SPECIALIZED MAXRAFT INSULATED FOUNDATION WATERPROOFING SPECIFICATION

Tankit

PENETRATION WATERPROOFING SYSTEM

MAXRaft®

Project details

Project Name:

Project Address:

Specification Prepared For:

Specifier's Name:

Date:

Certified Specialized Plastering Contractor:

Licensed Building Practitioner Number:

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Introduction

This specification is for the application of Specialized Construction Products Tankit Waterproofing membrane and plaster finishing system to MAXRaft insulated foundations. Once the MAXRaft has been reinforced with a layer of Specialized fibreglass reinforcing mesh embedded in Coarse Mesh Coat it is subsequently waterproofed with Specialized's Tankit waterproofing membrane before the foundations are finished with a chosen Specialized finishing plaster.

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Pre-Plastering Requirements

The MAXRaft Insulated Concrete Formwork (ICF) substrate must be installed in strict accordance with MAXRaft's specifications and recommended installation procedures. MAXRaft's required curing time must be allowed after placement of the substrate to ensure it has completely cured and the foundations have stabilised.

Where DPM from under the slab has been installed up the side of the MAXraft foundation.

Marshall Innovations Ltd 150mm EIFS flashing tape must be applied to clean DPM at the junction between the MAXRaft and the DPM. The EIFS tape must extend a minimum of 75mm horizontally out from the foundation DPM and must lap a minimum of 75mm onto the MAXRaft. The MAXRaft must be clean and must be sprayed with Marshall Innovations Spraytak Adhesive prior to the EIFS tape being applied. Construction Joints must be provided according to the MAXRaft's design criteria. All construction joints must be in place and must be waterproof prior to the commencement of plastering.
Note : EIFS Tape will not adhere to wet DPM or a wet ICF substrate.

Where DPM from under the slab has not been installed up the side of the MAXraft foundation then no Marshall Innovations Ltd 150mm EIFS flashing tape is required.

All pipes running through the slab must have a downward rake of a minimum of 5° and must be sealed in place using MS Sealant or an approved sealant both before plastering and after the installation of the Tankit membrane.

Surface Preparation

All nibs, protrusions, and excess mortar on the surface of the MAXRaft ICF or irregularities in the slab must be ground off prior to plastering.

All surfaces to receive an application of Specialized's MAXRaft System 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. Painted or glossy surfaces must be specially treated prior to the application of any plaster material, please refer to Specialized Construction Products for specialist advice before you proceed. All cracks that may be the subject to ongoing movement must be correctly repaired and reinforced.

Some smooth, dense concrete surfaces such as poured in-situ concrete must be slush coated before application of Coarse mesh coat to ensure a suitable bond is created, please refer to Specialized Construction Products for specialist advice before you proceed. Tilt slab and other precast concrete items should be cleaned with Dulux Acratex Tiltwash to ensure any mould release agents are removed before the plaster is applied.

All gaps in the MAXRaft ICF must be flush filled with adhesive spray foam prior to the base coat plaster being applied. Any oxidization on the surface of the polystyrene must be removed with a stiff broom and water, and then the cleaned surface must be scratched to provide a key before plastering begins. All XPS foam surfaces must also be mechanically abraded with coarse sandpaper or another suitable alternative before plastering commences.

Failing to correctly prepare the substrate may cause delamination, chalking or failure in the base coat.

Do not wet down the surface of the MAXRaft before plastering and do not apply the Coarse Mesh Coat plaster to surfaces that are wet from rain or overnight dew.

Safety Precautions

Avoid contact with eyes and prolonged contact with skin. Wash thoroughly after handling all wet or dry plaster materials. 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 the plaster 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.

Materials Application

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.

Base Coat Plastering

Prior to the Coarse Mesh Coat being applied, any portions of the slab and MAXRaft insulation that are out of alignment due to poor preparation during the construction of the MAXRaft ICF should first be levelled with Specialized Thermorender plaster or rasped flat. The Thermorender must be applied a minimum of 4mm thick to ensure it maintains its cohesive strength and can be applied up to 50mm thick in one coat. If any areas require greater than a 50mm application, they must be done in several coats and left to dry between coats. All stress points should be reinforced with butterflies of mesh. Once a layer of Thermorender has been applied to the substrate it should be floated or screeded flat to achieve a level plane which is free of deviations. When the Thermorender is dry it can be sanded flat using a longboard or scraped with a broad knife to remove any ridges or minor bumps which have been left behind.

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Once the substrate is flat and true the entire surface of the slab edge, including the 75mm lap of EIFS tape, must be mesh reinforced with 160g fibreglass mesh embedded in Specialized Coarse Mesh Coat plaster. It is acceptable to use Specialized Fine Mesh Coat for detailing work and areas where a finer compound is required. The instructions for mixing the base coat plaster are clearly spelt out on the bag. **Note:** During summer, you can add one litre of resin per bag to help the plaster cure better in hot weather.

It is important that each mix stands for approximately 5 minutes and is then re-stirred, and the final consistency adjusted. This allows the thickening agents in the plaster to take effect and stops the brew becoming too thick too quickly. Do not use plaster that has been mixed for more than one hour. The plaster will continue to stiffen slightly over the hour.

Thickness is critical - a minimum thickness of 3-4mm must be achieved with this first coat. Do not force the mesh hard down onto the surface of the substrate. The mesh pattern should be "grinning" through, but the mesh itself completely covered with plaster. Apply a 100 to 200mm band of plaster around the corner and imbed the overhanging corner mesh. Once embedded scrape away the plaster at the edge of the mesh to ensure there is no plaster ridge there when you join on later. Repeat the process. Mesh must overlap the adjacent drop and plaster coat by at least 30mm. The mesh and plaster coat must cover the entire surface of the MAXRaft ICF.

Tankit Waterproofing

Once the MAXRaft ICF slab has been reinforced with Coarse Mesh Coat and the whole area is clean and dry, tanking can commence. Specialized's Tankit membrane is a one component polymer rich cementitious material which is mixed with clean potable water on site to create a unique high build, low shrinkage membrane. When the Tankit is mixed with water is creates a chemical cure which permits the product to be applied in poor curing 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 with the design parameters of this specification and is used in conjunction with other approved and correctly installed building systems and materials.

Do not apply Tankit if rain is imminent or if the surface temperature is below 8° C or higher than 30°C. In a clean 20 litre plastic pail, mix with a clean, rust-free electric drill and paddle to a smooth consistency. 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 provided it is kept in a sealed container and has not unduly thickened. 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 to ensure the required toughness and flexibility is achieved, Tankit must be reinforced with Specialized woven fibreglass mesh weighing 150g/m2 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.

Application is typically made with a medium nap roller, using a brush for corners and up stands etc.

Application Temperature : 8°C - 30°C

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

Dry Film Thickness : 800 - 1000µm.

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

Specialized Finishing Plasters Options

FLOAT FINISH: A polymer modified cement-based plaster which is polished flat to achieve a fine granular finish.

SPANISH FINISH: A polymer-modified, cement-based plaster used to achieve an undulating adobe style finish. This product can be applied in various thicknesses and using a number of different techniques. Before finish coating begins ensure the style of finish that is desired has been correctly communicated and understood by the plasterer. A trial sample is highly recommended.

TEXTURE: A polymer-modified, cement-based plaster which can be sprayed through a sagola gun to achieve a finely spiked texture finish.

FINE BASE COAT: A polymer-modified, cement-based plaster which can be sprayed through a hopper gun or a sagola gun to achieve a heavy stucco plaster finish.

ACRATEX 951 COVENTRY COARSE ACRYLIC TEXTURE - 15L

ACRATEX 951 1MM SUPER TROWEL ACRYLIC TEXTURE - 15L

ACRATEX 951 SIENNA COARSE ACRYLIC TEXTURE - 15L

ACRATEX 951 SIENNA NATURAL ACRYLIC TEXTURE - 15L

SPECIALIZED ACRYLIC TEXTURE FLEXIFLOAT - 20 KG (BAG MIX AND NOT TINTABLE)

SPECIALIZED ACRYLIC TEXTURE FLEXIFLAT – 20 KG (BAG MIX AND NOT TINTABLE)

Prior to an Acratex Acrylic texture being applied a full coat of Dulux Acratex Green Render Sealer should be applied at spread rate of 8m2 per litre.

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Curing

The curing time of Specialized's MAXRaft ICF System 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 this system contains cement and it will not fully cure for 28 days, if the Tankit has had a finish applied over its surface, and as long as it is lightly hosed down with fresh water 12 hours prior to painting, it can be painted after the finish coats have cured for a minimum of 3-4 days. 7.0

Limitations

DO NOT apply the system when the ambient or surface temperature is below 4°C or above 30°C or will be in that range for the 24-hour period after application. When hot, dry, or windy conditions exist, moist curing and protection must be provided. Material that is allowed to freeze or material that dries too quickly may suffer irreparable damage.

DO NOT add any other materials to the Coarse Mesh Coat or 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 Coarse Mesh Coat unless the substrate has been properly cleaned and prepared. See Surface Preparation above.

DO NOT add any more water than prescribed by the technical data sheet for this product.

DO NOT wet the wall prior to the application of this material.

DO NOT reactivate the Coarse Mesh Coat plaster or the Tankit with more water once they have begun to set.

DO NOT mix more plaster than you can use in 45 minutes.

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

Painting

Dulux Acratex Acrashield Advance : A 100% acrylic-based paint that has been specially formulated for use over cement-based plasters. All plastered surfaces must be coated with a minimum of 2 coats of Dulux Acratex Acrashield Advance tinted to the selected colour (with LRV over 25%) and applied by brush and roller at a spread rate of approximately 6m2. Other paint systems are not covered by this specification sheet and Specialized Construction Products will not warrant the use or suitability of alternative paint systems over the surface of its plaster finishes.

Cleaning

Cleaning may be accomplished with water immediately after use. Clean the whisk and the bucket between mixes and discard the cleaning water.

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.

Maintenance

The wall cladding system should be regularly 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 and painted walls should be recoated with Dulux Acratex Acrashield Advance at 7 to 10 yearly intervals or sooner if required to maintain their appearance and durability. Regular checks, at least annually, must be made of the system to ensure that the weather resistant 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.

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.

Note: The expected durability of the cladding that continues into the ground may be reduced and is not covered under a standard warranty.

System Guarantee Period
10 years from date of practical completion

Workmanship Guarantee Period
5 years from date of practical completion to plastering.

Technical Assistance

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