General Fixing Specification for Green Sukabumi Stone or Green Bali Stone Tile in Immersed Installations. 25 Year System Warranty.

This specification covers installation of Green Sukabumi Stone also known as Green Bali Stone tiles inside of, and around concrete Swimming Pools. Refer to Architectural Drawings and Details for specific installation materials & methods for each specific area and application.

WITNESS POINTS:
Give sufficient notice, so inspections can be made by the contractor, in the presence of the builder, specifier, owner or any other persons deemed relevant, as required.

1.0 GENERAL:

1.1 All works shall be carried out by experienced qualified trades.

2.0 SCOPE OF WORK:

2.1 Furnish all labour, materials and equipment necessary to complete the installation of Stone Tiles, in a chemical, shock resistant, grouting and fixing materials, as specified herein and where indicated in drawings. Install thin, load bearing waterproof membranes, as specified and indicated in drawings if required.

NOTES TO SPECIFIER:
2.2 this is a total system. Call out products by name, number and application to ensure that specifications do not differ from manufacturer's instructions.

2.3 The following shall be inserted in the Concrete Section:
"No sealers, crystalline waterproofing additives or curing compounds shall be used on concrete which are to be covered with tile. Concrete shall be covered and wet cured for a minimum of seven (7) days. Allow new concrete to cure and dry before the installation of tile or waterproof membrane. Areas that are to receive tile work, installed by the thin bed method shall have a wood float finish or open pored steel float finish; be true to within 5 mm in 3 m from the required plane and 1.5mm in 300mm when measured from the high spot; and pitched to drains where required. Areas requiring fill, patching or levelling shall be prepared / rendered / screeded using LATICRETE 3701 Latex Admix / LATICRETE 226 Thick Bed Mortar Mix in accordance with the manufacturer’s instructions. Gypsum or asphalt-based levelling compounds shall not be permitted. No polyvinyl (PVA) acetates shall be permitted in any substrate to receive tile. The surface, which is to be covered, shall be left clean, free of dust, plaster, sealer or curing compounds and form oil. Any contamination shall be removed by the Contractor who applied the material."

2.4 Tile and there, fixing and grouting mortars do not constitute a waterproof barrier. Specify & detail LATAPOXY Moisture Shield and LATICRETE HYDRO BAN Liquid Applied Waterproof Membrane where a waterproof installation is required.

2.5 Swimming pool copings and surrounding areas should be constructed of impervious finishes and fixing systems to help reduce the incidence of efflorescence. Weather bars and barriers should also be used at coping perimeters to prevent water under adjacent pavements, landscaped areas and the like, entering the pool under the pool coping system.

2.6 Unless otherwise noted in this document, product data sheets, how to guides, technical data sheets and other LATICRETE guidelines, all work should be in accordance with AS3958.1 & 2.
2.7 This specification may not include all the information required to complete the works. Contact LATICRETE for any additional information.

2.8 Consult the relevant, current product data sheets and how to guides for more complete and installation information on products specified in this document.

2.9 For the purpose of this specification all Sukabumi stone tile is deemed to be fit for purpose and suitable for the proposed application by the manufacturer. Ensure the stone is cleaned prior to fixing.

2.10 Concrete or other masonry should not have internal moisture content greater than 75% relative humidity as measured with moisture probes.

3.0 MATERIALS:

3.1 All Sukabumi stone tiles, where called for, shall be as supplied by; ..............................................

3.2 Renders, Screeds & Concrete patching materials shall be: LATICRETE 3701/226 Latex Portland cement Mortar. Slurry bond coat shall be: LATICRETE 254 Platinum Tile Adhesive. Tile adhesives materials shall be: LATAPOXY 300 Epoxy Adhesive Or LATAPOXY SP100 Epoxy. Tile grout materials shall be: LATAPOXY SP100 Epoxy Grout. Waterproofing & crack suppression materials shall be: LATICRETE HYDRO BAN Waterproof Membrane and LATAPOXY Moisture Shield. All waterproofing, renders & screed mortars, tile fixing and grouting materials shall be as provided by LATICRETE Australia Pty Ltd, 29 Telford Street, VIRGINIA, QLD 4014, Australia. Telephone: 1800331012. Email: technicalservices@laticrete.com.au Web: www.laticrete.com.au

3.3 The bedding and grouting mortars shall be weather, frost, shock and chemical resistant. The finished tile adhesive and grout materials shall be resistant to chlorine, bromine, urine, dilute acid, dilute alkali, sugar, brine and food waste products.

3.4 All installation materials shall be compatible and from one manufacturer.

3.5 All materials shall be delivered to the job site in the original factory containers with the manufacturer’s identification on each package. The addition of water or other materials to dilute the installation materials on the job site will not be permitted.

4.0 APPROVALS AND SAMPLES:

4.1 Provide mock-up of each type/style/finish/size/colour of tiles, trim unit and threshold, along with respective installation adhesives, mortars, grouts and other installation materials for assessment.

5.0 HANDLING AND STORAGE OF MATERIALS:

5.1 Handle and store tile in a manner to avoid contamination & intrusion of foreign matter that may inhibit bond.

5.2 Handle, store, mix and apply proprietary installation materials in strict compliance with the manufacturer’s instructions.
5.3 The contractor shall take precautions to protect the Mortar Additives, Admixtures from freezing or from excessive heat.

6.0 MORTAR, GROUT MIXES & WATERPROOF MEMBRANES:

6.1 Cement Renders, Shallow Levelling’s and Scratch Coats:
8 x 20 kg bags LATICRETE Thick Bed Mortar Mix 226
20 litres LATICRETE 3701 Mortar Admix (Adjust quantity of liquid to obtain proper consistency)

6.2 Thick Bed Mortar and Screeds:
11 x 20 kg Bags LATICRETE Thick Bed Mortar Mix 226
20 litres LATICRETE 3701 Mortar Admix (Adjust quantity of liquid to obtain proper consistency)

6.3 Slurry Bond Coats:
20 kg bags LATICRETE 254 Platinum Tile Adhesive

6.4 Waterproof & Anti-Fracture Membranes
15 Litre LATICRETE HYDRO BAN Waterproof Membrane.
20 Litre LATAPOXY Moisture Shield.
600ml sausages LATICRETE Fillet & Sealant

6.5 Epoxy Adhesives:
#2 Units LATAPOXY 300 Adhesive Or
Commercial Units of LATAPOXY SP100 Epoxy.

6.6 Epoxy Grouts:
Commercial Units LATAPOXY SP100 Grout

7.0 PREPARATION & CLEANING:

7.1 Inspection - Prior to commencing the installation, the contractor shall examine the stone and areas to be covered and advise the Main Builder and Architect of any existing conditions or surface contamination, which will require correction before the work commences. Stone and substrate must be clean & free from form oil, curing compounds, laitance, dirt or any other foreign material that may inhibit bond.

7.2 Preparation - As required, the concrete substrate shall be prepared/processed by grit blast, scarifying, sand blasted, hydro blasted or by whatever method deemed by the contractor necessary to prepare the concrete surface: to expose the fine aggregate; and to present with a sound, clean open pored surface, prior to installing render, waterproofing or adhesives.

7.3 Cleaning - As required the concrete substrate shall be cleaned after surface preparation and processing by high pressure water cleaning (above 1500 psi at the nozzle) to clean surface dirt and contamination or weakened surface layers. Any approved cleaning agents must be completely removed, neutralized and rinsed.

8.0 MIXING:

8.1 Mixing: Mix according to printed product instructions included with each product package. Mix only long enough to wet out the batch. Do not over-mix.

9.0 WALL PATCHING, PLASTERING or RENDERING:
9.1 Dimensional surface correction is necessary if concrete is not finished accurately to meet levelness or flatness tolerances for direct application of the tile using the thin bed methods of application.

9.2 Renders - LATICRETE 3701/226 Mortar Mix as a wall render should be mixed to a plastic consistency. As a plaster/render mix no slurry bond coat is required prior to placing wall renders. Apply wall render with a steel trowel pressing mortar into good contact with the prepared substrate. Apply “scratch coat” first – not to exceed 12mm thickness. Scratch mortar before it hardens. After “scratch coat” hardens, apply the “float coat” working the mortar into good contact with the scratch coat. Do not exceed 15mm thickness per lift. Scratch all lifts that will receive additional coats. Float wall with steel trowel and straight edges to form a plumb and true mortar surface. Allow the completed render coats to cure for 24 hours at 21°C prior to the installation of membrane or tile.

9.3 Screeds - LATICRETE 3701/226 Mortar beds are normally applied from featheredge – 50mm thick, mixed to a semi-dry consistency and placed over a latex/cement slurry bond coat consisting of LATICRETE 254 Platinum Tile Adhesive. It is levelled between screed boards, thoroughly compacted and finished to the desired levels and plane.

9.4 Before placing the mortar bed, apply the nominally 2mm thick LATICRETE 254 bond coat to the prepared surface by broom or trowel. Place the mortar bed over while the slurry bond coat is still wet and tacky. Do not apply mortar bed over skinned or dried bond coat. Re apply bond coat if it has skinned or dried prior to applying mortar bed over. Once placed - compact, strike off and finish the mortar with a steel float or wood float to the desired planes and levels. Allow the completed mortar to cure for 24 hours at 21°C and allow drying to the correct moisture content prior to the installation of membrane or tile.

9.5 See product data sheets, how to guides and technical data sheets for more complete information as required.

10.0 INSTALLATION OF WATERPROOF MEMBRANE:

Note: All surfaces to receive the HYDRO BAN shall be coated with LATAPOXY Moisture Shield no more than 24 hours prior to the application of the membrane. Do not install an incomplete or part membrane under an immersed installation; tank the complete installation to above the waterline.

10.1 Before starting, surface to be covered shall be cleaned to remove soil, dust, curing compounds, form oil, sealants, or grease. Cleaning shall be by means of high-pressure washing of previously prepared or built surfaces.

10.2 Surface to be waterproofed shall be dry, plumb and true within 5 mm in 3 m and 1.5mm in 300mm from the high spot and shall be dry and have a compact, flat wood float finish.

10.3 Surfaces to be waterproofed shall be liberally coated with LATAPOXY Moisture Shield prior to the membrane application. Time the application so the HYDRO BAN can be applied after the Moisture Shield has dried (nominally 4 hours at 21 degrees C) and before it is more than 24 hours old. Apply two coats, allow to dry between coats.

10.4 Stone tile may be installed directly over the membrane as soon as it is dry.

10.5 Allow membrane to cure fully, usually 7 days at 21°C. Cold weather installations will require a longer cure time.
10.6 See product data sheets, how to guides and technical data sheets for more complete information as required.

11.0 INSTALLATION OF TILE BY THE THIN BED METHOD:

11.1 The LATAPOXY Adhesive shall be applied with a notched trowel using a scraping motion to work the material into good contact with the surface to be covered. A trowel having notches of sufficient size to optimize bedding is recommended. On site test should be carried out to determine the appropriate trowel size to target 100% coverage with no voids in the adhesive bed, full bedding of the tile and complete adhesive distribution once the tiles are installed.

11.2 Only as much Adhesive shall be applied as can be covered within 5 to 10 minutes or while adhesive surface is still wet and tacky (bucket life is greatly reduced in high temperatures). Tile shall then be set in place manipulated to insure 100% full bedding (this means full contact of adhesive to tile & full contact of adhesive to substrate) and a true surface. Tile shall be aligned to show uniform joints and then allowed to set until firm using the following method.

1. Using the flat side of an appropriately sized notch trowel, work the adhesive firmly in the substrate.
2. With additional adhesive and the appropriately sized notch trowel, comb the adhesive horizontally to the required depth.
3. Apply the stone tiles into the adhesive layer using light and even pressure to establish initial contact. To achieve a uniform, flat surface, tap in place with mallet and beating block.
4. Repeat process with adjacent tiles using the beating block to align tiles as the work progresses. Check work on a regular basis for adhesive coverage.
5. Excess adhesive must be cleaned from the surface of the tile with a wet cloth or sponge while the adhesive is fresh.
6. Excess LATAPOXY 300 adhesive in the joints must be cleaned out of the joints to ensure sufficient space and depth for the LATAPOXY SP100 grout application.

11.3 See product data sheets, how to guides and technical data sheets for more complete information as required.

12.0 EXPANSION, MOVEMENT AND CONTROL JOINTS:

12.1 Existing joints in subsurface must be carried through tile work and shall conform to architectural details.

12.2 Movement joints shall be installed where tile, screeds and renders abut restraining surfaces, such as perimeter walls, curbs, penetrations, columns, corners, etc. Expansion joints shall be installed at all "changes of plane" in the tile work, renders and screeds. Refer to Australian Standards for more details.

12.3 Refer to architects & engineers’ drawings for full details on expansion, control, isolation or movement joints. (Do not tile, screed or render over construction joints).

Notes to specifier
The responsibility for calculating the actual spacing and size of the expansion joints shall be by the architect/engineer. The Optimum ratio of joint layout, length to width, is 1:1, and shall not be greater than 2:1.
12.4 Movement joints shall be sealed with an approved sealant and one compatible to HYDRO BAN. Use polyethylene backing rods or bond breaker tapes as required.

13.0 GROUTING AND POINTING JOINTS:

13.1 Joints shall be grouted or pointed with LATAPOXY SP100 Grout as required. Warranty is conditional on the use of a certified LATICRETE trained LATAPOXY Grout applicator.

13.2 Clean all joints of adhesive, dirt, spacers or anything that may inhibit a full joint. Joints shall be packed full and free of all voids and pits. (Tool or rake as specified).

13.3 Prior to grouting, test for absorption of grout. Porous tile will need to be sealed with a grout release prior to grouting.

13.4 Excess grout shall be cleaned from the surface with water and a damp sponge as the work progresses, while grout is fresh and before it hardens.

13.5 The day after installation grout film or haze shall be removed using a detergent solution.

13.6 See product data sheets, how to guides and technical data sheets for more complete information as required.

14.0 PROTECTION:

14.1 During installation of the waterproof membrane, screeds, renders, tiling and grouting the contractor shall take precautions to protect the work from varying adverse weather conditions.

14.2 The contractor shall take precautions to protect the finished work from damage by other trades. Do not allow construction traffic on fresh grout joints. Allow the grout to cure for a minimum of 7 days before steam cleaning or using aggressive cleaning techniques.

14.3 Allow tile work or grout to cure 10 days at 21 C before filling the pool. For warranty purposes, advise LATICRETE when tiling has been completed before filling.

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