

TILESEAL ANTI-FRACTURE UN-COUPLING TILE SYSTEM

1. GENERAL

This section relates to the supply and installation of the TileSEAL system and related Sealco and tiling systems.

1.1 RELATED WORK

Refer to www.sealco.co.nz for Sealco waterproofing membranes.

Documents

1.2 DOCUMENTS

Refer to the general section [REFERENCED DOCUMENTS](#).

The following documents are specifically referred to in this section:

E2/AS1	External waterproofing elements
AS 3740	Waterproofing of wet areas within residential buildings
AS 3958.1	Ceramic tiles - Guide to the installation of ceramic tiles
AS 4992.2	Ceramic tiles - Grouts and adhesives
BRANZ	Good practice guide: Tiling

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

1.3 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:
Schluter Specification Data Sheets

Copies of the above literature are available from Sealco Limited, technical support
Web www.sealco.co.nz
Email: jeff@sealco.co.nz
Mobile phone 027 544-5532
Telephone 0508 (SEALCO)

Sealco Ltd waterproof membrane systems refer to www.sealco.co.nz

Warranties

1.4 WARRANTY – TileSEAL - Sealco – Tiling Systems MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

- 5 years For TileSEAL system
- 20 years For EcoTUFF systems
- 10 years for Lexcoat Flash liquid systems

- Provide this warranty on the manufacturer/supplier standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section [1237 WARRANTIES](#) for additional requirements.

1.5 WARRANTY – MANUFACTURER

Provide a product/material manufacturer/supplier warranty:

- 5 years For the TileSEAL system
- 10-20 years For the waterproof membrane system (tbc)

- Provide this warranty on the manufacturer/supplier standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section [1237 WARRANTIES](#) for additional requirements.

1.6 WARRANTY - INSTALLER/APPLICATOR
Provide an installer/applicator warranty:
For the installation of the TileSEAL System
For the installation of the waterproof membrane
For the installation of the tiles

- Provide warranty on the installer/applicator standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section [1237 WARRANTIES](#) for additional requirements.

Requirements

1.7 Information & SAMPLES
Submit on request samples of the TileSEAL system and related data sheets.
Submit on request samples of the tiles specified, sufficient to show the pattern and the range of colour finish.

1.8 NO SUBSTITUTIONS
Substitutions are not permitted to any of the specified systems, components and associated products listed in this section.

1.9 QUALIFICATIONS
The TileSEAL system and tiling to be carried out by competent workers experienced with the materials and in the techniques specified.

1.10 DEFLECTION CRITERIA
Check that the deflection of suspended floors does not exceed $1/360^{\text{th}}$ of the span under dead and live load.

1.11 ADHESIVES COMPATIBILITY
Adhesives selected for use on proprietary substrates or waterproof membranes to have documented compatibility approval from the respective manufacturers.

1.12 PROVIDE SPARE TILES
Provide spare tiles. Refer to SELECTIONS for type and quantity.

Performance - slip resistance

1.13 SLIP RESISTANCE FOR ACCESS ROUTES
Slip resistance for tiles to comply with NZBC D1/AS1: 2.1 Slip resistance and 3.1 Slope.
- when in place on a level access route, to have a mean coefficient of friction (μ) not less than 0.4 when tested in accordance with AS/NZS 3661.1.
- when in place on a sloping access route, to have a coefficient of friction (μ) not less than $0.4 + 0.0125S$ (S = slope of surface expressed as a percentage).

1.14 CERTIFY SLIP RESISTANCE
Provide certificates and any other evidence at the time of selection/supply that the tiles comply with NZBC D1/VM1 2.0 and NZBC D1/AS1: Access routes.

2. PRODUCTS

Materials

2.1 ANTI FRACTURE/UNCOUPLING MEMBRANE
TileSEAL anti-fracture/uncoupling membrane.

- 2.2 LIQUID WATERPROOF MEMBRANES
Lexcoat Flash or Sikalastic-152 exterior liquid waterproofing. Use only approved liquid waterproofing membranes as specified by Sealco Ltd.
- 2.3 SHEET MEMBRANE SYSTEMS
EcoTUFF TPO membrane systems
- 2.4 FLOOR TILES
To BS 6431.1 to 23 inclusive. Refer to SELECTIONS for proprietary product selection.
- 2.5 TILE ADHESIVE
Sika Ceram 290 Starlight tile adhesive

Components

- 2.6 TILESEAL UNCOUPLING MEMBRANE
3mm thick x 1 metre wide x 30 metre long rolls with circular recesses for tiling on.
- 2.7 TILESEAL JOINT BAND
0.8 thick x 100mm wide x 30 metres long for jointing TileSEAL sheets
- 2.8 TileSEAL SEALANT
TileSEAL MS in cartridges
- 2.9 BUTYLFLASH TAPE
80mm and 150mm wide x 0,8mm thick by 15 metres long.
- 2.10 SCREED
Sikascreed cementitious screed as per specified.
- 2.11 ANCHORING SLURRY
Sikatop Seal 107 2-part modified cementitious slurry to EN1504-2 and to specification.
- 2.12 TILE ADHESIVE
Sika Ceram 290 Starlight cement based ceramic tile adhesive to AS 4992.2 with rubberized flexibility to suit TileSEAL Uncoupling sheet
- 2.13 GROUT
Sika Ceram Stargrout epoxy flexible grout to EN13888.
- 2.14 MOVEMENT JOINT SEALANT
To BRANZ Good practice guide: Tiling, section 5.0.
- Neutral cured sealant for areas where waterproof membranes are used or where used against aluminium.
- Acid cured sealant except for areas where waterproof membranes are used or where used against aluminium.

3. EXECUTION

- 3.1 HANDLING AND STORAGE
Take delivery of rolls of TileSEAL uncoupling sheet and bandage rolls undamaged and dry. Handle with care to avoid damage. Store on hard level standings in non-traffic, n on work areas that are enclosed, clean and dry.
- 3.2 CONFIRM LAYOUT
Before commencing work confirm the proposed layout of TileSEAL rolls and expansion joints and other visual considerations of the finished work.

Conditions

- 3.3 **DO NOT START**
Do not start laying TileSEAL until the substrate has been inspected for defects which must be rectified. Ensure the surface finish is suitable to have the TileSEAL installed and will achieve tile laying finished to a high standard.

Application – requirements

- 3.4 **SCREEDS**
Form screeds with a deviation from plane of not more than 5mm over 3 metres. Maximum substrate variations in plane are within limits set by AS 3958.1.
- 3.5 **FALLS**
Form screeds in areas where water is used in significant amounts with a deviation from plane of not more than 5mm over 3 metres. Unless otherwise specified form screeds with the following falls:

Unless stated otherwise provide minimum fall gradients to BRANZ Good Practice Guide - Tiling, clause 6.5 Falls in floors.
1 : 40 minimum for tiled decks.

Movement joints

- 3.6 **MOVEMENT CONTROL JOINTS**
When tiling on the TileSEAL system install an expansion joint at a maximum of every 3 metres in every direction. Expansion joints to be 10mm wide.

Application - Sealco Membranes

- 3.7 **INSTALL SEALCO MEMBRANE**
Refer to www.sealco.co.nz to select Sealco membrane specifications

Application

- 3.8 **BONDED SCREED**
Apply the anchoring slurry over the whole floor to manufacturers Specifications. Thoroughly mix and place the screed to the required levels and falls, ensuring drying times are observed before installation of tiles by thin/thick set method.
- 3.9 **WATERPROOF MEMBRANE**
Select a suitable Sealco Waterproofing liquid membrane or EcoTUFF TPO sheet membrane and install as per Sealco specifications.
- 3.10 **TILESEAL ANTI-FRACTURE UN-COUPLING SYSTEM**
Clean down the substrate removing all dust and contaminants leaving the surface ready to receive the TileSEAL system.
- Roll out the TileSEAL rolls, cut to length and leave to relax prior to installing.
- Apply Pressure Sensitive Adhesive (PSA) with a 1.5mm notched trowel and leave to tack off. The PSA will change to clear look when tacked off.
- Install the TileSEAL sheets set 3mm off all abutments with all sheet edges tight butted.
- The sheet joints are sealed together with TileSEAL joint bandage using Sika Ceram 290 Starlight tile adhesive which smooth and feathered off at edges and left to dry.

The perimeter edges which abut the edges to be sealed with TileSEAL MS sealant creating expansion and support for the TileSEAL bandage. The TileSEAL perimeter

edges must be feathered 50mm out forming a flush surface to further support the TileSEAL bandage.

Install TileSEAL bandage half onto the vertical surface and half onto the TileSEAL surface using Sika Ceram 290 Starlight adhesive.

Completion

- 3.11 **REPLACE**
Replace damaged tiles or elements.
- 3.12 **CLEANING**
Upon completion of setting and grouting, thoroughly sponge and wash the tiles to leave them completely clean and without blemish. Finally polish glazed tiles with a clean dry cloth.
- 3.13 **LEAVE**
Leave work to the standard required by following procedures.
- 3.14 **REMOVE**
Remove debris, unused materials and elements from the site.
- 3.15 **PROTECT TILES**
Protect tiles from damage. Ensure tiles are not disturbed by foot traffic for at least 24 hours after laying and after grouting. Provide protection to tiles by laying sheet material such as insulating board for the period between completion of laying and completion of the contract works.

4. SELECTIONS

- 4.1 **SEALCO MEMBRANE**
Sealco Lexcoat Flash Polyurethane
Sealco Approved liquid membranes
1.5mm EcoTUFF TPO
- 4.2 **TILESEAL ANTIFRACTURE SYSTEM**
TileSEAL rolls:
TileSEAL Bandage:
TileSEAL MS sealant:
- 4.3 **SCREED**
Manufacture: Sika
Brand: Sikatop Seal 107
- 4.4 **TILE ADHESIVE**
Manufacturer: Sika
Brand/type: Sika Ceram 290 Starlight
- 4.5 **GROUT**
Manufacturer: Sika Ceram Stargrout
Colour: Various
- 4.6 **MOVEMENT JOINT SEALANT - NEUTRAL CURED SILICONE**
Colour: Various
- 4.7 **MOVEMENT JOINT SEALANT - ACID CURED SILICONE**
Colour: Various