

BUILDING TRUST



SIKA[®] SYSTEM

WATERPROOFING AND TILING IN AND AROUND INTERNAL

WET AREAS

SPECIFICATION DOCUMENT

Project Name: Client: **Reseller- TileMax** Prepared by: **Nick Collett & Robert Luc** Version: **1.0** Date: April 2025

Sika Australia Pty Limited ABN 12 001 342 329 1300 22 33 48 <u>sika.com.au</u>

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Part 1 - General

Summary

- i. This specification describes the execution of the installation of waterproofing and tiling to internal wet areas including but not limited to bathrooms, laundries, and kitchens, or as per the designer's requirements
- ii. This specification assumes that the structural substrate is structurally sound and fit for purpose.
- iii. This specification is for tiles that are, dimensionally stable and fit for purpose. Minimum deflection standards shall be in accordance with AS3958:2023 The Installation of ceramic and stone tiles.
- iv. Waterproofing shall be installed in accordance with AS3740:2021, Code of practice for internal Wet Area Membranes NZBC E3/AS2 July 2022, and the TANZ Best Practice Guide.

Substrates: All substrates shall be fixed in accordance with relevant industry standards and manufacturers strict installation guidelines.

Quality Assurance

i. 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.

ii. Contractor qualifications:

Contractor(s) shall be suitably qualified and licenced in the field of waterproofing and tile installation with a successful proven track record.

iii. Materials

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 Safety Data Sheets (SDS) for complete handling recommendations.

Delivery, Storage, and Handling

- i. 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.
- ii. Store all materials off the ground and protect from rain, freezing or excessive heat until ready for use.
- iii. Condition the specified product as recommended in the PDS

Job Conditions

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

Part 2 - Products

Performance Specification

The wet area waterproofing and tiling system shall comprise of a high-performance compatible system from a single supplier including engineered screed, class III fibre reinforced water-based polyurethane membrane, multi-purpose dustless tile / stone adhesive, flexible stain resistant grout and acetoxy cure, sanitary grade gun applied silicone sealant. The materials below, supplied by **Sika Australia Pty Ltd** are considered appropriate for the works.

Materials and Manufacturer

Cementitious Floor Screed (to falls) where required:	Site mixed sand/cement minimum ratio of 4:1. Slurry Bond Coat consisting of Lanko Latex 751 and neat cement supplied by Sika Australia is considered appropriate for these works.(neat cement supplier by others)
Waterproof Membrane:	Sika – Davco K10 Plus supplied by Sika Australia Pty Ltd is considered appropriate for these works. Use in conjunction with associated Sika primers and Sika bond breakers.
Tile Adhesive:	Sika – Davco Maximum Tile Adhesive Supplied by Sika Australia Pty Ltd is considered appropriate for these works.
Tile Grout:	Sikaceram 690 Elite Tile grout Supplied by Sika Australia Pty Ltd is considered appropriate for these works.

Limitation

Waterproofing Design and Installation

i. All waterproofing design and installation must be completed in strict accordance with the latest Australian Standard AS3740, code of practice for internal Wet Area Membranes NZBC E3/AS2 July 2022, and the TANZ Best Practice Guide. This document does NOT take away from these requirements and if any doubt exists and or there any discrepancy's please contact Sika Australia Pty Ltd for clarification

Tiling Design and Installation

i. All tiling design and installation should follow best practice procedures and meet the requirements of AS3958:2023 and TANZ Best Practice Guide.

Application limitations

- i. Protect from rain for at least 24-48 h after application.
- ii. Avoid application in direct extreme sunlight / heat and when rain is imminent or in strong winds.
- iii. Setting time can be influenced by high relative humidity, particularly in closed rooms or basements. The use of adequate ventilation is strongly recommended.
- iv. Always apply during falling ambient & substrate temperatures to avoid 'pin-holing' from rising air.
- v. Dew Point: The substrate and uncured floor must be at least 3°C above dew point to reduce the risk of condensation or blooming on the floor finish. Low temperatures and high humidity conditions increase the probability of blooming.
- vi. Do not use membrane systems on substrates with rising moisture.

All products shall be installed in strict accordance with this document and the latest product data sheets.

Floor Screed Execution

Surface Preparation

- i. Concrete floors shall be fully cured, structurally sound, clean, dry and free of any surface contaminates and or dust. Any contaminates found should be mechanically removed prior to the installation of the floor screed.
- ii. Highly burnish concrete may require mechanical preparation if the surface does not accept water penetration.
- iii. New screed surfaces shall be wood float finished and be allowed to cure for a minimum of 7 days.

Bonded Screed Application (20mm-60mm)

- i. For bonded screed applications a bond coat is required.
- ii. Allow to apply slurry bond coat consisting of Lanko Latex 751 mixed with neat cement to the prepared substrate with a trowel or broom to a depth of 2-2.5mm.
- iii. Whilst the bond coat is still wet and tacky apply the site mixed screed. Compact, level and shape fall to wastes as required
- iv. If the bond coat skins prior to the application of the floor screed, the bond coat MUST be removed and re-applied.
- v. Apply the mixed **Eco Screed**, to the bond coat and compact. Allow to screed to falls and desired heights.
- vi. Allow screed to cure for minimum 5 days at 23°C prior to applying waterproof membrane system.

Waterproofing Execution

Surface Preparation

- i. All surfaces must be installed according to manufacturer's instructions and relevant Australian Standard(s) and be structurally sound, dry, clean and free from movement, oil, grease, wax, curing compounds, release agents and any other loose or contaminating material.
- ii. Prior to application, remove all sharp protrusions, which may pierce the membrane.
- iii. Any voids, pin holes in the substrate must be repaired with an appropriate **Sika** repair mortar.
- iv. New rendered or screed surfaces must have a wood float finish and be allowed to cure for at least 5 days.
- v. Building board fixings i.e. screws or nails must be sealed with a suitable Sika connector sealant.

Membrane Primer:

Porous substrates: Davco Ultraprime or Davco PrimeX

Non-Porous Priming: SikaTile 015 NPP or equivalent

i. Apply primers to surfaces as needed and allow to dry in accordance with product datasheet recommendations.

Membrane Bond Breaker: Where required to provide bond breakers i.e. membrane turn- up details, substrate joints etc allow to install bond-breaker or connector sealant With SikaFlex Fillet or SikaFlex Construction AP or equivalent.

A flexible butyl Tape can also be used over bond breaker and connector sealants.

Membrane Installation

- i. Pre-cut and install proprietary Butyl Tape allowing for a minimum 50 overlap at all junctions and around pipe penetrations. Tape shall also be used at the termination around the screed that meet the puddle flange.
- ii. Apply the Davco K10 Plus with a brush or roller to required areas to a minimum wet film thickness on 1.0mm per coat
- iii. Apply a minimum of 2 coats to achieve a finished dry film thickness of 1.00mm.
- iv. Allow membrane to dry for 24 hours at 23°C and 50% relative humidity prior to flood testing (if required).

Installation Notes

Screed termination over Control Leak flange

- i. Apply a water-based non-porous primer over the control leak flange and allow to dry prior to screeding. Ie SikaTile 015 NPP or equivalent.
- ii. Slurry bond coats for bonded screed can then be applied directly to the non-porour primer.
- iii. Bonded screeds shall be a minimum 20mm thick at the lowest point, when using site mix sand/cement screeds.
- iv. Sika Engineered screeds can be applied to a minimum 10mm (bonded) ie Eco Screed or SikaFloor 215 Rapid Screed. Refer to product pds for additional details

Proprietary Butyl Tape details

i. A proprietary "peel n stick butyl tape" can be used over "connector sealants" and "bond breakers", additionally the Butyl tape can also be used around all pipe penetrations and termination of the membrane onto the control leak flange over the connector sealant as per below typical image

Typical Waterproofing Details as per TANZ Best Practice Guide.

For the complete list of TANZ waterproofing details refer the TANZ Best Practice Guide: <u>https://tanz.net.nz/</u>





Tiling Execution

Surface Preparation

i. The substrate shall be in a good sound condition and free from dust, oils and grease, lose or friable materials, laitance and other surface contamination and materials which will reduce bond. Membranes shall be dry and set.

Tile Adhesive Installation

- i. The **Davco Maximum** 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.
- ii. Back-buttering the tiles with adhesive will be required to achieve coverage to both the tile and substrate. Ensure tiles are properly bedded and adhesive ridges are broken to adequately support the tile.
- iii. Clean any wet adhesive off the face of the tile prior to drying with clean water and a sponge while the adhesive is still wet.
- iv. Periodically check for adequate adhesive coverage throughout installation.
- v. Tiles shall be aligned to show uniform joint lines and spacing.
- vi. Allow a minimum of 24 hours for adhesive to set before grouting.

Tile Grout Installation

- i. Before commencement ensure all joints are free from dirt, excessive adhesive contaminates, etc.
- ii. Ensure the adhesive layer is dry prior to grouting.
- iii. Ensure joints are of even depth to assist in colour uniformity.
- iv. Mix the SikaCeram 690 grout in accordance with the latest product data sheet.
- v. Work the grout in a diagonal motion using a rubber float or squeegee.
- vi. Grout joints are to be full and packed to avoid any voids in the joint.
- vii. Excess grout can be cleaned of with water and sponge prior to drying on the surface off the tile.

Expansion, Perimeter and Movement Joints

- i. Existing joints in substrate shall be carried through tiling works.
- ii. Install new movement and expansion joints in accordance with AS3958:2023 and section 5 of TANZ best Practice Guide Movement Control Joints, as required.

Expansion joint size, dimensions and locations shall be designed by architect / engineer or suitably qualified person.

Typical movement joint detail as per TANZ Best Practice Guide



Maintenance

i. Refer to the TANZ Best Practice Guide for ongoing maintenace and care of waterproofing and tiling systems.

END OF SIKA[®] SYSTEM SPECIFICATION FOR INTERNAL WET AREAS

Kind Regards,

NCollett

Nick Collett Product Manager – BF & Cementitious Flooring Sika Australia

Robert Luc National Sales Manager Specialty Dist. Sika Australia