

Viking
Below
ground

watertight
from the
ground up



Viking Below Ground Tanking: protecting buildings with robust, watertight sub-structure encapsulation

There are no second chances with waterproofing the sub-structure of a building once the back-filling is complete.

Below-ground tanking involves the application of a waterproofing membrane system to the outside of a building's sub-structure to prevent water ingress.

Tanking includes the lining of:

- Retaining walls
- Cellars
- Lift shafts
- Tunnels
- Plaza decks
- Roof gardens
- Planter boxes
- Foundations
- Basements

Mitigating Your Risk

Once the back filling has taken place, it is extremely difficult and expensive to take care of a leak. There is only one chance to waterproof below ground. It is important that proven systems such as self-adhered or torch-on

membranes with nationally recognised appraisals are specified. Alternatives that are too highly tricked or questionable in performance could prove to be costly.

Optimal membrane choice is critical to the success of below ground waterproofing projects, and relies on careful consideration of variations in site conditions and surrounding environment.

- Type of substrate
- Installation conditions
- Ground conditions (eg. Saline conditions, contaminated soils, geothermal conditions, gas (radon) conditions, tree root resistance, moving water)
- Service depth and/or presence of groundwater (eg. from less than 1m deep right through to 10m+ with groundwater present)

Different tanking membranes are designed for varying combinations of conditions. Viking Roofspec offers two premium below ground tanking systems, Viking Mercury FC and Viking Peel and Stick.

For more information on Viking Roofspec products and solutions visit www.vikingroofspec.co.nz

The Key to Success with Below Ground Tanking in New Zealand

Alignment with Innovative and World-class Manufacturers

Viking Mercury FC

Viking's Mercury FC Torch-on system is manufactured in Italy by General Membrane S.p.A. With innovation at the forefront of their mind and a policy of investing in Research and Development, General Membrane S.p.A. has been manufacturing quality materials for international construction markets for decades.

General Membrane S.p.A provides Viking Roofspec with exclusive membrane systems to cope with the South Pacific's most brutal conditions.

Viking Peel and Stick

Carlisle Construction Materials is the manufacturer of Viking Peel and Stick system. Carlisle Construction Materials of the USA has been supplying waterproofing materials to the international construction sector since the 1960's.

Carlisle Construction Materials only align themselves with distributors with similar values (like Viking Roofspec); two of those values being a relentless emphasis on training, along with the mantra of sticking with accredited systems empirically tested in some of the world's most sophisticated laboratories.

Viking Roofspec Proven Record

A combination of:

- 50 years experience of successfully supplying torch-on and self-adhered membrane systems
- Alignment to a select network of licensed and approved applicators
- Installing only world-class membrane systems that have been certified and appraised by nationally and/or internationally recognised product accreditation bodies

This has been instrumental in ensuring Viking Roofspec has one of, if not, the lowest remedial rate in the waterproofing membrane industry.

A High Standard of Workmanship

To ensure a professional and watertight finish, only Viking Approved Applicators have exclusive access to, and are eligible to install Viking Roofspec's below ground tanking systems. These standards are vitally important when it comes to below ground waterproofing, as it is imperative that workmanship is exemplary.

Viking
Approved
Applicator

BRANZ Appraised

BRANZ is a nationally recognised body providing product appraisals through independent testing and verification of international lab reports for products being distributed in New Zealand. BRANZ appraises construction products to ensure they will withstand the New Zealand climate and meet New Zealand Building Code requirements.

Both of Viking Roofspec's below-ground waterproofing systems are BRANZ appraised. Viking Roofspec has invested more funds into the appraisal and certification of our waterproofing materials than any of our competitors.



Warranties of Substance

Viking below-ground waterproofing systems come with a comprehensive 20-year product warranty.

Not all warranties are equal. The Tiri Group, an established, reputable New Zealand company with an annual turnover exceeding \$300 million, backs Viking Roofspec's warranties.

The Tiri Group will honour its warranties in the unlikely event of a product issue. For more information visit our website www.vikingroofspec.co.nz

Code of Practice

Viking Roofspec is an active member of the Waterproofing Membrane Association Incorporated (W.M.A.I.), an association of companies whose goal is to lift the standard of waterproofing in New Zealand.

The W.M.A.I. has been commissioned by the Department of Building and Housing to formulate a Tanking Code of Practice for its Building Code.



One Build Envelope – One Supplier

Why not specify your tanking, decking and roofing materials from the same professional materials supplier?

Viking Roofspec's world-class, proven materials, expert technical managers and online resources, make this an easy and sensible decision to make.



Viking Mercury FC

Viking Mercury FC torch-on system, consists of a polyester and fibreglass modified bitumen membrane that can be used for vertical and horizontal waterproofing applications.

It is applied as a single layer down to a depth of 3.5 metres, but when installed as a double layer, can go down to 10m below ground level. Typical applications include: under floor slabs; behind masonry walls and on substrates of in-situ or pre-cast concrete.

Viking Mercury FC is manufactured with an SBS rubberised bitumen compound that renders excellent cold flexibility, down to (-20°C) degrees; preventing splitting or cracking in extreme conditions.

High Puncture Resistance

Viking GM Mercury FC comprises of 4mm thick polyester and fibreglass modified bitumen membrane which is torch-applied to a compatibly primed surface. Being 4mm thick, it has high puncture resistance which is important for protection from damage during construction.

Benefits

- Cold flexibility to -20°C
- Torch-applied – maximum adhesion
- 4mm thick – Very high puncture resistance
- Very high chemical resistance
- Resists hydrostatic pressure
- Rot proof
- Mechanically strong
- Age-old, proven successful method

System Components

- Viking Mercury FC membrane – 4mm x 1.0mm x 10m
- Bituminous Primer – 20 litres
- Bituminous detailing paste
- Protection board
- Drainage board
- Bituminous fillets





Proven performance needed – East Auckland

THE CHALLENGE

A new home was being built in an exclusive Auckland suburb. The high-profile architect and homeowners required waterproofing materials with a history of proven performance. The sub-structure's waterproofing system was especially important, as upon completion it would be covered by back-fill; there was only one opportunity to get it right. A robust tested-and-trusted solution was required to satisfy all stakeholders.

THE SOLUTION

The architect and builders sought the expertise of Viking Roofspect to support in the selecting two systems, one to protect the roof and one for the sub-structure; the latter would be encapsulated using Viking's Mercury FC tanking membrane system.

BRANZ appraised, Viking Mercury FC is 4mm thick offering a higher puncture resistance than the average tanking membrane to maximise watertightness of the sub-structure and to minimise damage after installation from heavy, earth moving machinery.

A Viking Approved Applicator trained to waterproof the all-important sub-structure completed the installation of the below-ground tanking system. The same applicator also installed the Viking Torch-on system on the roof of the house. Having one applicator to carry out all above and below-ground waterproofing systems provided a more coordinated programme on-site and streamlined the administration for all stakeholders (including Council) who received one folder with the mandatory Producer Statements and Workmanship Warranties for works carried out on site.

THE RESULT

Torch-on membrane systems have been protecting New Zealand buildings for decades. The age-old and proven methodology of using torch-on membranes as a tanking solution was once again proven effective using Viking Mercury FC.

The watertight sub-structure provided reassurance and instilled confidence in the homeowners who were also reassured that the membrane system had been backed by a substantial 20-year product warranty against defects.



Viking Peel and Stick

Viking Peel and Stick is a damp-proofing and tanking membrane system that protects the below-ground portion of a building structure from water ingress.

Viking Peel and Stick is a self-adhering waterproofing system consisting of a 1.5mm thick rubberised asphalt membrane, on the face of which a heavy-duty, high impact polyethylene film, has been laminated. The adhesive side has a removable release sheet that is peeled back at the time of application to a pre-primed substrate and then fully bonds to it.

It is applied cold; a perfect solution in restricted areas where the use of a propane-gas-fuelled flame would be dangerous.

Benefits

- Full-adhesion eliminates water migration
- Bond improves over time
- Adheres to various substrate types
- 20.4m long rolls – fewer seams
- Elastomeric properties - forgives movement and provides flexibility over cracks
- Cold-applied – no flame required; especially useful in restricted areas
- Age-old proven successful method

System Components

- Peel and Stick membrane – 1.5mm x 0.914m x 20.4m
- Bituminous Primer – 19 litres
- Liquid Mastic Sealant 750ml
- Drainage board





Living underground

THE CHALLENGE

A residential property in Wellington was being built on a sloping site. One interesting feature of this property was that two bedrooms and the garage would actually be below ground level, meaning the floor slab and three sides of the building required waterproofing. As this would be covered by a driveway and garden, there was no room for error from a waterproofing perspective. A further challenge was the fact that unlike waterproofing on large, open areas such as roofs – tanking the walls below the ground had to be done in a tight, confined space.

THE SOLUTION

The most suitable option was the BRANZ Appraised Viking Peel and Stick system. It is easy to apply in tight locations (the 9.15mm x 20.4m rolls are easily handled on site) requiring little equipment.

To start with, the floor slab was poured on Viking Peel and Stick membrane and the block walls then needed tanking. A critical component of this exercise is 'tying' the floor slab waterproofing to the tanking membrane (that runs up the block walls). To prepare the tanking job, the block work was primed with a roller-applied primer coat. The Peel and Stick membrane was then

adhered. Viking's standard details call for an extra layer of Peel and Stick membrane applied to the external corners for durability.

The Viking Approved Applicator then protected the waterproofing sheet with a proprietary dimpled protection/drainage sheet supplied by Viking. The membrane was terminated at the top of the block wall by fixing under the bottom plate. A drain was installed at the bottom of the wall to ensure any water drained away from the wall.

THE RESULT

The sub-structure of the building received a durable waterproofing solution through quality detailing and a BRANZ appraised proprietary protection system, resulting in a tanking job that meets the New Zealand Building Code's Clause B2 requirement, 50-year durability.



**Contact us here
to meet your needs**

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