



sareenstone

# INSTALLATION GUIDE

## CRAZY PAVING

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Crazy paving, also referred to as flag stone, is a paving style consisting of irregular stone pieces random in size and shape. This creates a one-of-a-kind pattern similar to wall cladding since no two projects will look the same.

Some of the advantages of crazy paving are the flexibility and freedom of design. The crazy paving works well in unusual floor shapes and can adapt to the unique curves of your landscaping.

## PRODUCT VARIATION

As crazy paving is a natural quarried product, every piece is unique and carries the markings of its formation history. No two pieces will be the same and that is the beauty of natural stone. Variation is intrinsic in natural stone and ensures that every installation is unique.

Our goal is to set realistic expectations with our clients. Before ordering, ensure considerations have been made to understand what variation is to be expected with this product.

## SAREEN STONE STANDARDS

We specialise in the import of premium-quality natural stone. In operation since 2003, with our industry experience, we've established close relationships with quarries and suppliers from around the world. This enables us to source and develop products that meet the unique needs of our clients.

## CONSIDERATIONS

Every installation must consider the on-site conditions and refer to the relevant Australian Standards for trade practices, and manufacturer's installation and usage guides. As every site and conditions can differ, this document is to be used as a guide only.

Your trade professional, contractor and /or Specifier will be able to advise if the following recommendations are appropriate or need to be adjusted. The advice in this document is a guide

only and is not to replace the services of professionals.

## DELIVERY AND STORAGE

Crazy paving is packed in timber crates. Once your product has arrived, please check the order for correct product and quantity. It is important to establish if any additional product is required quickly as new batches may vary. Please note, stone is sometimes packed wet and will appear darker than expected. As stone dries it can lighten in colour.

We suggest crates are stored out of direct sunlight and rain, single stacked and on a level surface.

## SUBSTRATES

Preparation is key to ensure a successful installation. The substrate should be completely flat, level and clean. For natural stone being laid on concrete, the depth required for the purpose needs to be considered.

Pedestrian use only  
(reinforced concrete minimum 75mm)

Vehicular traffic below 3 tonne gross mass  
(reinforced concrete base minimum 100mm)

*Note: Engineer's advice is recommended when considering concrete substrates. Contractors also need to consider drainage and / or waterproofing issues to minimise the risk of rising humidity, which can bring salts contained in the soil or in the bedding layers to the surface.*

## CONTROL JOINTS

Control joints are recommended for the substrate (concrete sub base). The joints in the concrete base should be continued through the mortar bed and grout joint. Control joints help absorb variations in the flooring caused by temperature swings and other movement in the sub grade, concrete base, mortar or actual tile itself.

In addition to structural concrete joints, tiled surfaces should also include appropriate control joints every 20m<sup>2</sup> that penetrate through tile and

the bedding mix, but not through the concrete substrate.

Generally, the overall floor is divided into compartments where technical expansion joints are set out in a crosswise and/or longitudinal direction (minimum 5mm joints every five metres). We recommend you consult a structural engineer when designing the base. Control and Movement Joints should be carried out in accordance with AS3958.

## PRIOR TO INSTALLATION

Prepare crazy paving by firstly removing any loose material from the back, and ensure it is clean and free from dust. Minor marking and chipping is not structural and not considered as defective. A few pieces may have chips or marks and these can be used for cuts. An allowance of 10% is added to allow for wastage, cuts and continuation of batch. Installation of the product constitutes acceptance of the product.

Prior to installation it is advisable to blend the pieces from different crates to achieve a congruent appearance.

When installing natural stone, it is imperative that the correct system and products are used to ensure you receive the best possible result.

## PRE SEALING

Pre-sealing prior to laying should be considered depending on the stone selected and the environment it is to be installed. When pre-sealing, ensure the product used is appropriate to work in conjunction with the selected tile adhesive.

## WEATHER CONDITIONS

Avoid laying stone in extreme weather conditions or if rain is expected.

It is not advisable to lay stone on days above 30 degrees Celsius as this can affect the bonding of the adhesive with the stone.

## INSTALLATION

Installation methods will vary depending on factors such as the size of the stone, the moisture sensitivity and where it is to be installed.

**Adhesives:** All natural stone is porous to some degree, so a moisture sensitive adhesive specifically for natural stone must be used. It is essential to read and follow the manufacturer's advice. 100% adhesive coverage is required.

Whether installing onto a waterproofing membrane, concrete base or onto a screen bed, the immediate surface that the adhesive will be adhered to must be allowed to cure according to manufacturers' specifications.

## LAYING

*Wet mortar bed* – Apply the mix of bonding compound slurry to the concrete evenly to a depth of 1-2mm then add the mortar mix and paste to a total even thickness of at least 25mm. Be careful not to leave any voids or gaps.

Apply the bonding slurry to the back of the stone in an even coat (1-2mm) and place in position. Once in the correct position, gently tap each piece with a rubber mallet to the desired level and ensure there are no air voids under the crazy paving.

Fill any voids in between the crazy paving pieces with a trowel and remove excess. Clean the surface of the stone with a wet clean sponge. Always work in small areas to guard against premature drying.

*Synthetic adhesive bed* – prepare a sub floor (screed) that is flat. Spread the adhesive with a notch trowel and back butter the base of the crazy paving with adhesive. This ensures 100% coverage. The layer of adhesive is to be between 6 - 12mm. Refer to your preferred adhesive supplier for their range of suitable adhesives.

## CUTTING

We recommend using a wet saw with the appropriate diamond blade to ensure a clean cut. The stone should be washed immediately after it is cut to avoid cutting paste drying and staining the

surface of the product. The correct PPE should always been worn, and Work Health Safety conditions met. For WHS information refer to [safeworkaustralia.gov.au](http://safeworkaustralia.gov.au)

## GROUT

The spaces between the crazy paving can be filled with either grout or a sand/cement mix.

The choice of colour is personal but the general rule of thumb is to choose a colour similar to the stone so that the stone is the hero, not the grout.

Dampen the stone and grout joints with a wet sponge. Apply the grout to the full depth of the joints, being careful not to leave any gaps or air pockets. Remove excess as you go and clean the entire surface with the wet sponge once the grout is touch dry, but before it completely hardens. Ensure all grout residue is cleaned from the surface of the stone within the time limit as specified by the grout manufacturers' instructions.

## CLEANING PRIOR TO SEALING

Once the grout has set the stone should be thoroughly cleaned to remove any dirt or residue. Firstly, use a broom to remove loose debris then apply a pH neutral cleaner (never acidic) and clean with a stiff broom or nylon pad. Rinse thoroughly.

## SEALING

We recommend all stone be sealed to help protect against staining and to allow easier cleaning. Penetrating sealers do not form an impenetrable layer across the surface of the stone. They allow the stone to breathe while also changing the chemical nature near the surface to delay staining.

In general water-based sealers are better at repelling oil based stains but solvent-based sealers last longer outdoors.

We recommend the STONETECH® Professional range of sealers, cleaners and maintenance products. Please ask one of our natural stone specialists for the most suitable product for your particular application.

Engaging a cleaning and sealing specialist is always recommended for a professional result.

## EFFLORESCENCE

Efflorescence is what occurs when water brings soluble salts to the surface. When the water dries, it leaves white calcium salts behind. Efflorescence should not be confused with grout haze, which is maintenance and cleaning issue.

Efflorescent stains should be scraped off with a paint scraper, swept up and disposed of before any stain removal starts. Once the efflorescence stains have been removed, fill any small holes in the grout and seal the paving again. If water is not getting in, then efflorescence won't be coming out.

## PREVENTING EFFLORESCENCE

Avoiding efflorescence involves three key steps. Australian Standards recommend that a membrane is laid over a sand/cement screed to stop any soluble salts being brought to the surface and minimise water entry into the paving system, and to direct any water that does get in to an exit point where staining won't be obvious.

Cutting down on the entry of water involves good grouting, filling any small cracks and applying sealer. Hosing the surface can increase efflorescence so we advise to sweep instead.

Directing water that enters under the paving to a drainage outlet needs to be planned before the paving goes down. This must involve the substrate not having any ponded water. It can involve laying strips of drainage cell under the screed to make easy escape for water to drain. It is common to have an angle in the screed to prevent water under paving on a deck from carrying water down behind stairs.

## ONGOING MAINTENANCE

Interior floors: Dust mop interior floors regularly using a clean, non-treated, dry dust mop. Sand, dirt and grit do the most damage to natural stone surfaces due to their abrasiveness. Mats or area rugs inside and outside an entrance will help to

minimize the potential damage from these particles.

Be careful when using a vacuum cleaner as the metal or plastic attachments or wheels may scratch the surface. Damp mop the stone floor with a diluted solution of a neutral cleaner designed for stone. Keep off floor until completely dry, as wet stone floors may be slippery.

Exterior surfaces: Should be swept and then washed with water or a pH neutral cleaner designed for stone.

Bathroom and other wet areas: Periodic use of a neutral stone cleaner will remove any soap scum or hard water deposits that may have formed. In the bath, or other wet areas, using a squeegee after each use can minimise soap scum and hard water deposit build-up.

What to do when a spill occurs: No matter how careful, spills can happen. A quick response and the right solutions can keep spills from damaging your stone or degrading the sealer.

## TROUBLESHOOTING

Etch marks: Highly acidic substances such as orange juice, coffee, vinegar, wine, tomato products, mustard and many soft drinks will “etch” most marble, limestone and travertine. Sealing allows you time to wipe up a spill, but it cannot stop the chemical reaction that may leave a dull mark.

General cleaners not specifically designed for natural stone are not recommended. These may etch away the polish, discolour the surface, scratch the stone or degrade the sealer. Professional refinishing is the best way to permanently remove etch marks and restore your natural stone’s even finish.

Organic Stains: For most organic stains such as tannins from leaves, sawdust, food, moss, or mould, we advise to remove the remains of the stain and dry the area with a clean white cloth. Spray the area

with a neutral stone cleaner and wipe off excess with a clean cloth.

Inorganic Stains: Most inorganic stains such as rust, vanadium, copper, and other metal, paint and chemical stains require an inorganic solvent, such as oxalic acid, paint stripper or solvent to remove them. These products should only be used by a professional.

Oily Stains: If you identify the stain as having an oil base (from foods like salad, cooking oils, butter or some cosmetics) you may be able to remove the stain using a poultice. A poultice will wick up the stain from deep within the stone.

Scratch Removal: Scratches in natural stone surfaces can occur but are not permanent. Surface scratches can often be removed with fine sandpaper or honing powders.

**IMPORTANT WARNING:** Do not use acidic cleaners on your natural stone as it may affect the colour and texture of your stone. We recommend seeking help from a professional prior to use. Contact your installation contractor or one of Sareen Stone’s Natural Stone specialists for further information.

Note: Above instructions are for reference purposes only. Please follow label directions on back of actual product.

*Please note these Installation tips are provided in good faith and to the best of our knowledge and experience at the time of writing. Always check against the relevant Australian Standards for trade practices at the time of installation. In no way do these tips replace the services of professional contractors and / or consultants. The best advice is to always seek the services of a qualified professional when installing our products.*