TANKIT Penetration Waterproofing System

1. Introduction

This specification is for the application of Specialized Construction Products polymer-based, fibre-reinforced, flexible Tankit waterproofing membrane. Tankit is a one component polymer rich cementitious material which is mixed with clean potable water on site and used in conjunction with fibreglass reinforcing to create a unique high build, low shrinkage membrane. Tankit can be easily applied over a variety of properly prepared concrete and masonry backgrounds to produce a waterproof backing prior to the application of Specialized's wall claddings.
When the Tankit is mixed with water is creates a chemical cure which permits the product to be applied in poor drying conditions. Tankit will exceed the 15-year minimum durability requirements of the New Zealand Building Code Clause B2 providing it has been used in strict accordance with Specialized's written instructions, is used within the design parameters of this specification, and is used in conjunction with other approved and correctly installed building systems and materials.

2. Health & Safety

Avoid contact with eyes and prolonged contact with skin. Wash thoroughly after handling all wet or dry material. In case of eye contact, flush immediately with running water for at least 15 minutes. Consult a physician immediately. Do not take internally. The potential irritant nature of cement dust (in dry powder form or from subsequent cutting of the hardened product) is recognised. Paper dust masks or a respirator must be worn at all times when the product is being mixed. Be sure to provide adequate ventilation when working in enclosed areas. The wet compound is alkaline and prolonged skin contact should be avoided. People with sensitive skin must wear rubber gloves when handling the product. Materials Safety Data Sheets are available on request.

3. Properties

Application Temperature: 8°C - 30°C

Service Temperature Range: -20°C to 60°C

Dry Film Thickness: 800 - 1000µm

Coverage: Approximately 1.5m²/L per coat at a film build of 650µm

4. Pre-Waterproofing Requirements

The masonry/brick/concrete substrate must be installed in strict accordance with the manufacturer's specifications and recommended installation procedures. The manufacturers required curing time must be allowed after placement of the bricks/blocks to ensure all the pointing has completely cured and the walls have stabilised. Failing to allow the pointing to fully cure can lead to excess shrinkage and cracking on the pointing lines after the substrate has been waterproofed and plastered. All solid concrete substrates must be cured for a minimum of 28 days.

All loose or damaged material must be removed by waterblasting, sandblasting or mechanical wire brushing and repaired prior to being waterproofed. All surface imperfections such as blowholes, cracks and spalling must all be patched and levelled to required tolerances and smoothness with the recommended Specialized plaster materials before the Tankit membrane is applied.
Any EPS that has been directly adhered to the concrete or masonry substrate must be rasped and free of all bond-inhibiting materials, including but not limited to dust, oxidisation, and dirt.
This system must not be used in situations where water may pond. A minimum slope of 10° is required on all sills and copings. It is also not suitable for vehicular traffic or for use below ground.
Particular attention to detail and workmanship must be given to the weatherproofing details contained in the technical literature relating to flashing and sealing building penetrations or junctions with other building materials. This system is not designed as a waterproofing element for junctions between dissimilar materials. Its job is to provide a waterproof backing for the application of a subsequent, crack resistant surface coating. All junctions between masonry/brick substrates or poured concrete surfaces and dissimilar materials must be correctly flashed with appropriate metal or uPVC flashings and sealed with MS Sealant. The MS Sealant must be installed in strict accordance with the manufacturer's requirements and must be left to properly cure prior to plastering.
Construction Joints must be provided according to the brick/block manufacturers design criteria. All construction joints must be in place and must be waterproof prior to the commencement of plastering.

5. Surface Preparation

All nibs, protrusions, and excess mortar on the surface of the bricks or irregularities in the concrete must be ground off prior to coating.
All surfaces to receive an application of Tankit must be clean and free of debris, dirt, and dust, efflorescence, grease, oils, curing agents, cleaning solutions, mould, and algae or any other contaminants that may affect adhesion.
Where Tankit is being applied over an existing acrylic coating, it is crucial that the previous system is well adhered to the substrate.
Depending on the age and condition of painted or glossy surface, they must be heavily water blasted, acid etched, face ground or mechanically abraded prior to the application of Tankit.
Once the surface of the paint has been cleaned or correctly prepared Tankit can be applied to the surface either as a waterproofer or as a key coat to aid in the adhesion of subsequent layers of plaster. All cracks that may be the subject to ongoing movement must be correctly repaired and reinforced.
Tilt slab and other precast concrete items should be chemically cleaned with Dulux Acratex 400/4 Tiltwash left to dry to ensure any mould release agents are removed before the Tankit is applied. Failing to correctly prepare the substrate, may affect the adhesion of the Tankit and hence the subsequent ability of the Tankit to provide a waterproof barrier.
Do not wet down masonry surfaces before coating and do not apply Tankit to surfaces that are wet from rain or overnight dew.

6. Materials Application

Once the surface to be coated is clean and dry tanking can commence. Do not apply Tankit if rain is imminent or if the surface temperature is below 8°C or higher than 30°C or will be outside these limits within the 24-hour period of application. In a clean plastic pail, mix a small usable amount of Tankit powder to a smooth consistency with potable water using a clean, rust-free electric drill and paddle. Allow the product to thicken for approximately five minutes, before adjusting the mix, if necessary, with either more water or powder so the product is of a uniform useable consistency. The pot life of the mixed material is very good and provided it is kept in a sealed container and has not unduly thickened, generally it can be used up to 2 hours after being mixed. However, it is important to remember that this product contains cement and therefore must not be let down with water once it starts to thicken.
Tankit must be applied in 2 coats and must have a minimum dry thickness of 800µm. Where the product is being used to bridge the gap between different substrates or there is any concern with regard to the potential for ongoing movement in the substrate Tankit must be reinforced with fibreglass mesh cloth weighing 150g/m² (with a maximum aperture size of 4mm) between the first and second layers. All adjoining layers of fibreglass must overlap by a minimum of 50mm and care must be taken to ensure that all the material is well coated with Tankit. Do not overwork the cloth as the strands may part under pressure reducing the overall effectiveness and strength of the coating. The fibreglass should be fully embedded in the Tankit coating.
Application is typically made with a medium nap roller using a brush for corners and up stands etc.
All uncured material can be removed with water. Mechanical removal will be required once the Tankit has dried.

On-site application is beyond the control of Specialized Construction Products. Therefore, it cannot guarantee workmanship, supervision, aesthetic quality or the correct preparation and application of its products or the substrates to which its products may be applied.

7. Curing

The curing time of Tankit will vary
due to ambient temperature, relative humidity, surface temperature, surface porosity, application methods, and/or the thickness of the material. All freshly applied material must be protected from inclement weather for a minimum of 24 hours after application. It is the responsibility of the plaster applicator to determine if the product is cured and/or dry prior to applying any additional coats that may be required or exposing the applied product to rain, snow, dew, and/or any other inclement weather condition that may have a detrimental effect. Although Tankit contains cement and will therefore chemically cure, it will not fully cure for 7 days.

8. Cleaning

Cleaning may be accomplished with water immediately after use. Clean the whisk and the bucket between mixes and discard the cleaning water. Remove splatter or spills with water before the material sets.

9. Plaster Storage

In bagged form this product must be stored in a dry area, off the floor on a timber pallet or timber dunnage and it must be protected from the weather and from mechanical damage. Rotate the stock to ensure that the oldest material is used first. Plaster stock that is older than six months should be discarded.

10. Limitations

DO NOT apply Tankit when the ambient or surface temperature is below 8ºC or above 30˚C or will be in that range for the 24-hour period after application. Material that is allowed to freeze or material that dries too quickly may suffer irreparable damage.
DO NOT add any other materials to the Tankit or deviate from the mixing or application procedures outlined in any of Specialized Construction Product's technical data sheets without written approval from Specialized Constructions Products.
DO NOT apply Tankit unless the substrate has been properly cleaned and prepared. See Surface Preparation above.
DO NOT wet the substrate prior to the application of this material.
DO NOT apply Tankit unless the substrate has been properly cleaned, primed and prepared. See Surface Preparation above.
DO NOT wet the substrate prior to the application of this material.
DO NOT reactivate Tankit with water once it has begun to set.
DO NOT use Tankit where it will be subjected to vehicular traffic
DO NOT use this material where it will be subjected to permanent immersion or where ponding will occur.
DO NOT apply Tankit to wooden surfaces
DO NOT use Tankit below grade.
DO NOT apply Tankit to wooden surfaces.

NOTE: Failure to follow the manufacturers written specifications could result in the following but not limited to spalling, cracking, peeling, chipping, delamination, discolouration, wash off, and overall system failure.

11. Maintenance

The wall cladding system applied over the Tankit should be cleaned, at least annually, by washing with clean water to remove dirt and to maintain the finish appearance. Grime may be removed with warm water and detergent.
Plastered walls should be recoated with Dulux Acratex 955 Acrashield Advance paint system at 5 to 8 yearly intervals or sooner if required to maintain watertightness.
Regular checks, at least annually, must be made of the system to ensure that the weather resistant surface coating is maintained, and that the sealant, flashings, and other joints continue to perform their function and do not allow water to penetrate.
Failure to correctly maintain the system may void any long-term warranties offered with the system. Any accidental damage to the cladding must be repaired immediately using Specialized Construction Products materials.

12. Warranty

The recommendations, suggestions, statements, and technical data provided by Specialized Construction Products are based on the best current knowledge available and are given for information purposes only without any responsibility for their use. It is expressly understood and agreed that the buyer's sole and exclusive remedy shall be the replacement of defective products, and under no circumstance, shall Specialized Construction Products be liable for incidental or consequential damages. Specialized Construction Products neither assumes, nor authorizes, any others to assume for it any liability with respect to furnishing of the product. Handling and use of the products are beyond the control of Specialized Construction Products, therefore, no warranty is made, expressed or implied, as to the results or on-site quality that can be obtained from the use of the product.

Specialized Construction Products guarantees this product is free from manufacturing defects and will perform to its specification for 10 years from the date of application if application occurs within the products stated shelf life.

Material Guarantee Period

15 years from date of practical completion to plastering.

Workmanship Guarantee Period

5 years from date of practical completion to plastering.

Technical Assistance

Assistance and information are available by calling Specialized Construction Products on (09) 414 4499 or 0800 800 79 or by e-mail at info@specialized.co.nz.