



SmartStone



INSTALLATION GUIDELINES

CLADDING

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THE GROUNDING PRINCIPLES

(Important concepts to understand in order to install your SmartStone product to last a lifetime)

There is good reason for SmartStone advocating the methods described in these installation guidelines. Feel free to "Google" and cross check them against what international experts prescribe. (There is a wealth of good "how to" videos on the internet.) They all say what we say in these installation guidelines.

In section 1.3 and 1.4 of these guidelines, we describe a few universal rules related to paving. Please read these. Every single method described in these guidelines is related to one or more of these rules.

- A residential driveway is a road. Whether you have one car driving on it or a thousand cars, your road should be able to carry the weight of a single car at a time. We have all seen roads being constructed. Contractors spend weeks preparing the base or foundation. They use rollers, graders and other heavy equipment to prepare various layers before quickly coating it with a thin layer of asphalt.
- As described above, paving derives its strength from the layers beneath the paving blocks. These layers need to be constructed with the right aggregate. A well-compacted foundation is critical for your paving to last a lifetime.
- Do not install plastic sheeting beneath paving. Plastic sheets negatively affect the structural integrity and drainage of paving. Furthermore, they do not prevent weed growth, as weeds grow from the top as a result of bird droppings, the wind etc. – not through the paving.
- Consult an engineer experienced in the design of segmented block paving for paving intended to carry commercial traffic, or residential applications where the soil is clay, sand or contains excessive moisture.
- If you are replacing a paved area that has previously failed, establish why your paving failed initially, and ensure that the causes are addressed when repaving.
- Paving on top of existing structures and slabs require special design considerations. Consult an engineer experienced in the design of segmented block paving on slabs.
- Consult SmartStone's product brochure or website for suggested laying patterns that are aesthetically and structurally suited to the paving application. It is important to avoid continuous joints in the direction of vehicular traffic.
- Water ingress is detrimental to any paved area. The paved area must be higher than the surrounding ground level, and sloped so that water drains from it. Paving must always slope away from buildings. Water from downpipes should flow into a gully, or into an underground drain, and not over the paving, to prevent the grouting from being washed out.
- Pavers must be sealed around a salt chlorinated pool; and on a paved patio where there is a braai.
- Almost all cement grouting of pavers and flagstones exposed to the elements (i.e., sun, rain, heat, cold) fails over time – either from expansion and contraction due to temperature variations, or movement of the pavers. We recommend using a proprietary grout, such as Romex, available from Cretesol.
- Paved areas need to be maintained, and should grouting or edge restraints start to fail, this should be repaired promptly.
- Pavers are brittle. They could chip and break, if not handled with care. Never throw pavers in wheelbarrows or front-end loaders and tip them at the destination. Pack and unpack pavers individually, by hand, when using a wheelbarrow to move them.
- It is important to note that there will be slight variances in colour between different batches of pavers. It is always advisable to draw and install pavers from different packs during installation, to avoid a patchy finish.

INSTALLATION OF CLADDING

1.1. SURFACE PREPARATION

- If the wall to which you'd like to install cladding is already plastered and painted, you will need a hammer and masonry chisel to chip off bits of the paint and plaster. This is done to help the mortar adhere to the walls surface.
- New walls require a curing period of at least 28 days before cladding may be installed.
- Expansion joints in the walls must be maintained and carried through the mortar and cladding. Expansion joints should be filled with suitable flexible / expandable filler.
- The wall must be free of any dust and loose particles prior to installation.
- If the back of the cladding appears to be shiny or smooth, use a wire brush to roughen the surface. This is essential to ensure proper adhesion of the tile adhesive to the tile.
- Before bedding the cladding, ensure that any loose material is removed from the back of the cladding using a wire brush for this purpose.
- Lightly moisten the prepared wall with a block brush immediately before installing cladding.

1.2. SETTING OUT THE INSTALLATION

- Lay a test pattern on the ground before you start cladding to ensure that you have the desired pattern and effect. Ensure an even distribution of the various sizes.
- Using spacers will help ensure that your cladding has uniform gaps.
- Cladding units can be cut with an angle grinder or masonry saw fitted with a diamond-tipped blade.
- Always ensure correct protective gear is worn when cutting tiles.

1.3. ADHESIVE/MORTAR

- Cladding units are adhered to the wall using a good tile adhesive or a stiff mortar mix (1:3 cement / plaster sand mix with bonding liquid or plaster key).
- Apply the mortar to the wall with a bed thickness of 8-10mm.
- Spread only enough mortar so that it does not dry out before the cladding can be installed.

1.4. BEDDING & POSITIONING THE CLADDING

- Press the cladding firmly into the mortar and make sure it is bedded securely with the aid of a small rubber mallet.
- A thin +/-2mm "back buttering" on the rear of the cladding is recommended to ensure that there are no voids between the cladding and the mortar, giving better adhesion.
- If the mortar starts to overflow on the sides, there is too much mortar on the wall or cladding.
- Ensure the cladding units are positioned so that the gaps between them are even and the rows are horizontal.
- The mortar or tile adhesive should be left to cure for at least 2 days before grouting.

1.5. GROUTING

- Grouting can be done using a stiff mortar mix (1:3 cement / plaster sand mix).
- Grout from the top down to avoid unnecessary cleaning.
- Use a pointing tool to create the desired finish.

1.6. CLEANING

- Use a wet sponge to immediately remove any cement that comes into contact with the face of the cladding during installation or grouting. The sponge must be rinsed regularly in clean water to avoid staining the cladding. If left to dry, it will stain and be very difficult to remove. Never clean cladding with acid. This will permanently damage the cladding.

1.7. SEALING

- Cladding is not usually sealed. However, SmartStone-approved sealants (available from SmartStone), are available to add a penetrating, protective coat to minimise the risk of staining, and ease of cleaning.





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