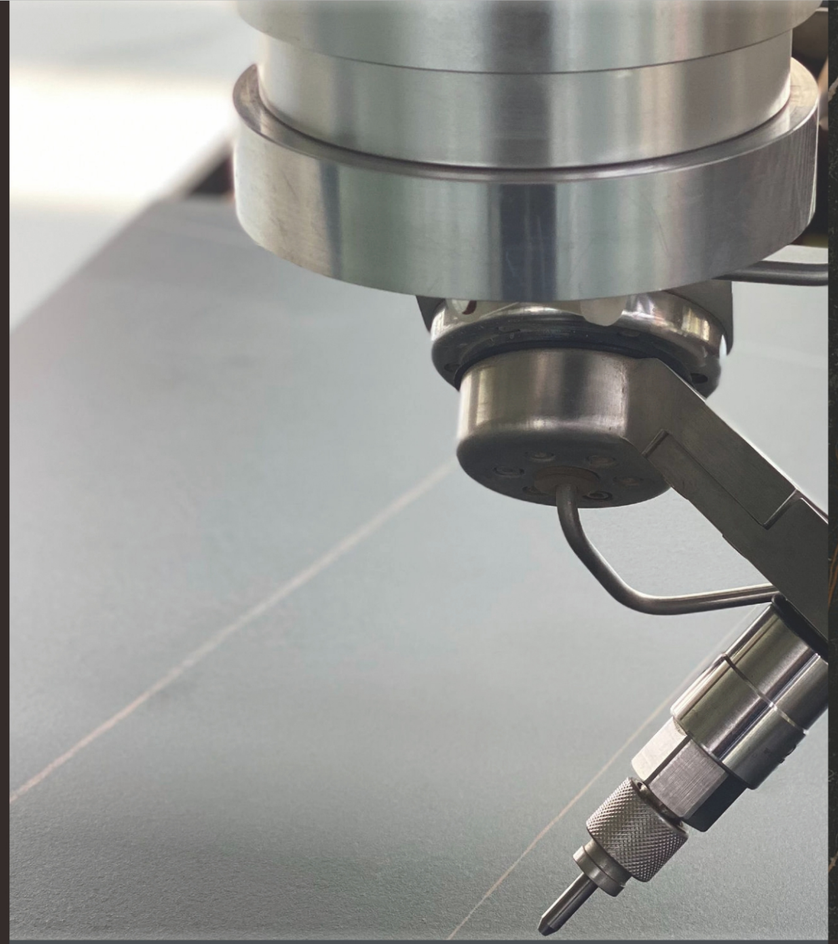
WEB: www.acstonegroup.com.au



AC® STONE GROUP

FABRICATION MANUAL

Engineered Stone And Porcelain

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2. Engineered Stone

3. Porcelain

Fabrication & Safety Protection Guide Receipt Form from Stonemason.

The undersigned acknowledges receipt of the AC Stone Group Fabrication & Safety Protection Guide

Stonemasons details
Company name:
Address:
Suburb:
State:
Country:
Telephone number:
Workers Compensation Insures Name
Is policy current
Policy copy Provided
Name (Please print):
Signature:
Date:
The undersigned confirms delivery of the AC Stone Group Fabrication & Safety Protection Guide. To the above mentioned Stonemason.
Representative of AC STONE GROUP PTY LTD
Name (Please print):
Signature:
Date:
Please complete and return page to address below AC STONE GROUP 63 Fairford Rd, Padstow NSW 2211 171-173 Fairbairn Road, Sunshine West VIC 3020

By signing this manual you have read the important information about the safe fabrication of AC Stone Group engineered stone, which includes the hazards of Crystalline silica dust.
And that all employees have been trained in accordance to Work place health and safety procedures when fabricating.

AC®
STONE GROUP

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AC Stone Group

Silica Dust Indemnity.

The buyer understands that working with Products such as Engineered stone (Quartz, Porcelain and natural stone) may generate Silica dust and exposure to silica dust has the potential to cause diseases that include Silicosis , Lung cancer ,Kidney damage.

The buyer acknowledges that risks have been bought to the attention of the buyer, and that AC Stone Group has provided detail instructions in relation to safe handling and the fabrication of such goods.

To the extent Permitted by law the buyer accepts full responsibility for safe work practises by any person or persons handling and fabricating with such goods.

And agrees to Indemnify AC Stone Group and indemnified against all claims, expense, costs and actions and any demands made by buyer, its contractors, employees and any third party exposure to silica dust generated from goods.

NSW:
63 FAIRFORDRD, PADSTOW, NSW 2211
PH: [02]97096809

VIC:
171-173FAIRBAIRNRD, SUNSHINE WEST, VIC 3020
PH: [03]93119899

ACSTONEGROUP.COM.AU/FABRICATION-TECHNICAL-SUPPORT/

Introduction

AC Stone Group product range are for a wide range of both interior commercial and residential applications.
Most common area of applications includes Kitchen tops, Vanities,
Reception counters, Cladding (Interior) and Furniture.

AC Stone Group product range are not suitable for exposure to UV Radiation or excessive heat or external use.

AC Stone Group are available in various ranges Luxury Plus, Luxury, Natural Plus, Natural,
Premium and Standard each catering for individual budgets without compromising quality or the integrity of our product.

About this Manual

This Manual includes safety and health information and its recommendations on fabrication.
It does not serve as expert advice, it is the stonemason's responsibility to apply all relevant health and safety measures.

This is to ensure, protect the health and life of all employees exposed to silica dust,
it is always necessary to consult with a local advisor.
All stonemasons, who work on AC Stone Group® slabs,
agree that their business operation is compliant to Safe Work Australia and OHS
Australia standards before purchasing and fabricating on AC Stone Group® products.

AC Stone Group® reserves all rights on not to be responsible for any consequences.
AC Stone Group® will not supply slabs to stonemasons who do not
meet Safe Work Australia and OHS Australia standards.

Purpose

The purpose of this manual is to define the basic technical requirements,
suggestions and guidelines related to the introduction of the product, design, its usage, installation and maintenance.
And the Hazards of Crystalline silica

Terminology

The word AC Stone Group® used in this manual that refers to any Engineered stone, Porcelain,
marketed and sold by AC Stone Group the word "Customer" used in this manual refers to any person,
firm or company placing an order with AC Stone Group Pty Ltd .
The word ("Company") for the purchase of any AC Stone Group®. The word "Product manual"
used in this manual refers to the technical information, specification, design, fabrication,
maintenance and other information relating to the use and application of AC Stone Group®.

General Information

AC Stone Group® is a composite of natural minerals and rocks - mainly Quartz mineral with resin,
pigments and other fillers.AC Stone Group® engineered stone collection is sold all over Australia.
The AC Stone Group® collection is supreme in quality and variety by any other supplier of engineered stones in Australia.
AC Stone Group® can be used in a variety of domestic and commercial interior applications including kitchen and vanity
tops, splashbacks, flooring, wall cladding, furniture, food service counters etc.
AC Stone Group® is manufactured using the highest quality of resin and raw
materials used in the manufacture of the stone.
AC Stone Group® is a high quality, non-porous product that is highly resistant to scratching,
staining and water absorption and requires minimum maintenance and the surface remains in flawless condition for years.

AC®
STONE GROUP

Crystalline silica

Uncontrolled cutting and grinding of materials containing crystalline silica presents a serious risk to health
Uncontrolled cutting, grinding or drilling of products or materials containing crystalline silica can generate hazardous levels of airborne dust.
Breathing in this dust, usually over several years, leads to serious and fatal lung disease such as silicosis.
Inspectors can issue prohibition notices to stop you from doing work that generates high levels of silica dust.
You must use water, dust extraction systems on portable tools,
or adopt other methods that eliminate or minimise the generation of silica dust.
If you are a fabricator or installer of manufactured stone materials,
you must comply with the above methods highlighted in green for the safety and health of persons and environment.

Protection

All workers Fabricating AC Stone Group slabs must comply with local OH&S regulations
which in includes correct equipment and PPE

Hazard Statement

Quartz Surfaces Components: Quartz (Silica Crystalline)
CAS No.: 14808-60-7 Silicon dioxide 93%
CAS No.: 13463-67-7 Titanium dioxide 4%

HAZARD STATEMENTS: May form combustible dust concentrations in air. May cause cancer.
Causes damage to organs through prolonged or repeated exposure.
(Lungs) (Refer to Safety Data Sheet for additional information on proper handling)
Precautionary statements: Quartz Engineered Stone contains quartz (crystalline silica),
the product is not hazardous as shipped or once it has been installed.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Do not eat,
drink or smoke when using this product. Use personal protective equipment as required.

If exposed or concerned: Get medical advice/ attention. If large amounts of dust are inhaled, remove to fresh air.
Changing its physical state by dry cutting, grinding, polishing, routing, drilling, sanding, breaking etc.,
will create airborne crystalline silica. This can lead to various and serious health problems such as Lung Cancer,
Silicosis, Tuberculosis, Irritation of the skin and eye and abrasion of the cornea, etc.

This material must be fabricated using only wet tools with the use of appropriate Personal Protective Equipment to Australia standards, AS/NZS 2210, AS/NZS 1715 & 1716, AS/NZS 2161, AS/NZS 1337, AS/NZS 1269, AS/NZS 1801:1997, and any other applicable standards depending on your situation.
Supplemental information: The product as such is not hazardous. The hazards of this product are associated mainly with its processing. Operations such as drilling, sawing, routing and sanding can generate dust, and adequate ventilation is recommended to keep exposure to airborne dust below acceptable limits. Dust generated during handling of Quartz Surfacing Products can contain particles of crystalline silica (quartz).

Hazard Statement

Overexposure to airborne quartz can cause silicosis (scaring of the lung tissue) with a risk of cancer.
Effects can be permanent. If small particles are generated during further processing, handling or by other means,
it may form combustible dust concentrations in air.
Every fabricator/stonemason has a legal responsibility to provide a healthy and safe work environment.

All materials need to be fabricated with consideration to the material composition and behaviour under various
fabrication processes. This notice is to highlight hazards associated
with the fabricating of quartz based Engineered Stone slabs.

It does not cover other items that are associated with the fabrication and installation of the material,
items like joint fillers, glues, cleaner, and chemicals etc. These will all have their own safe handling requirements
that also must be addressed. It also does not cover the various machinery or equipment.

**All work carried out by any user of this manual on any AC Stone Group® slab must be done in accordance with
all laws and regulations relating to that work and the slab, including but not limited to, occupational health and
safety laws and laws relating to the protection of the environment. Note: this manual is not for general distribution.**

This manual supersedes all previous manuals. Content is subject to change at any time without notice.
The use of the term “Distributor” and “we” throughout this document refers to AC Stone Group® Pty Ltd.
AC Stone Group® is a registered trademark of Pty Ltd, Version 2021.Effective Date: 01st May 2021.

SAFETY GUIDELINES

General Safety Procedures AC STONE GROUP has always been active in creating a safe work environment. We recommend that Stonemasons and installers follow the same level of commitment regarding safety and comply with local occupational, health and safety regulations.

- Keep working areas well ventilated and well lit.
- Maintain a clean and neat working environment; keep working areas uncluttered
- Keep visitors at a safe distance from the work area.
- Do not overreach - keep proper footing and balance at all times.
- Maintain a fully equipped first-aid kit on site.
- Read the instruction manuals pertaining to the tools used. Learn the tools' application, maintenance, limitations and potential hazards.
- Use the appropriate tools. Do not use tools or attachments for functions or at speeds for which they were not designed. Do not use improvised tools.
- Maintain tools in top condition. Keep tools sharp and clean for best and safest performance.
- Wear the following protective apparel when fabricating surfaces:
- Hair covering to contain long hair Safety helmet when handling and transporting.
- Dust mask.
- Nonslip, steel-capped safety shoes.
- Safety glasses or other approved eye protection.
- Earplugs when working in noisy areas.
- Gloves for protection against chemicals or rough material.
- In wet areas, aprons and steel-capped boots.

Australian and New Zealand reference guide.

https://infostore.saiglobal.com/

AC STONE GROUP PRODUCT INFORMATION.

AC Stone Group carries 2 sizes in some of our product range.
Please check pricelist to verify which colours are available in Standard size.

Product sizes

Slab definition	Thickness	Width	Length	Weight
Jumbo	20 mm	1600mm +/- 5mm	3200mm +/- 10mm	256kg (50kg per sqm)
Standard	20 mm	1430mm +/- 5mm	3030mm +/- 10mm	216kg (50kg per sqm)

Should you require full length and Width of slab check the outer edge before cutting,
if you require to return slab to exchange, it must be within Five days of purchase,
AC Stone Group recommends you check the exchange at our warehouse prior to loading ,
Damage to slab on return will forfeit your right to exchange.

All slabs are inspected for quality control once they have passed inspection a White sticker is applied marking them as a grade.

Identification of can be located on the shorter side of each slab.

SAFETY GUIDELINES

Identify slab codes and Batch numders

WARNING LABEL

Warning labels are stuck on all of AC STONE GROUP slabs can be located on the back of slab top right hand corner. This warning label attached is to explain the hazards of crystalline dust and the effects on health of workers if the proper OH&S procedures during fabrication.
Please check with State Governments for further information.

WARNING

SILICA DANGER

Exposure to Crystalline Silica can cause Silicosis or Cancer

COMPOSITION: *CAS:14808-60-7* *Quartz (Crystalline Silica) < 93%* *CAS:13463-67-7* *Titanium Dioxide <4%*

WARNING SIGNS REQUIRED

WEAR A MASK | PROTECT HEARING | NO FOOD OR DRINK | PROTECT HANDS | FIRST AID AREA

DANGER SILICA DUST | NO SMOKING | WET SWEEP ONLY | WASH HANDS | NO DRY CUTTING

FINISHED PRODUCT POSES NO HEALTH HAZARD

www.acstonegroup.com.au | info@acstonegroup.com.au
NEW SOUTH WALES - (02) 9709 6809 | 63 Fairford Rd, Padstow NSW 2211
VICTORIA - (03) 9311 9899 | 171-173 Fairbairn Rd, Sunshine West VIC 3020

AC STONE GROUP

FABRICATING HAZARDS

Quartz stone is designed for indoor use purpose. It is commonly being used particularly for kitchen and bathroom worktops, cladding and other similar uses. Quartz Engineered Stone contains quartz (crystalline silica), the product is not hazardous as shipped or once it has been installed. Do not handle until all safety precautions have been read and understood. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use personal protective equipment as required. If exposed or concerned: Get medical advice/ attention. If large amounts of dust are inhaled, remove to fresh air. Changing its physical state by dry cutting, grinding, polishing, routing, drilling, sanding, breaking etc. will create airborne crystalline silica. This can lead to various and serious health problems such as Lung Cancer, Silicosis, Tuberculosis, Irritation of the skin and eye and abrasion of the cornea, etc. This material must be fabricated using only wet tools with the use of appropriate Personal Protective Equipment to Australia standards, AS/NZS 2210, AS/NZS 1715 & 1716, AS/NZS 2161, AS/NZS 1337, AS/NZS 1269, AS/NZS 1801:1997, and any other applicable standards depending on your situation.

HAZARD & PRECAUTIONS

Causes damage to lungs through prolonged or repeated exposure (inhalation)
Do not breathe dust generated in the cutting, grinding and polishing processes.
Wash face and hands thoroughly after handling.Do not eat, drink or smoke when using this product.
Wear respiratory, gloves, eyewear, apron protection for particles.
Do not eat or smoke near fabricated areas, Do not take work clothes home
Get medical advice/attention if you feel unwell.
Dispose of remains in accordance with local regulation

ADDITIONAL INFORMATION

The dangers of this product are associated mainly with its fabrication. Processes such as sawing, routing, drilling can generate dust, good ventilation is recommended to keep exposure to hazardous airborne dust below acceptable limits. Dust generated during handling of Quartz Surfacing Products can contain particles of crystalline silica (quartz). Overexposure to airborne quartz can cause silicosis (scaring of the lung tissue) with a risk of cancer. Effects can be permanent. If small particles are generated during further processing, handling or by other means, it may form combustible dust concentrations in air. Every fabricator/stonemason has a legal responsibility to provide a healthy and safe work environment. All materials need to be fabricated with consideration to the material composition and behaviour under various fabrication processes. This notice is to highlight hazards associated with the fabricating of quartz based Engineered Stone slabs.

Inspection of slabs

Stone Inspection

AC Stone Group is made of 93% quartz small inclusions, blotches, and irregular distribution can occur in engineered stone. This is not a product fault or defective and is not covered in our 15 year limited warranty.

AC Stone Group protects each slab with a protective plastic coating please remove this sheet and perform a visual check of slab prior cutting.

Check batch numbers are the same.

Things to look for

1.Colour inconsistencies in slab
2.Cracks from transporting slab to manufacturing plant
3.Pits, Voids and blemishes
4.Variation in gloss levels
5.Thickness tolerance +/- 1.5 mm
6.Bowing of slab up to 3mm in length and 2 mm in width.(Check with straight edge horizontal not vertical)

AC Stone Group will not will not warranty any claims for any of the above, if the slab has be cut or modified in any way.

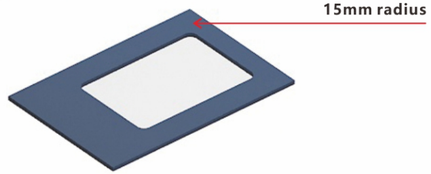
Colour matching

Batch numbers are located on back of slab, between each production of colour there is a variation we recommend you use same batch number to complete each individual fabrication using off-cuts were no identification numbers can be located will void your warranty.

FABRICATION

Cut-outs

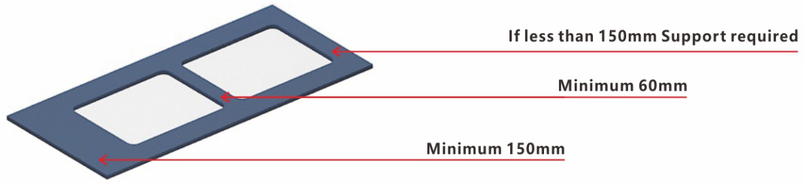
Sinks or cooktops are accessories used on benchtops. For all the cut-outs, please fabricate a minimum radius of 15 mm for all corners in cut-outs. The larger the radius, the stronger the corner which will limit the risk of cracking. Diagram below.



Under mount sinks

Make sure the cut-outs is slightly smaller than the accessory.
Then the join between the accessory and the surface is not visible. Round or bevel the edge for the cut-out.
The larger the edge profile the greater the impact resistance of the edge,
AC STONE GROUP® recommends the minimum radius of 6-8mm.
This will reduce the risk of cracking and chipping from impact.

Please note were there are double bowls (Under mounts) minimum 60mm between both bowls required.



11.3 CUT-OUT SUPPORTS

If the distance between the cut-out and a joint is less than 150mm, this will require support underside of benchtop.
This can be achieved by ensuring that all joints are placed at the junction of the base cabinets side panels or a solid slat be fitted under the joint.

Do not cross-cut. When preparing a cut-out use a core bit.
Avoid damaging the drill area with a cutting disk.

CUT-OUTS SUPPORTS

The minimum distance between a cut-out and an edge or join must be no less than 60 mm.
The greater the distance, the stronger the area.

If a large cut-out will leave front and back rails of less than 60 mm, important consideration should be given to making these rails from separate pieces to avoid problems with cracking.

Please advise the cabinet maker or customer that separate rails should be used and there is more possibilities for the rails cracking with less than 60mm.

Cut-out support

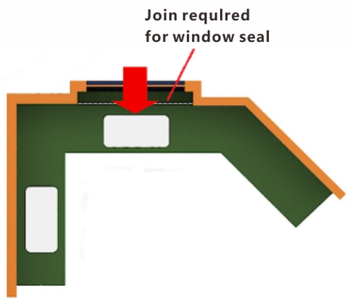
Regarding large cut-outs it is recommended that White vinyl wrapped timber rails be used in a vertical position for support this will minimise risk of top cracking especially around cooktop cut.

Note horizontal rails for support on underside of cut-out not recommended

Window sill/Reveals

In some fabrications stonemasons will be asked for the benchtop to continue onto window sills or reveals the temptation to fabricate in one piece is common, this will require the stonemason to cut as an L shape by doing so, it creates stress points on slab, also taking into consideration that it is an area of direct sunlight and sink cut-out contributing factors that may cause the Stress cracking.
AC Stone recommends a fill piece (Join) be used.

AC Stone Group warranty will not cover any cracking in this circumstance.

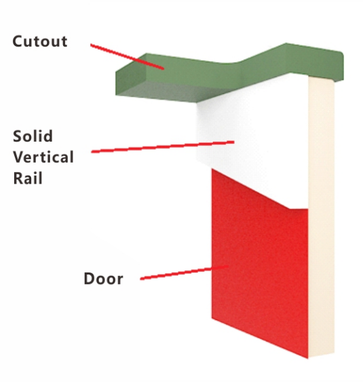


Cabinetry Support

It is important that plinths (Kick boards) provide a strong base for the positioning of cabinets and are considered oundation to minimise movement.
It is crucial that they are properly levelled and screwed fixed to the floor and wall.
Cabinets should be placed and fixed securely to ensure there is no movement.
It is also important that you have a level surface to place the tops on. Under-bench Appliances such as ovens, dishwashers and microwaves generate heat in a very confined area.
In order to protect the benchtop, we recommend that a solid top is installed above these appliances.
In doing so this will provide both support and insulation for the benchtop.

Cooktop Locations

Please avoid cooktop location above drawer units.
This restricts the use of vertical rails as most cabinet makers or joiners place rails horizontally and can weaken the support structure under the benchtop.

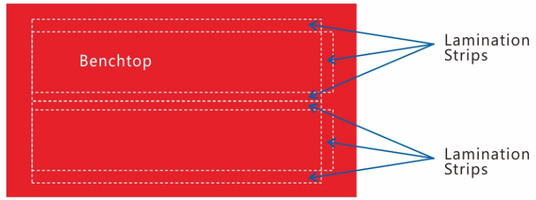


Dishwasher

Support is required across the top of a dishwasher space and over an under-counter oven.

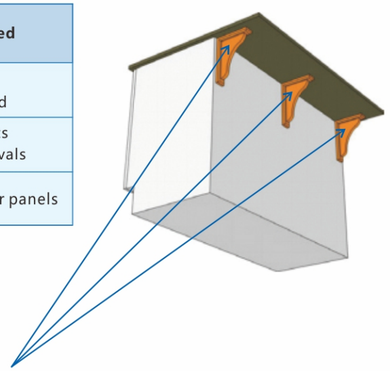
Lamination

All lamination of AC Stone Group product range must be from the same saw cut to insure same colour match,
taking from another area in the slab or from a different slab will result in a variation of colour and will be seen on edge profile.
This will not be covered under warranty.



Overhang

Overhang support 20 mm thickness slabs	30 mm thickness slabs	Support required
Less than 300 mm overhang	Less than 400 mm overhang	No additional support required
300-500 mm	400-600 mm	Support brackets at 600 mm intervals
Greater than 500 mm	Greater than 600 mm	Legs, columns or panels



AC Stone group AC Stone group

Mitred Edges

We strongly recommend mitred edge with shadow line for any drop-down panels, i.e. island bench waterfalls, bench waterfalls, etc.

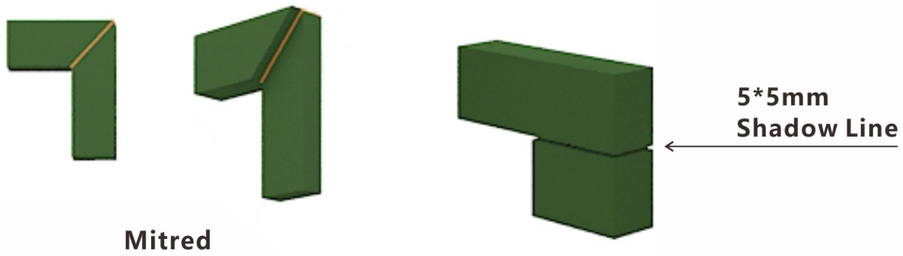
Mitred edges should be done at a 45 □ angle to ensure maximum strength.
The joint should be clean, flush, and parallel.

Mitred edges have the greatest area of weakness and are most prone to chipping.
Our recommended minimum edge profile is a 4mm bevel.
Our preferred minimum edge profile is a 4mm Pencil Round edge.

Chipping will occur where the application of the adhesive is not evenly distributed throughout the joint.

Ensure that the adhesive is thoroughly distributed throughout the joint for maximum strength.

Note: Chipping of the benchtop edge in this situation is not covered by our warranty.



Mitred

Joint Joins

- AC Stone Group Pty Ltd does not recommend installing “L” shaped (or other angled) bench tops without a joint at the corner of angle due to various stresses to be experienced by such tops after installation (e.g. settlement of cabinets etc.) Fabricator should use his own discretion when installing “L” shaped or angled bench tops. Warranty cannot be claimed when a L shape or Angled benchtop is fabricated out of one piece
- Joints in the tops should be well supported underneath.
  Insert picture l shape u shape with joins
- If a straight seam is not used, any internal angled corner in the seam must have a 9mm radius.
- All seams should be made level by adjusting the material before adhesive sets.
- Do not surface polish seams to make them even/level.
- Use a state-of-the-art seam setter tool to make seams as narrow and inconspicuous as possible.
  Seams should not be more than 2.0mm wide.

Sink drainage grooves

Please Note: That drainage grooved surface will not be the same finish as the rest of the Benchtop due to the different machine methods stonemasons use as compared to the original polishing system of slabs provided.

If the drainage grooves are too deep, it will seriously affect the strength and performance of the benchtop in and around that area. This may require additional support to be placed beneath the area to ensure that it will minimise any issues in the future.

Drainage grooves could pose cleaning issues for the home owner and require cleaning maintenance. Performance of the sink drainer is solely the responsibility of the stonemason.

Warranty will not be provide should there be product failure in the future.

Fixtures (Taps)

Can be installed on AC STONE GROUP slabs using two methods anchoring or adhesives or even both.

Drilling can be performed on slab using core bit (Wet cutting).

Applying excessive pressure when securing tap to top may cause damage to surface use the correct washer or pressure dispenser to avoid pressure point on small area.

Heat resistance

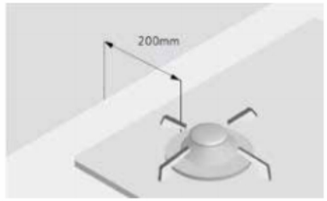
AC Stone Group' s products are heat resistant to moderate temperatures for a short period of time, prolonged exposure to heat will result in discolouring and possible hairline cracks may occur we recommend using a trivet to protect your benchtop from damage

Please do not place hot pots or frying pans straight out of oven or from cook top onto AC Stone Group slabs.

Splashback and Gas cooktops

A clearance between the nearest gas burner to any combustible splashback of 200mm or more means the installation will be fine. Any less than 200mm and you will need your builder to do a little bit of work to make it safe.

· AS/NZS 5601 Gas

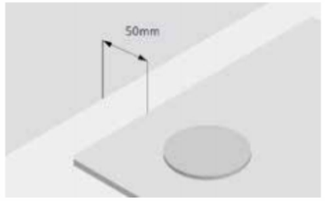


Gas cooktop

Splashback and Electric cooktops

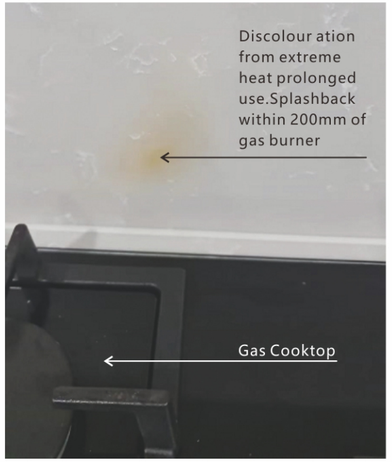
For both electric and induction cooktops it is a requirement to have a minimum 50mm gap from the back edge of the cooktop to the AC Stone Group's splashback.

· AS/NZS 4386.2 Electric



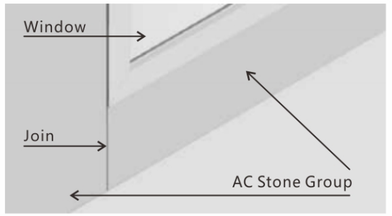
Electric cooktop

Example of splashback discoloured because Gas cooktop was within 200mm Burner



Window L SHAPES

We strongly recommend L shape fabrications splashback under window sill not be made from one piece but instead have join please see illustration below.

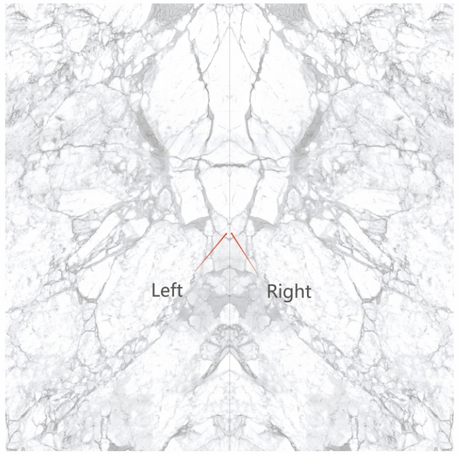


Book Matching

Is a term used for when two slabs with a Vein pattern are put together left and right.

The veins meets from one slab to another.

They are pairs, but they are not an exact mirror image there will always be a slight offset due to manufacturing of product and this is mainly caused by compression and vibration technics used to form the slab into its finished product.



Vein matching

Is a term used for when two pieces are cut from the same slab e.g. Waterfall feature, wrap around, Wall feature.

20mm Edge Profiles


20mm Aris


20mm Pencil Round

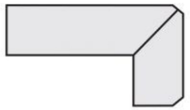

20mm Full Bullnose

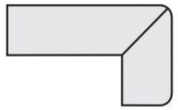

20mm Half Bullnose

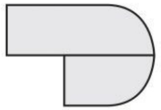

20mm Lambs Tongue


20mm Sharknose

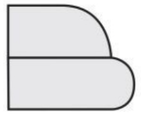
40mm Edge Profiles

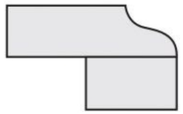

40mm Mitred Apron Aris

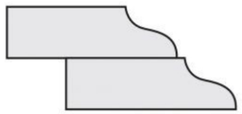

40mm Mitred
Apron Pencil Round


40mm Full Bullnose

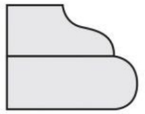

40mm Half
Bullnose-Half Bullnose


40mm Haif
Bullnose-Full Bullnose


40mm Lambs Tongue


40mm Lambs
Tongue-Lambs Tongue


40mm Lambs
Tongue-Half Bullnose


40mm Lambs
Tongue-Full Bullnose

Drawings are for illustration purposes only

HANDLING OF AC STONE GROUP SLABS

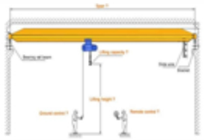
Equipment required when handling slabs

1.Forklift with Jib
2.Floor mounted crane with Jib
3.Overhead crane
4.Vacuum lifters

All lifting equipment and clamps must comply with current regulations.

1.Prior to lifting slab make sure the Jib is firmly secured before raising slab, do so slowly, also make sure the jib has been placed centre of gravity.
2.Check surrounding area for before lifting slabs for persons and obstacles.
3.Do not walk around or under a slab that is being raised or raised. Do not control product in between forklift and slab remain on the outside to control.

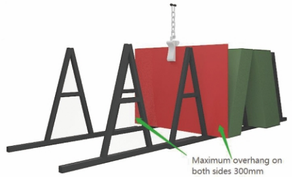


HOW TO STORE AC STONE GROUP SLABS

It is recommended that slabs be stored away from sunlight should you have no choice but to store outside keep polished finish away from direct sunlight.

Slabs are best stored on A frames between uprights on frame, making sure that over hang in length are equal on both sides of A frame. Do not store slabs on open ends of A frame.



TRANSPORTATION OF AC STONE GROUP SLABS

Transportation Of AC Stone Group SLABS Slabs are heavy and large in size they are required to be delivered on a truck in a safe and secure manner. Information on National Heavy vehicle website load restraints and load capacity, https://www.nhvr.gov.au

Use appropriate A frame to truck for loading making sure A frame is secure. Weight distribution is important be sure to load equally on both sides of A Frame.

Correct load capacity of Vehicle.

AC Stone Group reserves the right not to load Vehicles that are not in good working order or overloaded.

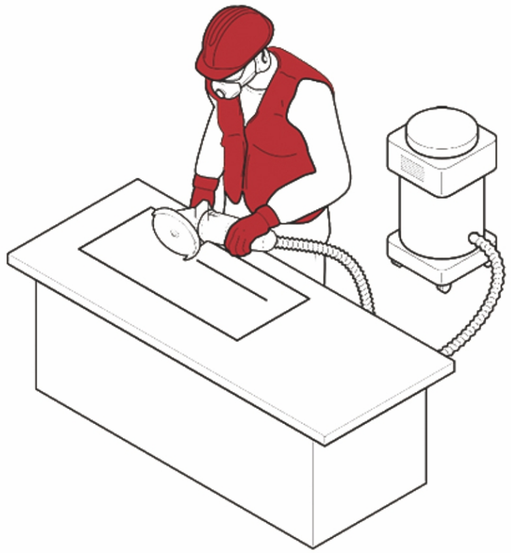
Secure stack of slabs to A frame of truck. See example below.

Working on site or End users home

All Fabrication and polishing must be done in a factory controlled environment. If cutting on site, a combination of water-cooled machinery and dust extraction system must be used minimize the amount of silica dust being expelled into the environment please ensure that the slab is not overheated by the friction of the blade.

Dry cutting of slabs may cause friction (Generating heat) which can lead to cracking chipping and discolouration of product which will not be covered under our warranty.

Wet tools used for cutting



Dust extraction on hand tools

Protection after Installation

After benchtops have been installed and cleaned it is good practise to protect benchtops with a protective cover we recommend corrugated cardboard especially if other trades will be working on site after installation is complete.

Other tradesmen may use benchtop to stand on excessive weight may crack benchtops especially around cut-outs.

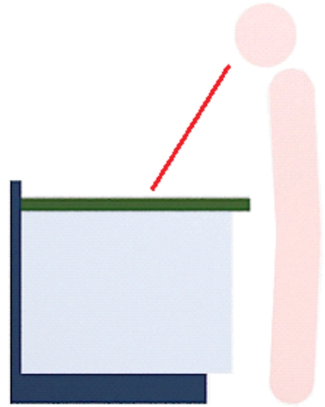
Other trades use solvents and adhesives that may spill which may leave marks on benchtops that may not be removed.

We recommend that customer' s signs off on completion of installation,
this is to protect you against damages caused by others.

Standards and Tolerances

Slabs installed are to be viewed from a normal position.
A normal position is looking at the tops at a distance of 600 mm with the surface of the slab illuminated by non-critical light

"Non-critical light" means the light that strikes the surface is diffused and is not glancing or parallel to that surface.
Slight variations in the colour and finish of materials do not always constitute a defect' in slab.



AC Stone Group merchandising

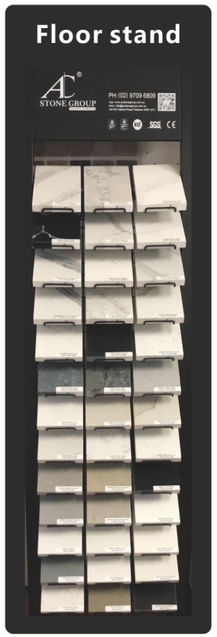
We provide merchandising to Kitchen retailers, Stonemasons, Builders and Architects & Designers.

1.Floor stands
2.Retail boxes
3.Brochures (Do not use brochure for colour selection)
4.Website

All of the above are a good indication of what the colour looks like,
however there is a variation to the full size slab especially Vein colours.
We recommend you invite customer to view full size slab at our showroom
63 Fairford Rd, Padstow NSW 2211.

Merchandise available

Floor stand



Retail Box

Sample folder

AC Stone Group® Care Instruction & Maintenance

Everyday Cleaning

AC Stone Group® surfaces require very little maintenance to keep them looking like new. For every day, routine cleaning of AC Stone Group® we recommend wiping the surface with warm soapy water (a mild detergent) and a clean damp cloth.
Do not use the cloth you use to wash the dishes, as it may transfer oils and other contaminants to the AC Stone Group® surface.

Stain Resistance

As AC Stone Group ® is virtually non-porous, it will never require sealing. Its low moisture absorption is resistant to stains caused by wine, fruit juices, liquid food colouring, tea and spices with strong colours.
Never attempt to polish the surface and avoid prolonged rubbing in one spot when cleaning.

Food Preparation

- We always recommend cutting on an appropriate cutting board and never directly on the AC Stone Group® surface to avoid blunting kitchen knives or damaging the surface of your bench top.
- Never cut food directly on your AC Stone Group® benchtop.

Cleaning

- FOR LIGHT, EVERYDAY CLEANING:
- Wipe surface with a warm soapy water and a clean, damp cloth.
- FOR STUBBORN STAINS, MARKS AND DRIES SPILLS:
- For dried spills, remove solids first. A wet cotton cloth is recommended for any stubborn stains. Avoid forceful scrubbing as this may result in a loss if shine. Rinse well with water. If necessary, a PH neutral household liquid detergent is acceptable.
- Do not use bleach on or near an AC Stone Group® surface.

Heat Resistance

- Placing a hot items directly onto your AC Stone Group® bench is not recommended. Even though AC Stone Group® has heat resistant, excessive localised heat may in damage to your AC Stone Group® due to thermal shock.

Maintenance

- To keep your AC Stone Group® clean, simply wipe with a soft cloth and a PH neutral household liquid detergent. Avoid exposure to products with high PH levels such as oven cleaner. If it happens, please rinse immediately with clean water to neutralise the effect, then follow usual cleaning procedure.
- Avoid excessive weight being placed on the benchtop when such as tradespeople standing on the benchtop when carrying out other work in your home such as painting or electrical work.

AC Stone Group® Warranty Registration

- Have you registered your AC Stone Group® 15 Year Limited Warranty yet?
- Register online www.acstonegroup.com.au
- Please complete and submit the AC Stone Group® 15 YEAR LIMITED WARRANTY FORM on Website: www.acstonegroup.com.au with proof of your purchase of AC Stone Group® product within 90 DAYS of purchase of the product. After 14 days processing of our after-sale service, you' ll get a formal AC Stone Group® 15 Year Limited Warranty PDF file which is effective immediately.

SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name ACSTONE
Synonyms ARTSCUT STONE

1.2 Uses and uses advised against

Uses BUILDING APPLICATIONS
Interior application, bench top, splashback, furniture top, reception desk top etc.

1.3 Details of the supplier of the product

Supplier name **AC STONE GROUP**
Address 63 Fairford Road,Padstow,NSW,2211,AUSTRALIA
Telephone 02 97096809
Email info@acstonegroup.com.au
Website www.acstonegroup.com.au

1.4 Emergency telephone numbers

Emergency 029709 6809

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

2.2 GHS Label elements

No signal word, pictograms, hazard or precautionary statements have been allocated.

2.3 Other hazards

The solid product as supplied is classified as non-hazardous under normal conditions and does not present an inhalation, ingestion,skin, or eye hazard. However, dust created when the product is cut, grinded and machined may contain crystalline silica some of which may be respirable (particles small enough to go into deep parts of the lung when breathed in).

3.COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances/Mixtures

Ingredient	CAS Number	EC Number	Content
QUARTZ(CRYSTALLINE SILICA)	14808-60-7	238-878-4	<93%
ADDITIVE(S)	-	-	<4.7%
TITANIUM DIOXIDE	13463-67-7	236-675-5	<4%
PIGMENT(S)	-	-	<1%
GLASS	-	-	<40%
POLYESTER RESIN(S)	-	-	7 to 15%

Ingredient Notes Additives include Al203,Fe203, TiO2,CaO,etc.

4.FIRST AID MEASURES

4.1 Description of first aid measures

Eye For dust exposure, hold eyelids apart and flush continuously with running water. Continue flushing untiladvised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

Inhalation Due to product form/nature of use, an inhalation hazard is not anticipated. However, if exposed to dustgenerated from processing the stone, transport to fresh air area immediately. Apply artificial respiration andseek immediate medical attention if experiencing breathing difficulties.

Skin For dust exposure, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

Ingestion For advice,contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). Due toproduct form and application, ingestion is considered unlikely.

First aid facilities None allocated.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture

Combustible. May evolve toxic gases if strongly heated.

5.3 Advice for firefighters

No fire or explosion hazard exists. Toxic gasses may evolve in fire.

5.4 Hazchem code

None allocated.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Always avoid dust generation. Avoid inhalation of dust generated from processing the product.
Wear Personal Protective Equipment(PPE) as detailed in section 8 of the SDS.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Moisten with water to prevent a dust hazard and place in sealable containers for disposal or reuse.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7.HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation.Observe good personal hygiene, including washing hands before eating.
Prohibit eating, drinking and smoking in contaminated areas.
Install proper and suitable ventilation where dust is generated.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool,dry,well ventilated area, removed from incompatible substances and foodstuffs.
Ensure materials are adequatelylabelled and protected from physical damage.

7.3 Specific end uses

No information provided.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m3	ppm	mg/m3
Quartz (respirable dust)	SWA(AUS)	--	0.1	--	--
Titanium dioxide (a)	SWA(AUS)	--	10	--	--

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls Avoid dust inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Wet where possible. Maintain dust levels below the recommended exposure standard.

PPE

Eye/Face If cutting or sanding with potential for dust generation, wear dust-proof goggles.
Hands Wear leather or cotton gloves. Wash hands after handling.
Body Wear proper work clothing.
Respiratory If cutting or sanding with potential for dust generation, wear a Class P2 (Particulate) respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	MULTI COLOURED SOLID
Odour	ODOURLESS
Flammability	COMBUSTIBLE
Flash point	NOT AVAILABLE
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	NOT AVAILABLE
Specific gravity	NOT AVAILABLE
Solubility (water)	INSOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Hazardous polymerization is not expected to occur.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

Incompatible with strong acids (e.g.hydrofluoric acid).

10.6 Hazardous decomposition products

May evolve toxic gases if heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met. Ingestion is unlikely to occur. If ingested, seekimmediate medical attention. The intact and finished product is expected to be low toxicity. Under normalconditions of use, no adverse health effect is anticipated.

Information available for the ingredients:

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
TITANIUM DIOXIDE	5000 mg/kg(rat)	--	3.43-6.82 mg/L air(rat)

Skin Not classified as a skin irritant. Contact with dust generated may result in mechanical irritation, redness, rash and dermatitis.

Eye Not classified as eye irritant. Contact with dust generated may result in mechanical irritation, lacrimation and redness.

Sensitisation Not classified as causing skin or respiratory sensitisation.

Mutagenicity Not classified as a mutagen.

Carcinogenicity Dust created when the product is cut, grinded and machined may contain crystalline silica some of which may be respirable (particles small enough to go into deep parts of the lung when breathed in). Crystalline silica is classified as carcinogenic to humans (IARC Group 1). However, there is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis. Therefore, preventing the onset of silicosis will also reduce the cancer risk.

Reproductive Not classified as a reproductive toxin.

STOT-single exposure Over exposure may result in irritation of the nose and throat, with coughing.

STOT-repeated exposure Dust created when the product is cut, grinded and machined may contain respirable crystalline silica (particles small enough to go into deep parts of the lung when breathed in). Repeated overexposure to crystalline silica for extended periods may result in silicosis.

Aspiration This product does not present an aspiration hazard.

12.ECOLOGICAL INFORMATION

12.1 Toxicity

This material in its intact finished form is not expected to cause harm to plants, fish or animals.

12.2 Persistence and degradability

Persistant and non-biodegradable.

12.3 Bioaccumulative potential

The material and its components are not expected to bioaccumulate.

12.4 Mobility in soil

Low mobility expected in a landfill situation.

12.5 Other adverse effects

The main component/s of this product are not anticipated to cause any adverse effects to plants or animals.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS#	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No-European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration,50%/Median Lethal Concentration
LD50	Lethal Dose,50%/Median Lethal Dose
mg/m3	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highlyalkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity(repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

Prepared by

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Web:www.rmtglobal.com

PRODUCT NAME ACSTONE

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal Reuse where possible. No special precautions are normally required when handling this product.
Legislation Dispose of in accordance with relevant local legislation.

14.TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE,IMDG OR IATA

	LAND TRANSPORT(ADG)	SEA TRANSPORT(IMDG/IMO)	AIR TRANSPORT(IATA/ICAO)
14.1 UN Number	None allocated.	None allocated.	None allocated.
14.2 Proper Shipping Name	None allocated.	None allocated.	None allocated.
14.3 Transport hazard class	None allocated.	None allocated.	None allocated.
14.4 Packing Group	None allocated.	None allocated.	None allocated.

14.5 Environmental hazards

No information provided.

14.6 Special precautions for user

Hazchem code None allocated.

15.REGULATORY INFORMATION

15.1 Safety,health and environmental regulations/legislation specific for the substance or mixture

Poison schedule A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

Inventory listings AUSTRALIA:AICS (Australian Inventory of Chemical Substances)
All components are listed on AICS, or are exempt.

16. OTHER INFORMATION

Additional information

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Porcelain

Hazard Statement

Crystalline
silicaUncontrolled cutting and grinding of materials containing crystalline silica presents a serious risk to healthUncontrolled cutting, grinding or drilling of products or materials containing crystalline silica can generate hazardous levels of airborne dust.
Breathing in this dust, usually over several years, leads to serious and fatal lung disease such as silicosis.
Inspectors can issue prohibition notices to stop you
from doing work that generates high levels of silica dust. You must use water, dust extraction systems on portable tools, or adopt other methods that eliminate or minimise the generation of silica dust.If you are a fabricator or installer of manufactured stone materials, you must comply with the above methods highlighted in red for the safety and health of persons and environment.

Protection

All workers Fabricating AC Stone Group slabs must comply with local OH&S regulations which in includes correct equipment and PPE

1. Wear respirator.
2. Wear Protective gloves.
3. Wear protective apron.
4. Wash hands.
5. Wear hearing protection.

Safety guidlines

General Safety Procedures AC STONE GROUP has always been active in creating a safe work environment.
We recommend that Stonemasons and installers follow the same level of commitment regarding safety and comply with local occupational, health and safety regulations. Keep working areas well ventilated and well lit.
Maintain a clean and neat working environment;
keep working areas unclutteredKeep visitors at a safe distance from the work area.
Do not overreach - keep proper footing and balance at all times. Maintain a fully equipped first-aid kit on site.
Read the instruction manuals pertaining to the tools used.
Learn the tools' application, maintenance, limitations and potential hazards. Use the appropriate tools.
Do not use tools or attachments for functions or at speeds for which they were not designed.
Do not use improvised tools. Maintain tools in top condition. Keep tools sharp and clean for best and safest performance.
Wear the following protective apparel when fabricating surfaces:
Hair covering to contain long hair Safety helmet when handling and transporting.
Dust mask.Nonslip, steel-capped safety shoes. Safety glasses or other approved eye protection.
Earplugs when working in noisy areas. Gloves for protection against chemicals or rough material.
In wet areas, aprons and steel-capped boots.

Benefits and Feature of Product

1. Easy to clean- resistance to chemical cleaning which makes it great for exterior cladding especially in areas of high density pollution.

2. High traffic/Wear & Tear- Suitable for flooring both Commercial and residential applications. Hard surface makes impervious to extreme weather conditions.

3. Hygienic properties- Bacteria and fungus resistance due to its non-porous value creating a safe environment amongst allergy sufferers.

4. UV resistant- Colour will not fade from exposure to sun light and weather conditions

5. Waterproof- Low Porosity will not absorb water also stain resistant

Size and thickness availability

Size of slab

3200x1600x12mm
2700x1200x6mm

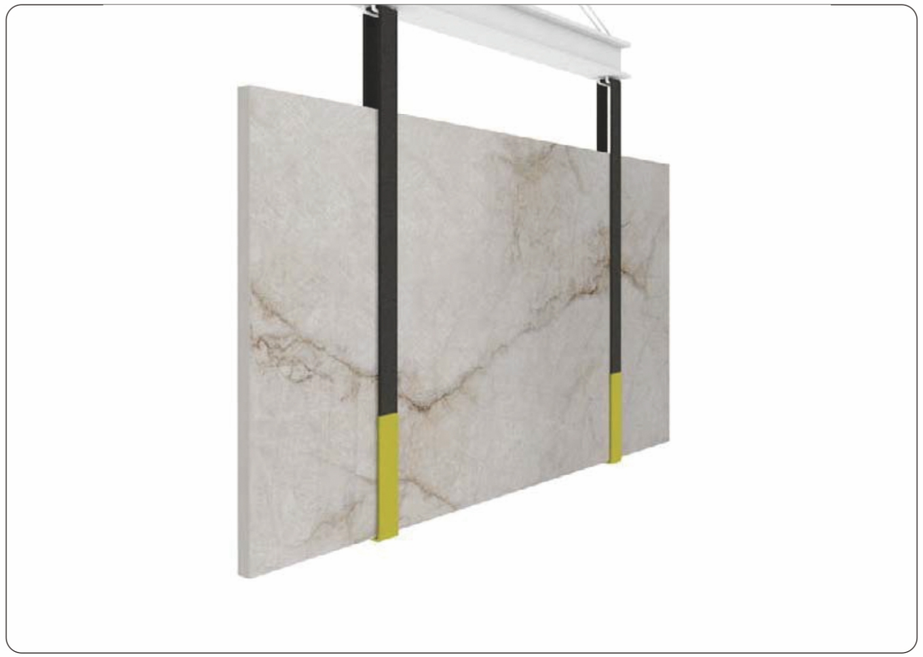
Weight

3200x1600x12 mm 73 kg
2700x1200x6 mm 150 kg

*** Please check Price list for alternative size in certain colour**

Handling Porcelain with sling

As demonstrated in Pic 3 sling handling with Gantry crane will manage to move several slabs at a time, slings must be canvas and be able to hold load capacity of slabs.
Do not use chains or any other metal slings as it will damage slabs.



Pic 3

Slab Handling

The risk of breakage and chipping Porcelain slab to be handled with care and attention in compliance with safety and with edges protected. When handling, loading and unloading please use the correct handling systems make sure slabs are balanced prior to movement.

Handling with clamps

Pic 1

Pic 2

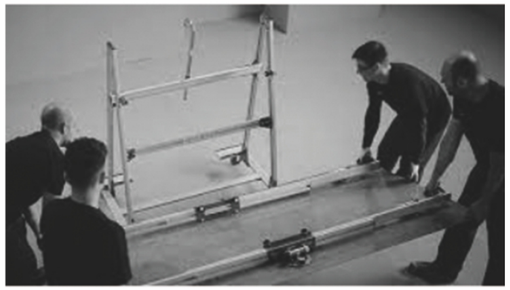
1. Clamps demonstrated in Pic 1 can handle 2 slabs at once

2. A Gantry crane using a double clamp which grips slabs at 2 contact points to prevent slabs flexing and possibly breaking.

3. Prior to lifting please ensure contact points are clean to avoid slipping.
   Rubbing fittings should also be placed at contact points to avoid damage to Porcelain but also create better gripping

4. When a double clamp is not available when using a single clamp you can create a greater contact point by using
   a straight piece of timber Length 2000mmx Width 200mmx Thickness 20mm.
   By doing this it will decrease the chances of the slab bending, flexing and then breaking. Pic 2

Manual Handling



Pic 4

When it comes to manual handling you can only handle 1 slab at a time this is to be done by using a suction cup frame as illustrated in Pic 4 this is to support slab to avoid flexing and bending 4 people to handle 12mm thick slabs and 2 for 6 mm slabs. Failure to use the correct clamping tool can result in injuries.

Inspection of slabs

Before the fabrication process is to begin we recommend that you inspect slabs for hair line cracks, marks, and manufacturing defects.

Once inspection has been completed it is important to destress the tension in slab this can be done by cutting 20mm in from the perimeter of the slab we recommend cutting long sides first then short side.

Tips

Care and Maintenance

Porcelain Panels are stain resistant, but care must be taken to immediately clean off stains, especially on polished bench tops.

To ensure stubborn stains do not occur is to immediately wash away stains such as red wine, food and drinks, using warm water and a soft cloth.

For stubborn stains use a non-abrasive cleaning product, sugar soap or normal house cleaning products. Do not use cleaners that have strong alkaline pH levels and thoroughly rinse the surface with clean water to remove residue.

Full Cleaning and Maintenance Guide is available on www.acstonegroup.com.au

Heat Resistant

The advantages of Porcelain is that it is cured at high temperatures and is resistant to thermal shock we still recommend that you place a mat when placing items like hot pots oven trays on benchtops.

Safety guides when manufacturing Porcelain

Safety guidelines when fabricating Wear an approved face mask when fabricating Maximum.

Always cut and fabricate with wet diamond tools and take appropriate measures to provide efficient ventilation in the work area.

Always wear approved eye, boot and hand protection when fabricating porcelain. Sharp edges of cut or broken porcelain can be sharp

Tension cutting

In manufacturing Porcelain the finish product may have tension within the slab it is reccomended that prior to fabricating tension cuts be made as demostrated in picture below.

Please note bridge saw bed must be flat and level this will help minimise Porcelain from cracking during the cutting process.

Water jet cutting

Cutting Parameters

Thickness	Cutting speed m/min	Pressure (Bar)	Abrasive rate
6-12mm	0.8-1.8	2800-3700	0.35-0.45

Surface area large and straight to hold the slab.

Level of water above slab 3-4mm.

Destress slab straight cuts must follow through outside of slab parameters.

Beginning of each cut entry pressure 550-700 bars.

When making subsequent cuts, make sure that corners have a radius of at least 8 mm in 12mm thick slabs.
Make sure corners have a radius of at least 6 mm in slabs under 12 mm thick.

Fabricating slower and adjusting cutting speed will improve a cleaner cut.

Bridge saw cutting

Cutting Parameters

Thickness	Cutting speed meter per minute straight cut	Saw Blade mm	RPM
		300	2350-2600
6-12mm	1.4 - 1.6 meters	350	2050-2250
		400	1750-2200
		450	1450-1850

When cutting on a bridge saw a Diamond saw blade is suitable for cutting Porcelain

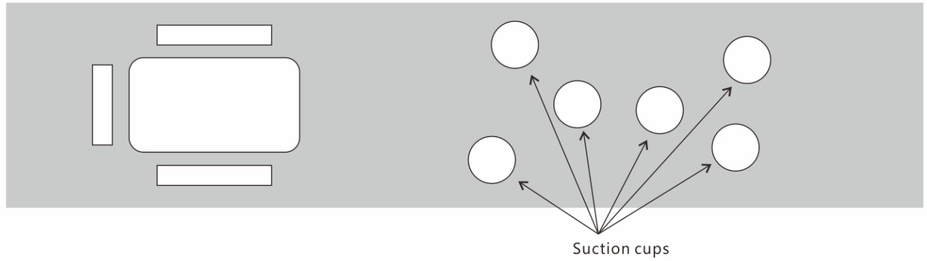
Bridge saw bed must be large enough to support size of slab also must be straight and flat surface.

Descent speed .1m/min

Tension cutting 2 long sides' first then short side.

When first cutting slab reduce cutting speed fir the first 300mm and when exiting the cut 300mm.

CNC Cutting



Core bit recommendations for drilling holes/Speed

Core drill RPM 4500.
Cutting speed (mm/min) 20.

Finger Bit recommended for cutting.

Finger bit RPM 4600.
Cutting speed (mm/min) 120.

Use specific porcelain cutting tools when fabricating constantly, please ensure water is constantly used both on cutting bit and material.

Area surface must be large enough to hold the slab flat otherwise added tension will be placed on slab which may result in cracking.

Suction cups for best support, to prevent cut pieces from falling and twisting during cutting process.

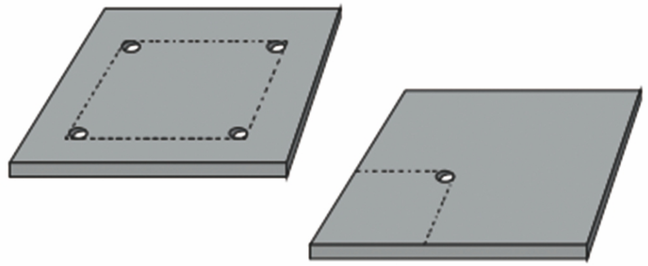
Tension cuts required to distress slab prior to fabricating finished cut sizes.

When making subsequent cuts, make sure that corners have a radius of at least 8 mm in 12mm thick slabs. Make sure corners have a radius of at least 6 mm in slabs under 12 mm thick.

When creating cut-outs, start to cut at a point inside the cut out and proceed out toward the perimeter of the cut, using a slightly curved cutting motion.

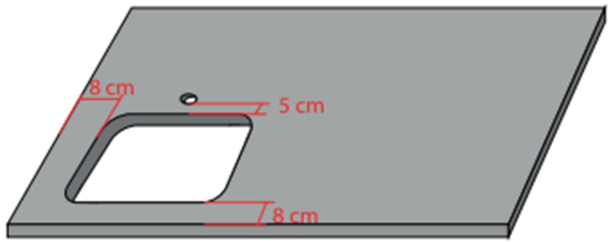
CNC cut outs

NOTE: Cut-outs are made by first drilling out the corners with core bit.



when fabricating a cut out please bear the following in mind:

- The minimum distance between a cut-out and the edge of the slab should be at least 8 cm
- The distance between a hole for a tap and the cut-out should be at least 5 cm



Minimum distance between a cut-out to the edge of the slab should be 80mm.
The distance for tap hole no less than 50mm as illustrated above.

4.2 Sink cut-outs/cut-outs

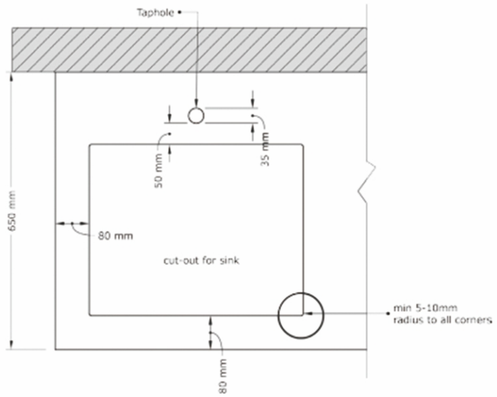
For general cut-outs including sink, holes must be drilled inside corners with a drill bit then cut from hole to hole for 12mm thickness a 16mm drill bit must be used for an 8mm radius.
For 6mm slabs 12 mm bit is required to create a 6mm radius.

During the cutting process cooling the saw blade with a constant jet of water is important also directed at cutting area

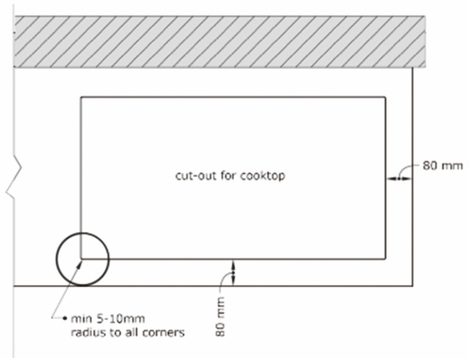
When first cutting slab reduce cutting speed fir the first 300mm and when exiting the cut 300mm.

Blade depth should not be more than 3mm thickness of slab e.g. 12mm thickness blade depth 15mm.

When cutting small pieces, it' s recommended that it be secured to stop saw blade from getting twistered on start and finishing cut.

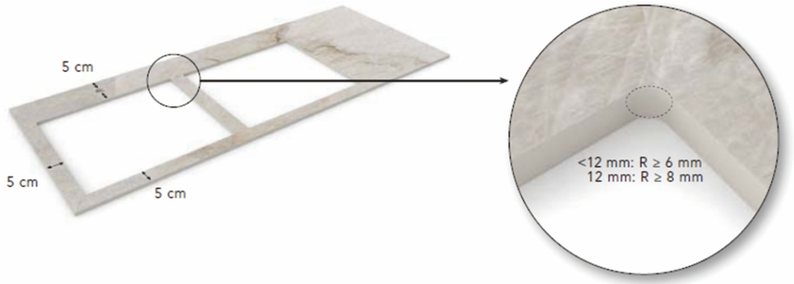


A 1 Dimensions for sink cut-out



A 2 Dimensions for cooktop cut-out

Sink and Tap cut outs



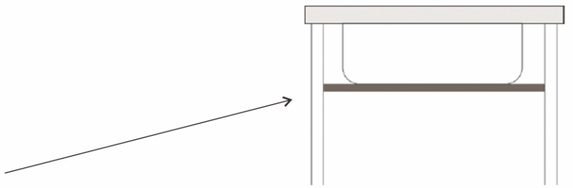
5 cm or 50mm between holes and the edges of the distressed slab and between the edge of the sink hole and the tap hole as demonstrated in the above picture.

Straight corners or 90 degrees is not to be done, it will create stress points and over time may cause stress fractures in benchtop, a radius of at least 6 mm for the corners of holes in slabs less than 12 mm thick, and a radius of at least 8 mm in slabs of 12 mm thickness is the correct fabrication

Drop-in sink, no requirement as the cut-out is smaller than the overlap of sink which protects the edge cutout from chipping.

Under mount sinks the top edge of Porcelain must be bevelled or rounded of the inside edges of the cutout at least 2 mm to minimise chipping.

Cabinet fabrication to support sink



Support required for Sink

Any cut-out made in fabricating automatically weakens the piece of Porcelain in particular sink cut-outs taking also into consideration that holding water within sinks is added weight therefore it is essential that sinks are supported as illustrated in picture above.

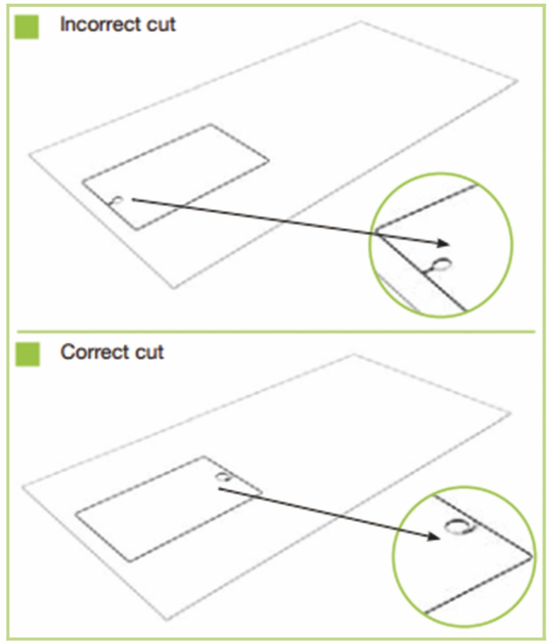
Also plywood around sink & underneath the slab. This provides additional support for the sink.

CNC

1. Make an initial hole for the recess with a coring bit, with minimal descent speed, especially at the start and end of the drilling process. Raise the core bit slightly before completing the hole to reduce the pressure inside it and blow out.

2. Approach the cutting tool to the line of the cut with a curved trajectory.
   When making subsequent cuts, make sure that corners have a radius of at least 6 mm. Halve the speed in the final part of the cut which completes the recess. Never lower the cutting tool straight onto the surface of the slab.
   Never use the oscillation function with cutting tools.

3. When grinding inside edges, always start from a hole already made.

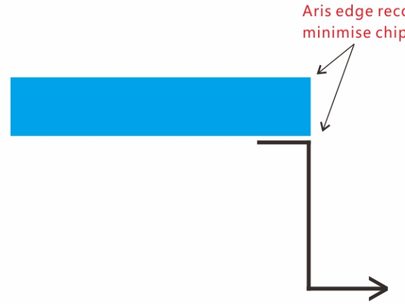


Please note diagram not to scale.

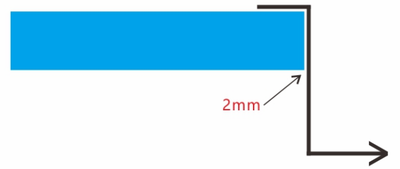
Types of Sinks

Below illustrated in diagrams are different types of under mount, Drop in sink (Top mount) and flush mount sink. Please follow installation guide of the sink manufacture. Flush mount sink leave follow installation guide it is recommended to leave a 2mm gap between sink and counter bore.

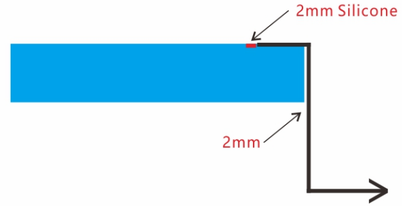
Under mount sink.



Drop in sink.



Drop in sink.



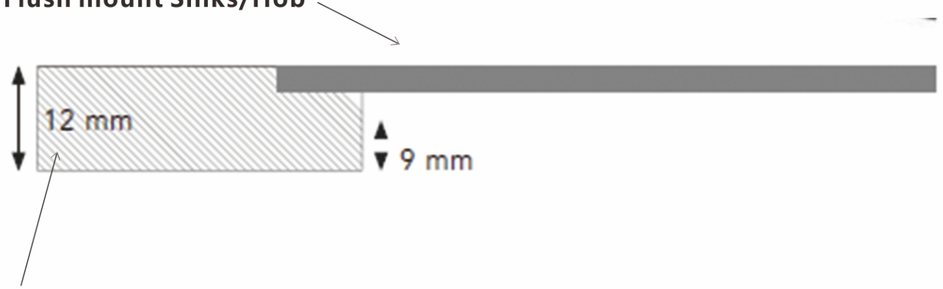
Please note diagrams are note to scale.

Flush mounted sinks/Cooktop

For all types of sinks, the basic wooden structure should be built first, ready for waterproofing and then covering with the slabs.

Holes for flush-mounted sinks and hobs must only be created in 12 mm slabs, cutting to a depth of no more than 3 mm in the mounting zone.

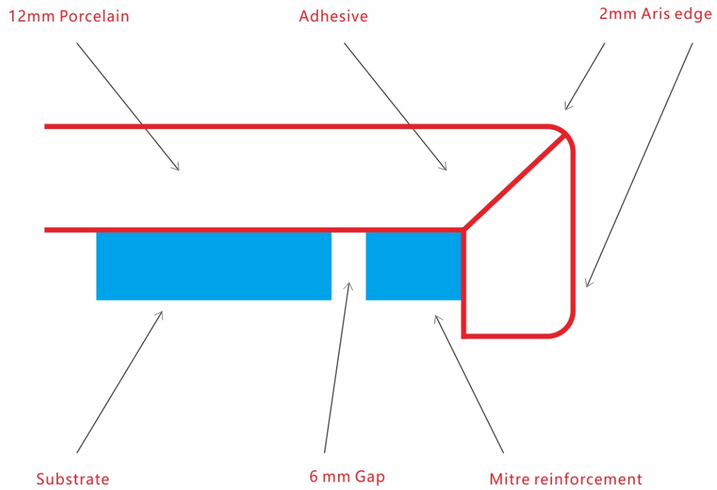
Flush mount Sinks/Hob



Porcelain

Mitred joints

Edges will require to be glued with a specific adhesive please ensure mitres have been cleaned prior to the application of glue. As illustrated below reinforce mitre allow a gap 10mm between mitre reinforcement and substrate.



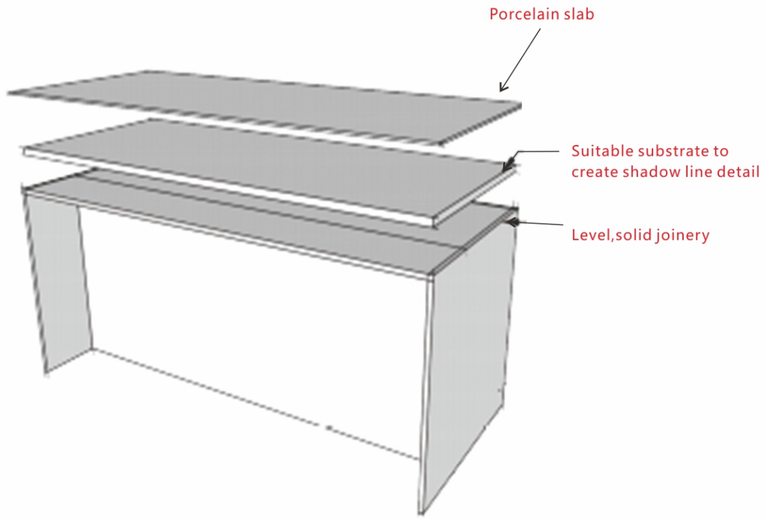
Please note diagram is not to scale

It is important to read carefully the recommendations of the adhesive manufacture regarding temperatures that are recommended for gluing mitres. There are also specific adhesives for outdoor use.

Substrates for benchtops

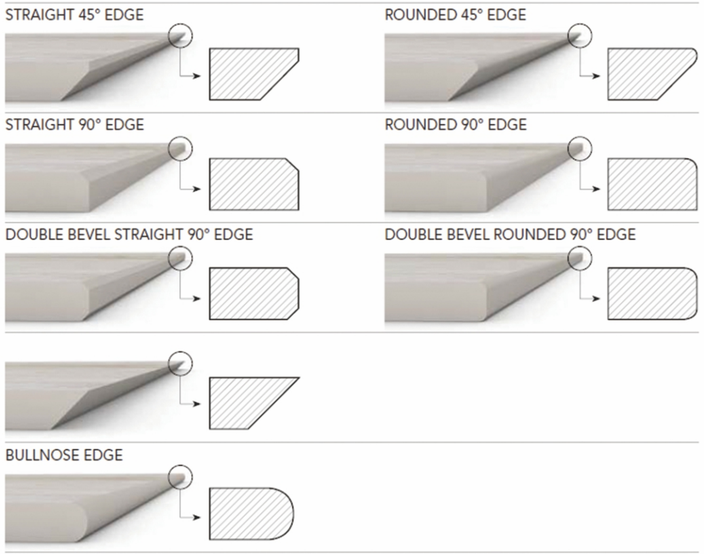
When selecting substrate for Porcelain benchtops and rigid and moisture resistant substrate is best we recommend CFC (Compressed fibro cement) CFC is a combination of cement and reinforcing fibres formed into sheets, of varying thickness that are typically used as a tile backing board.
HMR (High moisture resistant board know as melamine board).

Do not use timber battens as substrate. Substrate requires complete contact to Porcelain slab.



Prior to installing Porcelain when doing your check measure please check joinery is level and suitable substrate has been installed.

Edge Profiles



Edge finishing

Mitred edges

This type of edge is used for waterfall side aprons and increasing thickness of edge profile.
Use component epoxy adhesives preferably in same colour as surface.

Once mitre is glued a Astra edge or bevel edge of 2mm on the top of corner as illustrated in Pic1.

Straight edge

Round edge

Transportation/manual handling

Damage to Porcelain slabs occur post fabrication mainly in transport toensure and minimise the risk to damaging/cracking but also saftey to workers here are some helpful tips as illustrated in Pic T.

Ensure that A-Frame is higher and longer than material transporting.

Do not allow material that has been fabricated to over hang A-Frame.
Using a substrate not guarantee against damage or cracking porcelain slab.

Unloading by Hand.

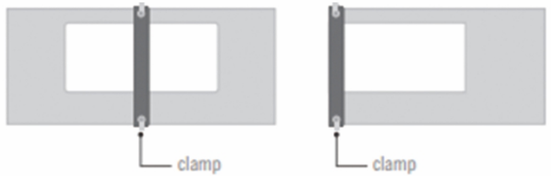
Pic MH

There will be situation were delivery to site Porcelain slabs will requirie manual handling please follow these steps.

Attach support frame illustrated below Pic SF
this will stop flexing and potential breaking.
If unsupported Porcelain may break causing
sharp edges that may do serious injury.

Pic SF

Secure sink cut-outs with clamps as illustrated below in Pic C. This can be done by using timber off cuts and clamps.



Pic C

Transportation/manual handling continued

Slabs must be carried in a vertical position as illustrated in previous page Pic MH.At not point should you carry slabs in a horizontal position.The right way to place Porcelain slab is to lean it onto its final position illustrated below in Pic LP and with a coordinate movement place slab into its final position. (Please use gloves).

Pic LP

Handling equipment.

Adhering Porcelain to substrates and splashback installation.

When gluing Porcelain to an existing substrate or splashback you must ensure that the adhesive spread has coverage of at least 2-3mm thick full coverage as illustrated below in Pic G.
Do not leave air pockets under bench tops. Ensure that manufacturers curing times have been performed before any works such as core drilling, plumbing or on-site cut outs.

Pic G

Splashback installation.

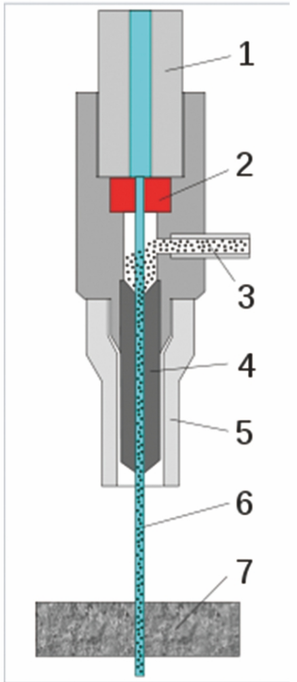
When gluing Porcelain to an existing wall you must ensure that the adhesive spread has coverage of at least 2-3mm thick full coverage as illustrated below in Pic S.
Do not leave air pockets. Ensure that manufacturers curing times have been performed before any works such as on-site cut outs.

Pic S

Prior to installing splashback please make sure wall that you are installing to is a clean surface no loose debris.
Also wall has no uneven surface and is flat this will ensure correct installation.

Fabriction tips

Machinery used for Porcelain cutting.
1. Bridge saw (Porcelain blade)
2. CNC (numerical controlled cutting core bit/cutting bit)
3. Water jet (Water pressure/Abrasive particles) Illustrated below Pic WJ.



A diagram of a water jet cutter. #1: high-pressure water inlet. #2: jewel (ruby or diamond). #3: abrasive (garnet). #4: mixing tube. #5: guard. #6: cutting water jet. #7: cut material

Pic WJ

Tips for cutting Porcelain Panels using a bridge saw or water jet.

Must use a solid base, such as a flat stone slab – slightly larger than panel size.

Continuous water flow.

Only run slow cuts. Step cutting is an option, as well as first creating a small step cut at opposite end.

Porcelain blade.

Use handling equipment as required.

Secure panel were possible, to avoid any flex or vibration in product when cutting.

When cutting smaller panels to use stone off cuts around perimeter edge of panel to minimise panel movement.

Always wear approved eye, face, boot and hand protection when fabricating. Cut edges of porcelain

Regular sharpening of the blade is essential.

Always cut and fabricate with wet diamond tools and take appropriate measures to provide efficient ventilation in the work area