

Viking Dec-K-ing (PVC) Waterproofing Membrane



Product Description

Dec-K-ing is a single-ply, trafficable, waterproofing PVC sheet membrane system for deck surfaces (suitable for decks above living areas). It is an aesthetic, all-inclusive finished waterproofing solution. The sheets are heat-welded with 25mm lapped seams. Dec-K-ing has an embossed, slip-resistant surface that provides underfoot comfort, and due to a lighter colour palette aids in reflecting more of the heat away from the deck structure when compared to some other waterproofing membranes. Dec-K-ing does not need to be overlaid with another deck surface as most other deck waterproofing membrane systems do.

The embossed surface provides slip-resistance, while the polyester-reinforcing mesh scrim inherent throughout the membrane provides great puncture resistance. Added durability comes from Dec-K-ing's strong UV resistance and directional stability: changes in temperature can cause deck substrates (especially plywood) to contract and expand. This has caused splitting and leaking in some waterproofing membranes particularly with some liquid membranes reinforced with fibre-glass. Dec-K-ing's flexibility, reinforcing mesh scrim and heat-weldable technology avoids this.

Dec-K-ing is suitable for inland, coastal, residential (roof decks, patios, pool decks, multi-unit apartments), commercial areas and walkways.

Other features:

Available in seven colours, listed below, Dec-K-ing is BRANZ Appraised #411, and is backed by a 20-year product warranty. Specific projects over 300m² that are registered with Viking Roofspect may be eligible for [Viking's Full System Warranty](#), which covers the product and installation warranties in one document.

Colour	Average LRV
Sandy Landau Grey,	33
Sandy Pearl,	<i>Not yet tested</i>
Stonehenge,	28.5
Sand Pebble	<i>Not yet tested</i>
Baltic	<i>Not yet tested</i>
Prairie Barn	43
Country Cottage	27

Dec-K-ing is an attractive low maintenance, trafficable deck waterproofing membrane.

Thickness: 1.5mm;

Width: 1.830m;

Roll length: cut to any length up to 123Lm.

Scope of Use:

Viking Dec-K-ing PVC Waterproofing Membrane has been appraised for use as a waterproofing membrane for buildings within the following scope:

- on pedestrian decks and balconies; and,
- scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
- with timber supporting structures designed and constructed in accordance with the NZBC; and,
- with substrates of plywood sheet and compressed fibre cement sheet; and,
- with decks that have a maximum size of 40 m².

Viking Dec-K-ing PVC Waterproofing Membrane has also been appraised for use as a waterproofing membrane for external reinforced concrete pedestrian decks and balconies for buildings within the following scope:

- up to 3 storeys with a maximum height from ground to eaves of 10 m and with a floor plan area limited only by seismic and structural control joints; and,
- with the reinforced concrete structure designed and constructed in accordance with the NZBC.

New Zealand Building Code (NZCB):

The product will, if employed in accordance with the supplier's installation and maintenance requirements, assist with meeting the following provisions of the building code:

- Clause B2 Durability: Performance B2.3.1(b) 15 years
- Clause E2 External moisture: Performance E2.3.1, E2.3.2
- Clause F2 Hazardous building materials: Performance 2.3.1

Supporting Evidence

The product has and can make available, the following additional evidence to support the above statements:

- Dec-K-ing BRANZ Appraisal 411

Product Criteria

Design Requirements

Product specification and incorporation of the Viking Dec-K-ing PVC Waterproofing Membrane into the building design shall be carried out by a designer/architect/engineer or building professional who:

- Is qualified to design the buildings covered under the 'Scope' of use of this product.
- Has ready access to the technical specifications including installation details and standards referenced in the current BRANZ Appraisal No. 411 where the design limitations are outlined for the scope of this PTS.

Dec-K-ing is a system that works in conjunction with its matching accessories including internal and external corner flashings, door transits, clamped drains and overflows, scupper outlet, fastening bars and PVC weldable flashing material.

Substrate Design

It is the responsibility of the specifier to design supporting structures within the limitations required of the NZBC. Dec-K-ing as a waterproofing membrane is not limited to size of area for use. Viking Roofspec have a specific Dec-K-ing Plywood Substrate Checklist created to minimise the chance of substrate movement between sheets. There may be requirements within the substrate design to allow for structural movement.

Note: Movement of the structural framing and / or plywood substrate, caused by various factors, can produce a membrane wrinkle at the movement points. This is known as 'tenting'. The Dec-K-ing substrate specification has been written to prevent substrate movement, however on rare occasions tenting has still occurred due to certain seasonal conditions. The performance and long-term durability of the Dec-K-ing membrane will not be adversely affected if tenting occurs.

Installation Requirements

- Installation shall be carried out by a Viking Roofspec trained and licensed installer.
- Installation shall be undertaken in accordance with all relevant technical information related to the selected installation method, including current information contained within BRANZ Appraisal # 411, Viking Roofspec Dec-K-ing Applicator Handbook, typical details and specification.
- Installation of substrates must always be carried out in accordance with the Viking Dec-K-ing PVC Waterproofing Membrane Technical Literature by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant License Class

Maintenance Requirements

- No special maintenance of the membrane is normally required provided significant substrate movement does not occur.
- In the event of damage to the membrane, the membrane must be repaired by removing the damaged portion and applying a patch as for new work.
- Drainage outlets must be maintained / cleaned to operate effectively.
- Long term properties of the material may be affected by contact with petroleum-based products such as bitumen-based membranes, oils, greases and solvents.
- A Membrane Care and Maintenance Guide is available from the Viking Roofspec website.
- Viking recommend use of Dec-K-ing Cleaner SDM185. One Litre concentrate bottle supplied by Viking Roofspec.

Warranties

The Viking Dec-K-ing system is backed by a 20-year product warranty. Specific projects over 300m² that are registered with Viking Roofspec may be eligible for [Viking's Full System Warranty](#), which covers the product and installation warranties in one document.

Physical Properties

Physical Property	
Weight	2.3kg/m ²
Effective coverage per LM x 1.8mt width <i>sold as cut to length</i>	1.8m ²
Vinyl Coating	2.2kgm
Scrim	0.7kg/m ²
Emboss pattern	Pebble, Sand, Timber-grain
Tensile Strength	MD 4.9kgcm XD 4.9kgcm
Lap joint strength	Initial 68.6kg MD 72.3kg
After boiling	Initial 60.5kg MD 65.0kg
Elongation at break	MD 117% XD 112%
Low temperature Impact	Pass
Resistance to heat aging	Pass
Low temperature flexibility	Pass
Accelerated weathering	No cracking, blistering or colour change
Water vapour transmission	Pass
Dimensional change (loading and non-loading)	Pass
Cone	Pass / 173N
Abrasion resistance	Pass / 110%
Slip resistance (American test)	Pass / 105%



BRANZ Appraised

Appraisal No. 411 [2018]

VIKING DEC-K-ING PVC WATERPROOFING MEMBRANE

Appraisal No. 411 [2018]

This Appraisal replaces BRANZ
Appraisal No. 411 [2011]



BRANZ Appraisals

Technical Assessments of products
for building and construction.



Viking Roofspec

A division of Viking Group Ltd

P O Box 14 541
Panmure
Auckland

Freephone: 0800 729 799

Freefax: 0800 729 788

Email: info@vikingroofspec.co.nz

Web: www.vikingroofspec.co.nz



BRANZ

1222 Moonshine Rd,
RD1, Porirua 5381
Private Bag 50 908
Porirua 5240,
New Zealand
Tel: 04 237 1170
branz.co.nz



Product

- 1.1 Viking Dec-K-ing PVC Waterproofing Membrane is a reinforced polyvinyl chloride (PVC), adhesive fixed sheet waterproofing membrane designed to be used on pedestrian decks and balconies.
- 1.2 The product is a coloured, laminated, multi layered, flexible PVC sheet in roll form. The product is installed as a single layer system.

Scope

- 2.1 Viking Dec-K-ing PVC Waterproofing Membrane has been appraised for use as a waterproofing membrane for buildings within the following scope:
 - on pedestrian decks and balconies; and,
 - scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
 - with timber supporting structures designed and constructed in accordance with the NZBC; and,
 - with substrates of plywood sheet and compressed fibre cement sheet; and,
 - with decks that have a maximum size of 40 m².
- 2.2 Viking Dec-K-ing PVC Waterproofing Membrane has also been appraised for use as a waterproofing membrane for external reinforced concrete pedestrian decks and balconies for buildings within the following scope:
 - up to 3 storeys with a maximum height from ground to eaves of 10 m and with a floor plan area limited only by seismic and structural control joints; and,
 - with the reinforced concrete structure designed and constructed in accordance with the NZBC.
- 2.3 This Appraisal is limited to pedestrian decks and balconies within the following scope:
 - constructed to suitable falls [Refer Paragraphs 12.4 – 12.5]; and,
 - with no steps within the deck level, no integral roof gardens and no down pipe discharging directly onto the deck.
- 2.4 The design and construction of the substrate and movement and control joints are specific to each building, and are therefore the responsibility of the building designer and building contractor, and are outside the scope of this Appraisal.
- 2.5 The membrane must be installed by Viking Roofspec trained and approved applicators.

Building Regulations

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, Viking Dec-K-ing PVC Waterproofing Membrane, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet the following provisions of the NZBC:

Clause B2 DURABILITY: Performance B2.3.1 [b], 15 years. Viking Dec-K-ing PVC Waterproofing Membrane meets this requirement. See Paragraph 9.1.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.1 and E2.3.2. Decks and balconies incorporating Viking Dec-K-ing PVC Waterproofing Membrane meet these requirements. See Paragraphs 12.1 - 12.8.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1 Viking Dec-K-ing PVC Waterproofing Membrane meets this requirement and will not present a health hazard to people.

Technical Specification

4.1 Materials supplied by Viking Roofspec are as follows:

- **Viking Dec-K-ing PVC Waterproofing Membrane** - A PVC waterproof sheet membrane reinforced with a polyester fabric mat. The product is supplied as a 1.5 mm thick sheet with a width of 1.8 m and length of 23 m or 115 m. The Viking Dec-K-ing PVC Waterproofing Membrane is available in 6 colours.
- **Dec-K-ing Contact Adhesive** - A specially formulated solvent-based adhesive for all Viking Dec-K-ing PVC Waterproofing Membrane applications. It has been designed to withstand the plasticizers in PVC sheeting. Supplied in 18.9 litre containers.
- **Dec-K-ing Floor Patch and Floor Patch Additive** - A two part, cement-based concrete patching compound to rapidly repair rough or damaged concrete prior to the installation of floor coverings. The floor patch is supplied in 10 kg bags and the additive is supplied in 3.7 and 18.9 litre containers.
- **Dec-K-ing Deck Cleaning Conditioner** - A cleaning conditioner for maintaining completed Viking Dec-K-ing PVC Waterproofing Membrane decks. It is supplied in 200 ml plastic containers.
- **Dec-K-ing Scupper Drain** - A PVC drain with baked on plastisol coating, one piece scupper drain. It is used to provide adequate drainage in Viking Dec-K-ing PVC Waterproofing Membrane decks by way of wall or overflow drainage.
- **Dec-K-ing Fastening Bar** - An anodized, extruded aluminium, pre-drilled channelled bar with tape sealant installed on the back. It is used for mechanically fixing Viking Dec-K-ing PVC Waterproofing Membrane under doorways, on wall surfaces, step risers, wheelchair ramps and deck edges.
- **Dec-K-ing Deck Edge Flashing** - A deck edge flashing for Viking Dec-K-ing PVC Waterproofing Membrane to provide a formed drip edge at the deck edge.
- **Dec-K-ing PVC Drain** - A PVC floor-waste deck drain for Viking Dec-K-ing PVC Waterproofing Membrane with a clamp-ring system to ensure a water-tight seal. They are available in various drain and grill sizes.

Handling and Storage

5.1 Handling and storage of all materials whether on or off site is under the control of the Viking Roofspec trained and approved applicators. Dry storage must be provided for all products.

Technical Literature

- 6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for the Viking Dec-K-ing PVC Waterproofing Membrane. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

General

- 7.1 Viking Dec-K-ing PVC Waterproofing Membrane is for use on pedestrian decks and balconies where an impervious waterproof membrane is required to prevent damage to building elements and adjoining areas.
- 7.2 The effective control of internal moisture must be considered at the design stage due to the impermeability of the membrane. Refer to the BRANZ publication "Good Practice Guide - Membrane Roofing".
- 7.3 Timber framing systems must comply with NZS 3604, or where specific engineering design is used, the framing shall be of at least equivalent stiffness to the framing provisions of NZS 3604, or comply with the serviceability criteria of AS/NZS 1170. In all cases framing must be provided so that the maximum span of the substrate as specified by the substrate manufacturer is met and that all sheet edges are fully supported.
- 7.4 The fully adhered membrane is suitable for use on decks and balconies of buildings within all NZS 3604 Building Wind Zones up to and including Extra High.
- 7.5 The membrane is designed for use on trafficable decks and balcony areas; however, contact with sharp objects that may damage the membrane surface must be avoided.

Substrates

Plywood

- 8.1 Plywood must be treated to H3 [CCA treated]. LOSP treated plywood must not be used. Plywood must comply with NZBC Acceptable Solution E2/AS1, Paragraphs 8.5.3 and 8.5.5. Where specific design is used [i.e. outside the scope of E2/AS1] the plywood thickness and fixing size may increase and centres may decrease to meet specific wind loadings.

[Note: Movement of the plywood substrate, caused by various factors, can produce a membrane wrinkle at the movement points. This is known as 'tenting'. The Dec-K-ing substrate specification has been written to prevent substrate movement, however on rare occasions tenting has still occurred due to certain seasonal conditions. The performance and long term durability of the Dec-K-ing membrane will not be adversely affected if tenting occurs.]

Fibre Cement Compressed Sheet

- 8.2 Fibre cement compressed sheet must be manufactured to comply with the requirements of AS 2908.2 and must be specified by the manufacturer as being suitable for use as an external deck substrate. The fibre cement sheet must be of a thickness to meet the specific structural design requirements and must be secured to the structure to resist wind uplift and all other forces acting on the deck or balcony such as deflection from gravity and live loads.

Concrete

- 8.3 Concrete substrates must be to a specific engineering design meeting the requirements of the NZBC, such as concrete construction to NZS 3101 or NZS 3109.

Durability

Serviceable Life

- 9.1 Viking Dec-K-ing PVC Waterproofing Membrane when subjected to normal conditions of environment and use, is expected to have a serviceable life of at least 15 years.

Maintenance

- 10.1 No maintenance of the membrane is normally required provided significant substrate movement does not occur.
- 10.2 In the event of damage to the membrane, the membrane must be repaired by removing the damaged portion and applying a patch as for new work.
- 10.3 Drainage outlets must be maintained to operate effectively.

Prevention of Fire Occurring

- 11.1 Separation or protection must be provided to Viking Dec-K-ing PVC Waterproofing Membrane from heat sources such as fire places, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 – C/AS6 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

- 12.1 Pedestrian decks and balconies must be designed and constructed to shed precipitated moisture. They must also take account of snowfalls in snow prone areas. A means of meeting the performance requirements of NZBC Clause E2.3.1 is given by the Technical Literature which is aligned with details in NZBC Acceptable Solution E2/AS1.
- 12.2 When installed in accordance with this Appraisal and the Technical Literature, Viking Dec-K-ing PVC Waterproofing Membrane will prevent the penetration of water and will therefore meet the performance requirements of NZBC Clause E2.3.2. The membrane is impervious to water and will give a weathertight deck or balcony.
- 12.3 Viking Dec-K-ing PVC Waterproofing Membrane is impermeable, therefore a means of dissipating construction moisture must be provided in the building design and construction to meet the performance requirements of NZBC Clause E2.3.6.
- 12.4 The minimum fall to decks and balconies must be 1 in 40 and gutters is 1 in 60. All falls must slope to an outlet. Inadequate falls will allow moisture to collect and increase the risk of deterioration of the membrane.
- 12.5 Allowance for deflection and settlement of the substrate must be made in the design of the deck or balcony to ensure falls are maintained and no ponding of water can occur.
- 12.6 Drainage flanges must be used for any outlet and must be fitted with a grate or cage to reduce potential sources of blockages. An overflow must be provided where the deck or balcony does not drain to an external gutter or spouting.
- 12.7 Penetrations and upstands of the membranes must be raised above the level of any possible flooding caused by blockage of deck and balcony drainage.
- 12.8 The design of details not covered by the Technical Literature is subject to specific weathertightness design and is outside the scope of this Appraisal.

Installation Information

Installation Skill Level Requirement

- 13.1 Installation of the membrane must be completed by trained applicators approved by Viking Roofspec.
- 13.2 Installation of substrates must always be carried out in accordance with the Viking Dec-K-ing PVC Waterproofing Membrane Technical Literature and this Appraisal by, or under the supervision of, a Licensed Building Practitioner [LBP] with the relevant Licence Class.

Preparation of Substrates

- 14.1 Substrates must be dry, clean and stable before installation commences. Surfaces must be smooth and free from nibs, sharp edges, dust, dirt or other materials such as oil, grease or concrete formwork release agents. All surface defects must be filled to achieve an even and uniform surface.
- 14.2 The relative humidity of the concrete must be 75% or less before membrane application. Concrete substrates can be checked for dryness by using a hygrometer, as set out in BRANZ Bulletin No. 585.
- 14.3 The moisture content of the timber substructure must be a maximum of 20% and plywood and compressed fibre cement sheet must be dry at time of membrane application. This will generally require plywood and compressed fibre cement sheets to be covered until just before the membrane is laid to prevent rain wetting.
- 14.4 All plywood edges must be glued with a continuous bead of Holdfast Gorilla Grip Construction Adhesive. Lay the plywood with the face grain at right angles to the framing in a brick bond pattern with tight, butted joints. Refer to Masterspec 4432V, Section 3.7, or Substrate Checklist - Plywood in the Dec-K-ing section of www.vikingroofspec.co.nz for further specific plywood preparation instructions for Dec-K-ing.

Membrane Installation

- 15.1 The membrane must be installed in accordance with the Technical Literature.
- 15.2 The membrane should be unrolled without tension onto the prepared substrate. On plywood substrates the seams can be stapled to temporarily hold the membrane in place. These staples are removed later when the seams are welded.
- 15.3 Joints must be overlapped by a minimum of 20 mm at the ends and sides, with side overlapping in the direction of the fall. A minimum allowance of approximately 75 mm of membrane is required at deck edges, and 150 mm to turn up walls or upstands.
- 15.4 Adhesion of the membrane to the substrate is carried out by using a contact adhesive. The contact adhesive may be used in temperatures as low as 0°C.
- 15.5 Installation of the membrane is carried out by folding back half of the sheet at a time, applying the adhesive and folding back the sheet over to adhere it to the decking. Contact adhesive is applied to both the membrane and the substrate.
- 15.6 After all detailing work such as internal and external corners, deck edges and flashings have been completed, the joint seams can be welded using a hot air welder.

Inspections

- 16.1 Critical areas of inspection for waterproofing systems are:
 - Construction of substrates, including crack control and installation of bond breakers and movement control joints.
 - Moisture content of the substrate prior to the application of the membrane.
 - Acceptance of the substrate by the membrane installer prior to application of the membrane.
 - Installation of the membrane to the manufacturer's instructions.

Health and Safety

- 17.1 Safe use and handling procedures for the membrane system is provided in the Technical Literature. The products must be used in conjunction with the relevant Materials Safety Data Sheet.

Basis of Appraisal

The following is a summary of the technical investigations carried out:

Tests

- 18.1 Tests have been carried out on Viking Dec-K-ing PVC Waterproofing Membrane in Canada by Intertek Testing Services for compliance with CAN/CGSB 37.54-95 Test Standard for Polyvinyl Chloride Roofing and Waterproofing Membrane, and from ICBO-ES Acceptance Criteria for Walking Decks [AC39].
- 18.2 The CAN/CGSB 37.54-95 testing covered thickness, breaking strength, elongation at break, lap joint strength, low temperature impact, resistance to heat ageing, low temperature flexibility, resistance to accelerated weathering, water vapour transmission, effect of water absorption, dimensional change and chemical resistance.
- 18.3 The ICBO testing covered tensile strength, elongation at break, bond strength (using both latex and contact adhesive), low temperature flexibility, accelerated ageing, weatherometer testing, effect of water absorption, percolation, concentrated load, abrasion resistance and chemical resistance.
- 18.4 This testing showed that the Viking Dec-K-ing PVC Waterproofing Membrane passed all of the requirements of these standards.

Other Investigations

- 19.1 An assessment was made of the durability of the Viking Dec-K-ing PVC Waterproofing Membrane by BRANZ technical experts, partially based on the inspection and assessment of decks in the USA and by examination and testing of samples taken from the decks.
- 19.2 Site visits have been carried out by BRANZ to assess the practicability of installation, and to examine completed installations.
- 19.3 The Technical Literature has been examined by BRANZ and found to be satisfactory.

Quality

- 20.1 The manufacture of the membrane has not been examined by BRANZ, but the membrane manufacturer, Canadian General-Tower Limited is the subject of ISO/TS 16949:2002 and ISO 9001:2008 Certificates by QMI Management Systems Registration.
- 20.2 The quality of supply of the product to the market is the responsibility of Viking Roofspec.
- 20.3 Quality on site is the responsibility of the Viking Roofspec trained and approved applicator.
- 20.4 Designers are responsible for the substrate design, and building contractors are responsible for the quality of construction of substrate systems in accordance with the instructions of the substrate manufacturer, Viking Roofspec and this Appraisal.

Sources of Information

- AS/NZS 2908.2-2000 Cellulose-cement products - Flat sheet.
- AS/NZS 1170: 2002 Structural design actions.
- AS/NZS 2269: 2012 Plywood - Structural.
- NZS 3101: 2006 Concrete structures standard.
- NZS 3109: 1997 Concrete construction.
- NZS 3604: 2011 Timber-framed buildings.
- Good Practice Guide - Membrane Roofing, BRANZ, October 2015.
- Acceptable Solutions and Verification Methods for New Zealand Building Code External Moisture Clause E2, Ministry of Business, Innovation and Employment, Third Edition July 2005 (Amendment 7, 01 January 2017).
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.



BRANZ Appraised
Appraisal No. 411 [2018]

BRANZ Appraisal
Appraisal No. 411 [2018]
31 August 2018

VIKING DEC-K-ING PVC
WATERPROOFING MEMBRANE



In the opinion of BRANZ, **Viking Dec-K-ing PVC Waterproofing Membrane** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Viking Roofspec**, and is valid until further notice, subject to the Conditions of Appraisal.

Conditions of Appraisal

1. This Appraisal:
 - a) relates only to the product as described herein;
 - b) must be read, considered and used in full together with the Technical Literature;
 - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
 - d) is copyright of BRANZ.
2. **Viking Roofspec**:
 - a) continues to have the product reviewed by BRANZ;
 - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
 - c) abides by the BRANZ Appraisals Services Terms and Conditions;
 - d) warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
 - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
 - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
 - c) any guarantee or warranty offered by **Viking Roofspec**.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to **Viking Roofspec** or any third party.

For BRANZ

Chelydra Percy

Chief Executive

Date of Issue:

31 August 2018

- Framing supports at 400mm centres (in one direction). All plywood edges must also be supported. **Do not use tongue and groove plywood.**
- Minimum thickness 17mm, F8, CCA H3.2 treated, square edge structural plywood (not LOSP treated). CD grade with the sanded C face upwards
- Plywood laid with face grain at right angles to supports. All sheet joints must be made on a single timber support to minimise the chance of movement between sheets
- Plywood is to be laid with staggered joints in a brick-bond pattern. Apply with a continuous bead of Holdfast Gorilla Grip 2 Hour-Cure Construction Adhesive on top of timber supports
- Sheet edges are to be carefully glued together with a continuous bead of Holdfast Gorilla Grip 2 Hour-Cure Construction Adhesive (no spot gluing) and must be tight butt-joined. Glue must be seen to come to the top surface of the sheet joints. Once sheets have been placed together remove excess adhesive by scraping the joint with a chisel. Ensure joints and sheets are not walked on with two hours of application. When fully cured remove excess and sand all sheet joints
- Leave a 5mm expansion gap around the perimeter of the plane. This fixing specification allows for a maximum 50m² without expansion joints (dependent on design). 5mm expansion joints should be allowed for on areas over 50m². For further information regarding placement of expansion joints for your design, please contact Viking Roofspec
- Plywood screw-fixed with 10g x 50mm S/S counter-sunk screws at 150mm centres at all sheet edges and 200mm centres through the body of the sheet. All screws to be counter sunk 1-2mm
- Chamfer all external edges with a minimum radius of 5mm
- Plywood is to be kept dry at all times during construction.** Blow/torch drying the plywood surface prior to membrane application does not comply. Plywood and framing supports to be at no more than **20% moisture content**
- All outlets and overflows are membrane compatible. Outlets must be Clamped Grates or Dec-K-ing weldable components
- Ensure compliant falls. E2/AS1 8.5.1. limitations state **2° for roofs (1:30 or 34mm/mt), 1.5° for decks (1:40 or 25mm/mt) and 1:100 (10mm/mt)* for internal gutters**
* a minimum of 2° is required in Auckland
- Please ensure you have ordered the correct membrane colour for your project

NOTES:

- Cover the substrate to keep it dry, ensuring the waterproofing membrane can be installed when needed. Communicate early with your Viking Approved Applicator on the project scheduling to ensure weather exposure is kept to a minimum
- Correct substrate installation is critical to durability and performance of the membrane
- Failure to strictly comply with substrate specification may affect product warranty. Refer to Viking Dec-K-ing Product Warranty for further details
- **The Viking Dec-K-ing Specification works to control substrate movement where possible.** Substrate movement may occur due to several factors, including; incorrect substrate installation, seasonal conditions or within the design allowance for substrate expansion control. This movement of substrate can produce a wrinkle or 'Tenting' in all types of membrane. As it is created by movement of the substrate itself this is not a product fault of Dec-K-ing and as such, is not covered under the product warranty; however, the durability and waterproofing guarantee for Dec-K-ing is not affected if Tenting is exhibited
- All constructions should comply with the New Zealand Building Code. Contact your local council for further advice
- Communication between the Applicator and Construction Company will assist to ensure specification is met
- Information regarding our products, specifications and warranties is available at www.vikingroofspec.co.nz If you have a query regarding this substrate specification please call Viking on **0800 729 799**

Correct, regular maintenance of your membrane deck will ensure the best, long-term performance of the Viking Dec-K-ing system.

GENERAL CARE

Following is a list of maintenance recommendations for the Viking Dec-K-ing system

- a) **Provide proper drainage.** Keep the deck surface clean of debris - leaves, twigs, paper or accumulated dirt - particularly around drains to avoid clogging. Ponding water on the surface of the membrane increases the risk of moisture ingress at membrane laps, or in the event of a puncture or cut in the membrane
- b) **Avoid membrane exposure to chemicals,** petroleum products and solvents, grease and oils (including kitchen fat)
- c) **Exercise care with tools and equipment.** Where it is necessary for workers to be on the deck to service units, care should be taken when placing doors, lids or sharp objects directly onto the membrane surface. When moving units or equipment, avoid damage by using protective boards over the membrane prior to moving equipment
- d) **Remove debris,** such as glass, bolts, nails, screws, metal shavings etc. and any other material that may cause punctures or cuts to the membrane
- e) **Repairs.** Arrange for immediate repair of any damage using a Viking Approved Applicator. **To find a Viking Approved Applicator visit www.vikingroofspect.co.nz/find-an-applicator/** page

CLEANING

Viking Dec-K-ing membrane decks should be cleaned at least annually. If the deck is highly exposed to organic debris (leaves and branches), it should be cleaned more regularly. Hot soapy water applied with a brush or broom will normally suffice. For stubborn stains **Dec-K-ing cleaner is the only specified cleaner recommended for use with the Viking Dec-K-ing membrane.**

INSPECTIONS

A regular inspection programme should be established. Viking Dec-K-ing membrane inspections should be conducted at least twice a year after installation. Inspections should include high-risk areas such as drains, as well as a general inspection of the entire membrane area. Where possible, inspections should also include the examination from the underside for evidence of leaks, structural issues or movement and other deficiencies. Parapets, flashings and edging should also be examined for evidence of deterioration or moisture infiltration.

Additionally, Viking Dec-K-ing membrane inspections should also be conducted:

- a) After severe weather conditions; such as strong winds, hail or continued heavy rain, examine the deck for ponding, debris or damage to other building elements
- b) After repair or replacement of deck equipment (e.g. air conditioning units etc.), or when the deck is exposed to work where damage may occur.

WARRANTIES

Viking Roofspec Dec-K-ing membrane system is warranted for 20-years. The Viking Approved Applicator named in the Certificate of Workmanship underwrites the workmanship for installation of a Viking Dec-K-ing system for ten-years for a residential project, or for an agreed period of time for a commercial project. In the event of an issue, these warranties will cover the cost of labour and materials to correct any problem caused by a fault in workmanship or materials supplied by Viking Roofspec.

In some cases the Viking Dec-K-ing system may be installed in conjunction with other components not manufactured or supplied by Viking Roofspec, or terminated to building components that may cause or contribute to a leak. Materials not supplied by Viking Roofspec are excluded from the Product Warranty.

LEAKS

In order to retain warranty cover, any material or workmanship failure must be advised to Contractor, Approved Applicator or Viking Roofspec within 14 days of the leak or failure being identified. First contact should be to the Viking Approved Applicator who installed the membrane. If the issue is related to workmanship then the Approved Applicator will make good any fault (within the warranty period stated in the Certificate of Workmanship). If the issue is related to the Product Warranty, the Approved Applicator will communicate this to Viking Roofspec or the building owner can contact Viking Roofspec direct. Viking Roofspec will assign a technical representative to the project to assess the damage and plan the appropriate step to rectification.

For any further information relating to membrane maintenance or information regarding our products, specifications and warranties are available at www.vikingroofspec.co.nz call Viking Roofspec on **0800 729 799**

MEMBRANE POST INSTALLATION CHECKLIST

- Substrate checklist has been completed for the specific membrane type to be installed, with any remedial work finished before the membrane is installed
- All Outlets and Overflows are 'membrane-type-compatible' and have been installed correctly
- Membrane has been installed in the correct sequence, starting from the outlets up-to the highest point of the roof/deck or gutter
- All detailing has been installed as per manufacturer specifications and details
- All laps and details have been correctly inspected as per manufacturer specifications.
Note: Torch-on Gussets must be installed in the Base Sheet layer
- Internal Gutters have been flood-tested up-to the height of the overflow for a minimum period overnight, up-to 24 hours. **Note:** Torch-on membranes must be tested on the first (Base Sheet) layer, before the Cap Sheet is installed
- All accessories used are correct and compatible for the membrane type installed
- Vents have been installed as per specification. **Note:** Cavity ventilation is not required for a WarmRoof system that meets or exceeds the minimum R-value requirements
- Membrane and details are free from damage at the time of inspection.
See comments below if anything found

Date Inspected:			
Inspected By:			
Site Address:			
Areas Inspected:			
Approved Applicator Company:			
Names of Licensed Installers:			
Main Contractor:			
Testing method: <i>tick at least one</i>	Seam-Probed	Flood-tested	ILD
Notes or Comments: <i>Was inspection 100% pass or were repairs needed? Any following actions required?</i>			

Print Name:

Signature:

Viking Roofspec Notes:

Specifications, substrate checklists and applicator handbooks can be found on Viking Roofspec Applicators Only page at www.vikingroofspec.co.nz

All construction must comply with the New Zealand Building Code. Contact your local council for further details

Viking Roofspec

Ph: 0800 729 799

Email: info@vikingroofspec.co.nz

Viking Dec-K-ing System

Product Warranty



Viking Roofspec offers this Warranty for the Viking Membrane System for 20 years from the Warranty Commencement Date ("Warranty Period").

- Viking Roofspec warrants that the Membrane System will, subject to the terms set out below, retain its waterproofing and weatherproofing for the Warranty Period provided that the Membrane System has been properly installed by a Viking Approved Applicator in accordance with all Viking Roofspec specifications current at the time of installation, including, but not restricted to the technical data and standard details as listed on the Viking Roofspec Website at www.vikingroofspec.co.nz and training provided by Viking Roofspec ("Viking Specifications").
- This Warranty covers only materials supplied by Viking Roofspec as the Membrane System, including the membrane, proprietary accessories, primers and adhesives; provided materials were new and unused at the time of installation and have not been disturbed thereafter.
- Warranty Commencement Date: _____
(Date of completion of Membrane System installation)
- The Membrane System
Membrane Type: _____
Membrane Thickness: _____
Membrane Colour: _____
- The Building
Project Address: _____
Area of Application: _____
Installed by: _____
- This Warranty covers only the waterproofing and weatherproofing properties of the Membrane System. Viking Roofspec will not be liable for any failure of the Membrane System or damage resulting from any failure that has been caused in part or in whole by the Membrane System not being installed in accordance with the Viking Specifications. Viking Roofspec does not give any warranty as to the suitability of any installer and will not, in any circumstances be liable for the actions or omission of any installer. Viking Roofspec requires that all Viking Approved Applicators provide a separate Certificate of Workmanship covering any defects in the installation of the Membrane System.
- The Membrane System is not warranted against, and Viking Roofspec shall not be liable for loss of waterproofing properties or damage caused by:
 - objects penetrating the sheeting, or mechanical damage;
 - chemical or substance (save those specifically approved for use by Viking Roofspec);
 - shifting or altering of the Membrane System after installation;
 - infiltration or condensation of moisture in, around, or above the walls of the Building or the failure of other Building components;
 - the lack of positive drainage (ponded water);
 - the lack of adequate ventilation;
 - environmental factors including dirt, pollutants and biological agents, fungi, bacteria or spores;
 - accident or intentional or negligent acts, misuse, abuse, vandalism or civil disobedience or the like; or
 - Acts of God which include, but are not limited to, acts of nature without human intervention, such as earthquakes, storms, floods, lightning strikes and explosions.
- In addition to the above limitations, this Warranty will be void and Viking Roofspec will not be liable under it if;
 - any alteration or repair is made on or through the Membrane System (including, but not limited to: structures, fixtures or utilities) without prior written authorisation from Viking Roofspec;
 - any alteration or repair is made to the Membrane System by a person other than a Viking Approved Applicator;
 - the owner of the Building fails to use reasonable care in maintaining the Membrane System, such maintenance to include (but not be limited to) those items listed in the Membrane Care and Maintenance information, as amended and updated from time to time. Current Membrane Care and Maintenance information is available from our website at www.vikingroofspec.co.nz. You acknowledge that Viking Roofspec has no obligation to notify you of changes to the Membrane Care and Maintenance information; or
 - the building is moved from the site at which the Membrane System was originally installed.

9. Change in the aesthetics, colour or finish of the Membrane System, or "Tenting" of the Membrane System due to substrate movement, are not covered by this Warranty.
10. Viking Roofspec shall not be liable under this Warranty (or any implied warranties which are not excluded under clause (16) for any consequential, indirect or special loss or damage of any kind whatsoever, or loss of profits, whether under contract, tort or otherwise.
11. Viking Roofspec's liability is in any circumstances limited to (at the option of Viking Roofspec) either;
 - providing for the repair of the original Membrane System,
 - or providing a credit to be applied towards the purchase of a new Membrane System, calculated pro rata, based upon the number of remaining months of the unexpired Warranty Period, using the current material prices for the Membrane System. The maximum pro rata value allowed by Viking Roofspec for repair or credit shall not exceed the original purchase price of the product supplied.
12. The obligations under this Warranty shall only be enforceable against Viking Roofspec upon completion of the installation of the Membrane System; completion of the installation contract; and once payment in full has been received for the product supplied.
13. Should any defect occur which requires a remedy under the terms of this Warranty, then the defect must be notified to Viking Roofspec in writing within fourteen (14) days of discovery. By notifying Viking Roofspec you authorise Viking Roofspec to investigate the Warranty claim to assess whether it falls within the terms of this Warranty. Should our investigation of the claim find that the cause is outside the terms of this Warranty, then you acknowledge and agree that Viking Roofspec may charge you its reasonable investigation costs. You agree to provide Viking Roofspec free access to the Membrane System in order to investigate or to affect repairs under this Warranty during normal business hours.
14. Any remedial work required under this Warranty shall be as determined by Viking Roofspec and shall be carried out in accordance with the Viking Specifications by a contractor nominated by Viking Roofspec. Viking Roofspec does not accept liability for delay in sourcing or inability to match repair materials exactly to those originally installed.
15. Nothing in this Warranty shall require Viking Roofspec to shift any fixtures, plant, equipment, flashings or other items so as to allow access to part of any Membrane System to be repaired or replaced. Neither shall Viking Roofspec be liable for any costs involved in such shifting or reinstallation.
16. This Warranty represents the limit of Viking Roofspec's liability for the Membrane System. All other warranties, express or implied, are hereby excluded to the maximum extent permitted by applicable law.
17. Notwithstanding any other provisions of this Warranty, nothing in this Warranty is intended to limit any condition, warranty, right or remedy available under or imposed by any applicable legislation (including, for the avoidance of doubt but without limitation, the Building Act 2004, the Fair Trading Act 1986 and the Consumer Guarantees Act 1993) except to the extent permitted by such legislation.
18. This Warranty shall be governed according to the laws of New Zealand and any disputes shall be decided in the courts of New Zealand.

Certificate of Workmanship No.

Viking Warranty No.



John Edwards
For Viking Roofspec

Date Issued