



MAXSTONE CLADDING SYSTEM TECHNICAL BULLETIN

FIXING OF MAXSTONE CLADDING RANGE TO WALL SUBSTRATES

The following schematic diagrams give some guidance in relation to the fixing systems needed for the Maxstone Cladding range.

Please refer to individual product specifications for correct laying practices and technical data.



Maxstone Cladding
15 Year Guarantee

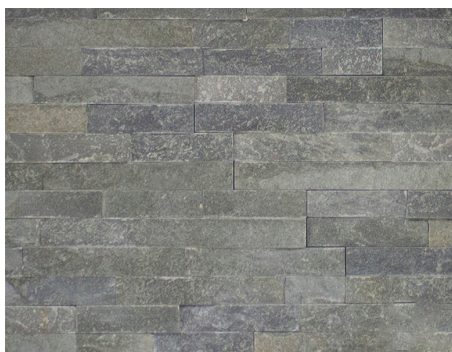


Sika Davco
15 Year Waterproofing
System Guarantee

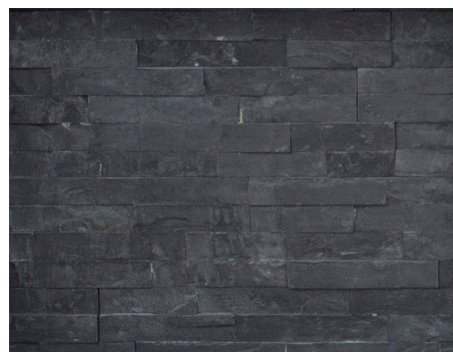
MAXSTONE CLADDING OPTIONS



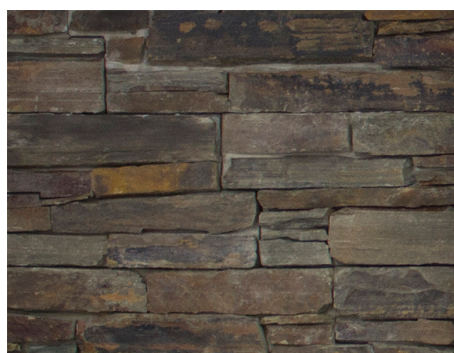
Maxstone Strip Autumn
Cladding 150x550
Corner 150x550



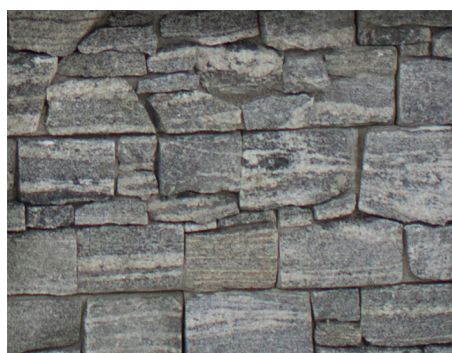
Maxstone Strip Grey Stone
Cladding 150x550
Corner 150x550



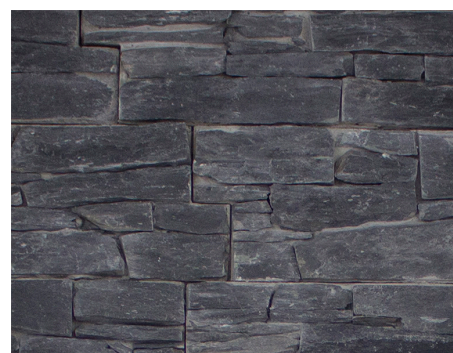
Maxstone Strip Black Stone
Cladding 150x550
Corner 150x550



Maxstone Modular Cladding Autumn
Mixed sizing in box allows for body pieces and corners.



Maxstone Modular Cladding Schist
Mixed sizing in box allows for body pieces and corners.



Maxstone Modular Cladding Black
Mixed sizing in box allows for body pieces and corners.



MAXSTONE STRIP CLADDING LAYOUT

Please see below for the Maxstone Stone Strip cladding layout. These styles come in two parts, the main body piece and the corner piece.

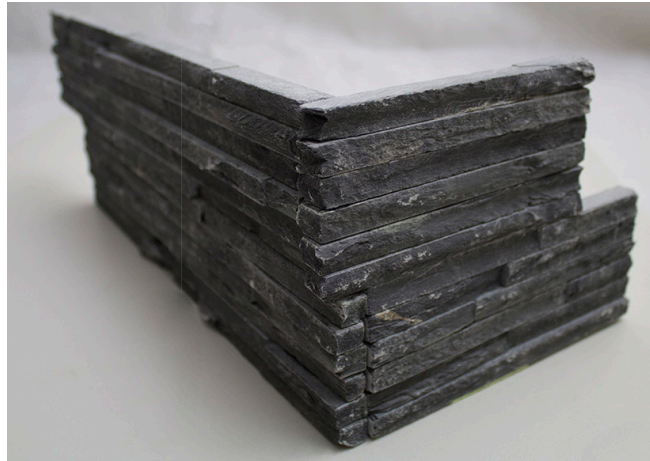
This product has a thickness of 5mm-25mm. Sizes are as follows:

Body Piece: 150x550mm

Interlocking Corner: 2 Pieces combined size 150x550mm

1 Piece - 400x150mm

1 Piece - 150x150mm



Maxstone cladding features interlocking shape to give a natural look once installed. This natural stone has natural variation from piece to piece, no 2 pieces are the same. As each piece is pre-formed to install like tiles, it save labour costs for you.

Variation in shade and caliber and imperfect edges is a character of Natural Stone and adds to the authentic look.



MAXSTONE MODULAR CLADDING LAYOUT

Please see below for the Maxstone Stone Modular Cladding layout - these pieces are designed to randomly lay and have finished edges for external corners.

Stone is a natural product presenting variations which need to be worked with from time to time. Should the stone not interlock properly, options are:

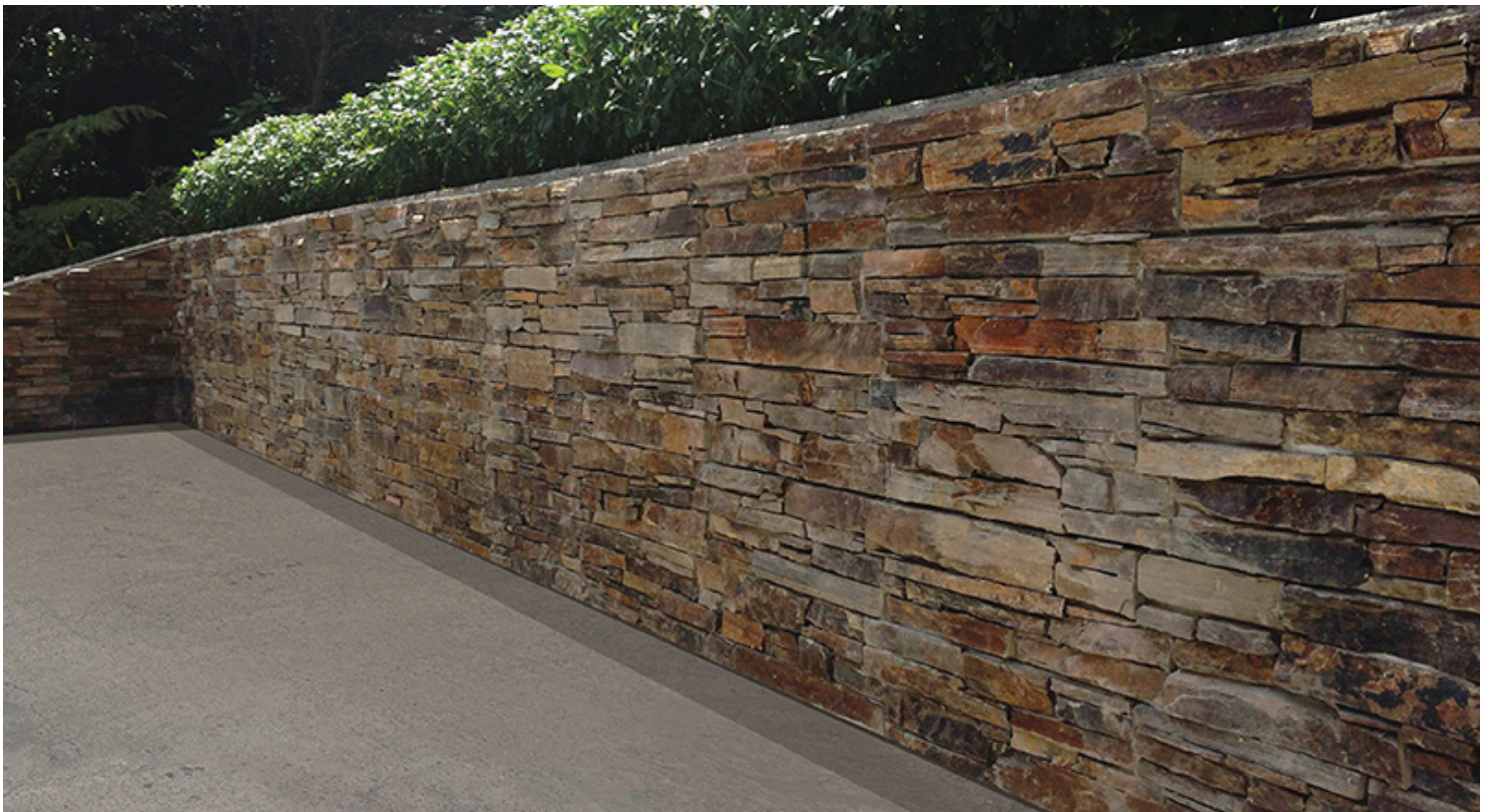
1. To trim the stone internal edge closing any visible gap.
2. Point with your grey adhesive or the closest possible grout colour.

This product has a thickness of 25-40mm. It is sold by the box and contains below:

2 pcs 550x200mm

2 pcs 330x200mm

2 pcs 220x200mm



MAXSTONE CLADDING FIXING SUBSTRATE OPTIONS

Please see a list below of approved substrate systems that can be used alongside the Maxstone Cladding system.



MAXSTONE STRIP CLADDING: INNOVA STONESHEET

(Can be used for Maxstone Venetian/Strip Cladding only)

INNOVA Stonesheet 9mm

<https://innovafibrement.co.nz/facades-linings/innova-fibre-cement/stonesheet/>



MAXSTONE STONE & STRIP CLADDING: ETERPAN MD

(Can be used as a backerboard for stone cladding up to 100 kg/m²)

ETERPAN Fibre Cement Sheet 9mm.

<https://fibrementsolutions.co.nz/products/eterpan/>

These systems must be installed in accordance with the manufacturers technical information. For full up-to-date specification and installation information please contact the manufacturer directly, or visit the above Websites.

MAXSTONE CLADDING TECHNICAL DIAGRAMS

Maxstone Cladding technical diagrams are available on our website. These show all installation details which can be given to builders or passed on to the council with your building plans.

These are available in both .pdf and .cad formats and can be found at:

tilemax.co.nz/trade-and-technical/technical-resources/maxstone-cladding-systems/



SPECIFICATION FOR EXTERNAL TILE INSTALLATION MAXSTONE CLADDING

PRODUCTS:

Client: TileMax NZ
Prepared by: Nick Collett & Ewen McDougall
Version: 2
Date: June 2024

Sika Australia Pty Limited
ABN 12 001 342 329
Tel: 1300 22 33 48
aus.sika.com

BUILDING TRUST



Davco products are available for purchase through Tilemax Limited. Please see page 13 for store contact information.

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Part 1 - General

1.1 Summary

- A. This specification describes the execution of the installation of tiles externally to a masonry substrate wall.
- B. The described procedure follows best practice procedures and the requirements of AS3958 Part 1 and Part2.
- C. This specification assumes that the structural substrate is structurally sound and fit for purpose.
- D. Substrates are nominated by the Maxstone fixing guide as per the below information:
 - PRIMAflex or PRIMAAqua 9mm www.ibs.co.nz
 - BGC Stonesheet 9mm www.bgcplaster.com
- E. This specification is for tiles that are, dimensionally stable, NOT moisture sensitive and fit for purpose.

1.2 Quality Assurance

- A. Manufacturing qualifications

The manufacturer of the specified product shall be ISO 9001:2008 certified and have in existence a recognized on going quality assurance program, independently audited on a regular basis.

- B. Contractor qualifications:

Contractor shall be qualified in the field of tile installation with a successful track record of 5 years or more. Contractor shall maintain qualified personnel who have received product training by a manufacturer's representative.

- C. For installations where the stone is fixed above 2.4 meters high. This specification shall be used in conjunction with mechanical fixing designed and supplied by others. These installations shall be approved by a suitably qualified engineer.
- D. For installations over framed substrates the system shall be approved by a suitably qualified engineer to ensure the substrate(s) are engineered to accommodate the incumbent loads of the stone system.
- E. Materials should be installed in accordance with all safety and weather conditions required by manufacturer or as modified by applicable rules and regulations of local, state and federal authorities having jurisdiction. Consult Material Safety Data Sheets (MSDS) for complete handling recommendations.

1.3 Delivery, Storage, and Handling

- A. All materials must be delivered in original, unopened containers with the manufacturer's name, labels, product identification, and batch numbers. Damaged material must be removed from the site immediately.
- B. Store all materials off the ground and protect from rain, freezing or excessive heat until ready for use.
- C. Condition the specified product as recommended in the PDS

1.4 Job Conditions

- A. Environmental Conditions: Do not apply material if it is raining or if such conditions appear to be imminent. Application temperature should be between 5°C and 35°C.
- B. Protection: Precautions should be taken to avoid damage to any surface near the work zone due to mixing and handling of the specified material.



- C. All for all products to adequately cure in accordance with data sheets. Note in cold weather the curing process is prolonged. Finished works shall be protected during cold weather and in hot weather provide shade to areas being tiled.

1.5 Submittals

- A. Submit two copies of manufacturer's literature including but not limited to: Product Data Sheets (PDS), and appropriate Material Safety Data Sheets (MSDS).

1.6 Manufacturer

- A. Tile Adhesive – **SMP EVO mixed with Davco Davelastic additive** supplied by Sika Australia Pty Ltd is considered appropriate for these works
- B. Joint Sealant – **Sikaflex Pro** supplied by Sika Australia Pty Ltd is considered appropriate for these works
- C. Joint Sealant Primer – **Sika Primer -3N** supplied by Sika Australia Pty Ltd is considered appropriate for these works

Part 2 - EXECUTION

2.1 SURFACE PREPARATION

- i. The substrate shall be in a good sound condition and free from dust, oils and grease, loose or friable materials, laitance and other surface contamination and materials which will reduce bond.
- ii. If required fill any substrate imperfections i.e. voids and or blow outs with an appropriate Sika repair mortar.
- iii. The Areas to receive tiles shall be true to within 5mm in 3m. and be primed with **Davco PrimeX** and allow to dry.

General fixing notes:

- Maxstone system must be supported with a stainless steel metal angle, mechanically fastened to the wall before the first course is laid.
- The Maxstone should be stack laid on top of each other with no horizontal gaps.
- If constructed above 2.4 metres in height, stainless steel angles must be installed at intervals of maximum 2.4m, including suitable stainless steel fixings. DO NOT use aluminium, brass or galvanised steel supports and / or fixings. Consult an engineer and the manufacturer of the stack stone system for specific details and instructions.
- Check for contamination / epoxy coating on back of stack stone – if present it MUST be removed.
- Do not spot fix – 98% adhesive coverage is the minimum requirement.
- If there is any doubt, check / confirm the structural integrity and construction methods employed with a qualified façade engineer.
- All perimeter and expansion joints are to be sealed with a suitable Sika flexible sealant

Framed substrates notes: Please ensure all board substrate are designed to accommodate the incumbent loads and are specifically designed to receive a tile installation. Ensure substrates are installed as per the strict manufacturer instructions. Mechanical fixing and or shelving angles shall be designed by an suitable qualified engineer or referred to Maxstone fixing instructions

Renderers: for installation over brickwork or concrete masonry units (CMU) all surfaces must be thoroughly cleaned down and adequate mechanical keying provided where necessary. A splash coat must initially be applied to the face, which consists of:

- 1 Part Lanko Latex 751
- 1 part water
- 2 parts neat cement

The splash coat should be applied with a brush or broom and must not exceed 2mm in thickness. Whilst the splash coat is still moist and tacky, the render must be laid. It is required that 1 part Lanko 751, 3 parts water be used as an added mixture in the render mix in place of water. This enhances adhesion, flexibility, tensile

strength, impact/water resistance in the rendered wall. The use of plasticisers in the render mix is not permitted.

The render mixture should be:

- 1 part cement
- 3 - 4 parts clean washed sand

Renders shall be allowed to dry for 5-7 days prior to applications of waterproofing membrane or stone adhesives.

WATERPROOFING MEMBRANE (WHERE REQUIRED)

All framed substrates shall require a waterproofing membrane.

Apply a minimum 2 coat of Sika Sikalastic 1K waterproofing membrane to required areas in accordance with the product datasheet.

Ensure the membrane achieves a minimum 2.00mm dry film thickness.

Sheet joints will be treated with the Schonox St sealing flexible bandage or a self-adhesive Butyl waterproofing tape that design for direct tile fixing.

Allow the waterproofing membrane to dry between coats.

Periodically check the membrane thickness to ensure adequate films are being achieved in accordance with the product datasheet requirements.

2.2 STONE ADHESIVE INSTALLATION

- Substrate that do NOT require a waterproofing membrane shall be primed with Davco PrimeX prior to fixing the stone
- The adhesive shall be applied to the prepared substrate using a notch trowel to achieve a minimum 90% coverage to the substrate and the back of the tile. Use and appropriate size notched trowel to achieve a minimum adhesive layer of 3mm.
- Back-buttering the stone with adhesive is required to achieve 98% coverage to both the tile and substrate. Ensure tiles are properly bedded and adhesive ridges are broken to adequately support the tile.
- Clean any wet adhesive off the face of the stone prior to drying with clean water and a sponge while the adhesive is still wet.
- Periodically check for adequate adhesive coverage throughout installation

Stone adhesive mixing ratio: A 20kg bag of Davco SMP EVO shall be mixed with Davelastic Additive at a ratio of 1:1 with clean potable water. Refer product datasheet for additional mixing instructions.

2.3 EXPANSION, PERIMETER AND MOVEMENT JOINTS

- Existing joints in substrate shall be carried through tiling works
- Install new movement and expansion joints in accordance with AS3958 as required
- Expansion Joint size, dimensions and locations shall be designed by architect / engineer or suitably qualified person

END OF SIKA® SYSTEM SPECIFICATION



Ewen McDougall
Specifications Consultant
Sika Australia



Nick Collett
Market Field Manager- Building Finishing
Sika Australia

The information contained herein and any other advice are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. The information only applies to the application(s) and product(s) expressly referred to herein and is based on laboratory tests which do not replace practical tests. In case of changes in the parameters of the application, such as changes in substrates etc., or in case of a different application, consult Sika's Technical Service prior to using Sika products. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

MAXSTONE CLADDING BASE FIXING

Stainless steel L-profile trim is to be used at the base point or second course of your installation as it will assist to hold the shear weight of the stone.

Maxstone Stone Cladding: 30mm x 50mm x 1.6mm

Maxstone Strip Cladding: 20mm x 20mm x 1.6mm

When installing the stainless steel L-Profiles: Please refer to Fig. 1 below.

To fix the L-Profile, run a bead of neutral cure silicone around the back of the L-Profile (Picture framing it).

Fix to the wall with 65mm stainless steel screws at 400mm centres along the length of the trim in the studs. After drilling the holes, fill first with neutral cure silicone before inserting the screws.

Mix and use waterproofing/adhesive as per supplier installation procedure.

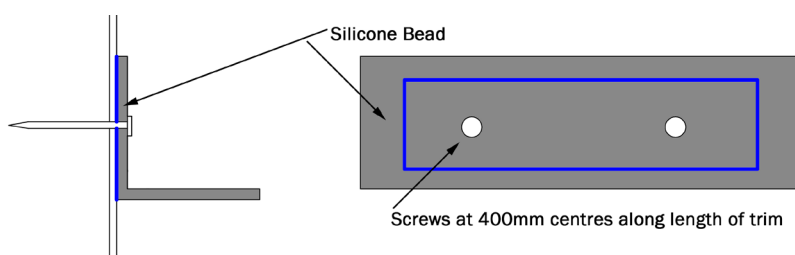
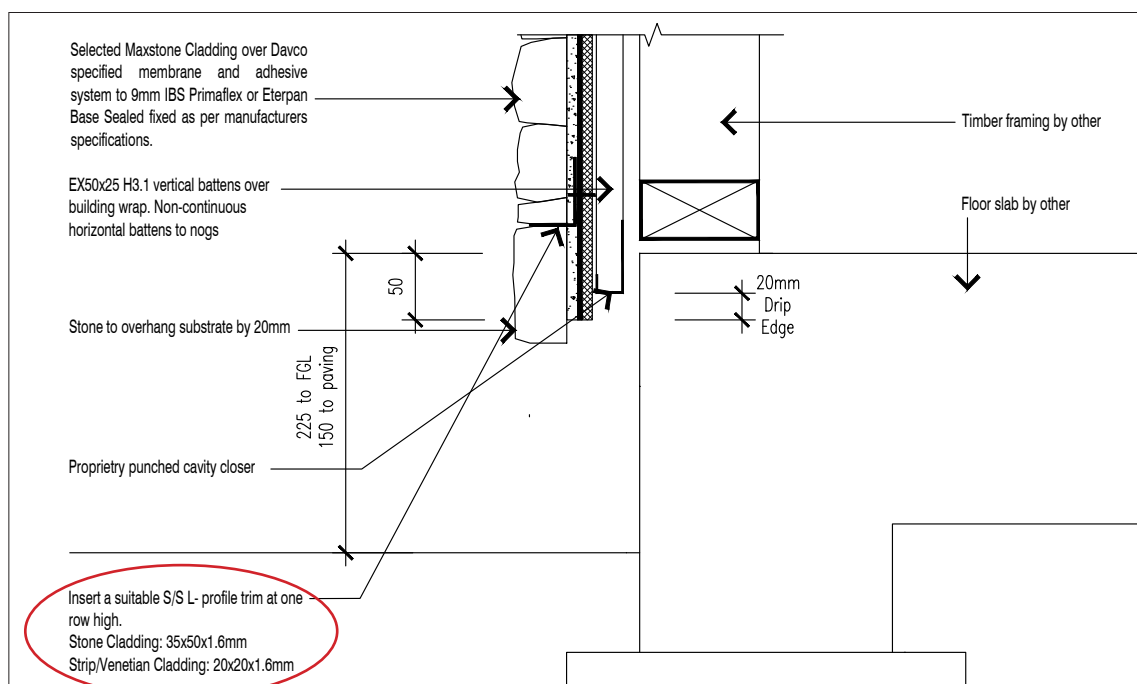


Fig. 1: L-Angle fixing diagram



NB:

- For Paved Surfaces, cladding must finish 100mm above the ground to allow for a weep hole (As per NZS 3604 or NZBC E2, Clause 9.1.3.2)

- For Non-Paved Surfaces (eg. Grass), the cladding needs to finish 150mm above the ground to allow for a weep hold (As per NZS 3604 or NZBC E2, Clause 9.1.3.2)

- For situations where a flush threshold is required or the standard distance to paved ground cannot be met, Accrete Design (www.accrete.co.nz) will be able to supply a grate and drain to suit the cladding system if required for specification. This is called: level threshold two stage system.

MAXSTONE CLADDING INSTALLATION METHOD

When installing your Stone facade, it is important to take the time to bed your stone correctly. Please use the following method to ensure correct stone adhesion.

1. Correct adhesion is achieved by first burning adhesive into the substrate and finishing it with a flat screed (Fig. 1 + 2).
2. The flat surface is then to be notched with a 12 or 15mm trowel.
3. Generously back butter your stone (Fig. 3).
4. As you bed each piece of stone, push it down and move the product from left to right. This motion will ensure coverage and see adhesive mold around the edge of the stone. This will bond the Z-lock stone pieces as they come together (Fig 4).
5. A wet paint brush should be used to smooth any product over flow ensuring all joints are evenly filled with mortar. If the joints are not fully filled, then pipe or gun additional mortar in the joints - **Do not leave joints unfilled** (Fig. 5).



Fig. 1: Adhesive on trowel to be burnt into the substrate.



Fig. 2: Flat screed the adhesive.



Fig. 3: generously back butter the stone.

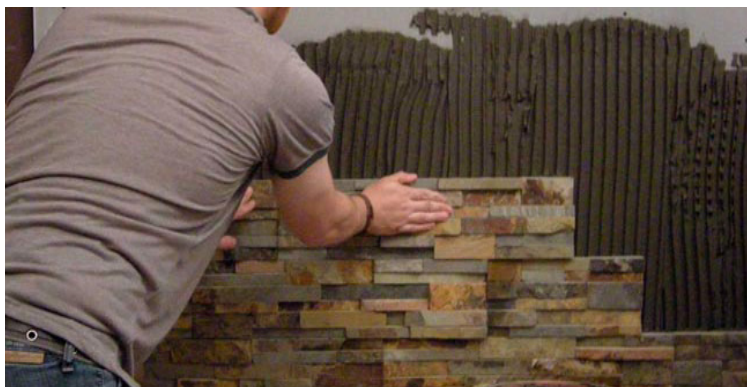


Fig. 4: Bed each piece of stone, letting adhesive come through.



Fig. 4: Ensure all joints are evenly filled with adhesive - no gaps.

TILEMAX STORE CONTACT INFORMATION

East Tamaki - AKL

Phone: (09) 273 0151
Email: easttamaki@showerwell.co.nz
Address:
Showerwell Home Products,
21 Neilpark Drive,
East Tamaki

Albany - AKL

Phone: (09) 443 5633
Email: takapuna@showerwell.co.nz
Address:
Showerwell Home Products,
14a Tawa Drive,
Albany

St. Lukes - AKL

Phone: (09) 845 8212
Email: sales@showerwell.co.nz
Address:
Showerwell Home Products,
15 Gordon Road,
St Lukes (Morningside)

Tauranga

Phone: (07) 575 7755
Email: tauranga@tilemax.co.nz
Address:
5a MacDonald Street,
Mount Maunganui,
Tauranga

Petone - Hutt City

Phone: (04) 568 5570
Email: Petone@tilemax.co.nz
Address:
27 Te Puni Street,
Petone,
Hutt City

Thorndon - Wellington

Phone: (04) 499 4415
Email: wellington@tilemax.co.nz
Address:
37 Old Hutt Road,
Thorndon,
Wellington

Christchurch

Phone: (03) 343 3893
Email: chch@tilemax.co.nz
Address:
280 Annex Rd,
Middleton,
Christchurch

Queenstown

Phone: (03) 428 2598
Email: queenstown@tilemax.co.nz
Address:
226 Glenda Drive,
Frankton
Queenstown

Dunedin

Phone: (03) 244 8213
Email: dunedin@tilemax.co.nz
Address:
67 Hillside Road,
South Dunedin,
Dunedin

Rotorua

Phone: (07) 777 2093
Email: rotorua@tilemax.co.nz
Address:
93 Old Taupo Road,
Rotorua

See the full range at: www.tilemax.co.nz

IMPORTANT:

This technical bulletin provides guideline information only and is not intended to be interpreted as a general specification for the application/installation of the IBS PRIMAflex or the BGC Stonesheet. It is however, an official specification for SIKA Davco adhesives (official documentation can be obtained from Tilemax). Since each project potentially differs in exposure/condition, specific requirements may vary from the information contained herein. For recommendations for specific applications/installations, please contact your nearest Tilemax Store.

DISCLAIMER:

The information presented in this technical bulletin is, to the best of our knowledge, true and accurate. No warranty is implied or given to its accuracy in describing the installation of the PRIMAflex product (this can be found at www.ibs.co.nz). The information on the Davco product is warrantable as per the above paragraph. Users are asked to check that the literature in their possession is the latest issue.

This specification is subject to change.
Current information is supplied from June 2024.