Please find below our current Masterspec Specification for Viking Enviroclad

Our focus is to ensure that you have the right information and technical support required to make specifying our roofing and waterproofing solutions easy.

If you require any of our CAD details you can find them on our website [www.vikingroofspec.co.nz](http://www.vikingroofspec.co.nz)

For any further support please do not hesitate to contact us on 0800 729 799.

Kind Regards,

The team at Viking Roofspec



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# 4422VE VIKING ENVIROCLAD

## 1. GENERAL

 This section relates to Viking **Enviroclad** membrane. It includes **Enviroclad** applied as a single layer membrane - suitable for industrial, commercial and residential roofing and decking applications

### 1.1 RELATED WORK

 Refer to ~ for ~.

### 1.2 ABBREVIATIONS AND DEFINITIONS

 Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

 The following abbreviations apply specifically to this section

 TPO Thermoplastic polyolefin

 **Documents**

### 1.3 DOCUMENTS

 Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

 [NZBC E2](http://www.masterspec.co.nz/redirect.aspx?pl=347)/AS1 External moisture

 [AS/NZS 2269.0](http://www.masterspec.co.nz/redirect.aspx?pl=1046) Plywood - Structural - Specifications

### 1.4 MANUFACTURER/SUPPLIER DOCUMENTS

 Manufacturer's and supplier's documents relating to this part of the work:

 Viking Waterproofing Membrane Systems manual

 Viking **Enviroclad** Plywood Substrate Checklist

 Viking Concrete Substrate Checklist

 Viking **Enviroclad** Standard Details

 Viking **Enviroclad** Applicator Manual

 [BRANZ Appraisal 656](http://www.masterspec.co.nz/redirect.aspx?pl=220) - **Enviroclad** Roofing Membrane

 [CodeMark Certificate Number 30058](http://www.masterspec.co.nz/redirect.aspx?pl=2008) Rev B - Viking **Enviroclad** Roofing and Deck Membrane System

 Copies of the above literature are available from Viking Roofspec

 Web: [www.vikingroofspec.co.nz](http://www.vikingroofspec.co.nz)

 Email: info@vikingroofspec.co.nz

 Telephone: 0800 729 799

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 **Warranties**

### 1.5 WARRANTY - MANUFACTURER/SUPPLIER

 Provide a material manufacturer/supplier warranty:

 20 years: For Viking **Enviroclad** Membrane

 - Provide this warranty on the Viking Roofing standard form.

 - Commence the warranty from the date of completion of fixing.

 Refer to the section 1237 WARRANTIES for additional requirements.

### 1.6 WARRANTY - INSTALLER/APPLICATOR

 Provide an installer/applicator warranty:

 5 years: For **Enviroclad** membrane when installed by Viking approved applicator

 - Provide this warranty in the Viking Enviroclad Membrane Product Warranty on standard form.

 - Commence the warranty from the date of completion of fixing.

 Refer to the section 1237 WARRANTIES for additional requirements.

### 1.7 WARRANTY - VIKING FULL SYSTEM WARRANTY ON APPLICATION

 Provide a Viking Full System Warranty for materials and installation:

 20 years: For Viking **Enviroclad** Membrane

 - Register with Viking Roofspec prior to installation.

 - Approved Applicator must hold d current Stage 3 Viking Roofspec Licence.

 - Provide this warranty on the Viking Full System Warranty job completion form.

 - Commence the warranty from the date of completion of fixing.

 Refer to the section 1237 WARRANTIES for additional requirements.

 **Requirements**

### 1.8 QUALIFICATIONS

 Installation of the membrane to be carried out by Viking Approved Applicators. Installation of substrates must be completed by suitably qualified persons in accordance with instructions given in Manufacturers Technical Literature and [BRANZ Appraisal 656](http://www.masterspec.co.nz/redirect.aspx?pl=220) - **Enviroclad** Roofing Membrane.

### 1.9 NO SUBSTITUTIONS

 Substitutions are not permitted to any specified Viking membrane waterproofing materials, or associated products, components or accessories.

 **Performance**

### 1.10 TEST

 Flood test horizontal applications with a minimum 50mm depth of water for 24 hours. Make good any lack of watertightness when the surface is completely dry.

### 1.11 PERFORMANCE

 Accept responsibility for the weather-tight performance of the completed roofing system, including all penetrations through the roof and junctions with walls and parapets. All penetrations to comply with Viking Roofspec recommendations and standard details.

## 2. PRODUCTS

 **Materials**

### 2.1 ENVIROCLAD WATERPROOFING MEMBRANE

 Polyester reinforced thermoplastic polyolefin (TPO) membrane. Refer to SELECTIONS for size and colour options.

 **Components**

### 2.2 ADHESIVE - ENVIROCLAD ONLY

 **Enviroclad Bonding Adhesive - proprietary solvent based contact adhesive.**

### 2.3 ENVIROCLAD CUT EDGE SEALANT (CLEAR)

 Proprietary sealant for sealing cut edges.

### 2.4 WATER CUT-OFF MASTIC

 Mastic Sealant for use at compression terminations, drains and beneath metal edging.

### 2.5 ENVIROCLAD UNIVERSAL SEALANT

 UV stable sealant for use in exposed terminations (e.g. chase sealing).

### 2.6 ENVIROCLAD WEATHERED MEMBRANE CLEANER

 Proprietary membrane cleaner.

### 2.7 ENVIROCLAD OUTSIDE AND INSIDE CORNERS

 Proprietary unreinforced moulded TPO flashings to be welded as internal and external corners.

### 2.8 ENVIROCLAD UNREINFORCED MEMBRANE

 Proprietary unreinforced TPO membrane. 300mm x 15.2m.

### 2.9 ENVIROCLAD T-JOINT COVERS

 Proprietary unreinforced TPO disks.

### 2.10 ENVIROCLAD PIPE FLASHINGS

 Proprietary unreinforced moulded TPO flashings for sealing pipe penetrations.

### 2.11 ENVIROCLAD POURABLE POCKETS

 Proprietary unreinforced moulded TPO surrounds for encasing pipe penetrations.

### 2.12 ENVIROCLAD THERMOPLASTIC POURABLE SEALER

 Proprietary thermoplastic pourable sealer for filling of pourable pocket.

### 2.13 SPLICE WIPES

 Proprietary wipes for cleaning and drying membrane prior to welding.

 **Accessories**

### 2.14 VENTS

 Aluminium vent or TPO vent.

### 2.15 ENVIROCLAD WALKWAY ROLLS

 Proprietary non-slip TPO walkway mat. 792mm x15m. (Apply and weld in 3m sections)

### 2.16 ENVIROCLAD SCUPPER OUTLETS

 TPO scuppers. 100mm x 100mm or 100mm x 65mm outlets.

### 2.17 LEAF AND GRAVEL GRATES

 Viking Gravel/Leaf Grates.

### 2.18 CLAMP RING ROOF DRAINS OR OVERFLOWS

 80mm, 100mm or 150mm clamp sealed drains and overflows.

### 2.19 DRYLIGHT SKYLIGHT

 1220mm x 1220mm single piece reaction injection moulded skylight.

### 2.20 DRYLIGHT FLASHING SLEEVE

 Single piece TPO proprietary flashing.

### 2.21 ENVIROCLAD DROPPER OUTLETS

 Proprietary 80mm or 100mm TPO droppers.

## 3. EXECUTION

 **Conditions**

### 3.1 GENERALLY

 All work and materials to comply with current Viking Enviroclad technical literature and standard details.

### 3.2 STORAGE

 Take delivery of **Enviroclad** membrane in rolls undamaged and include for site handling facilities where required. Store rolls horizontally only. Provide dry storage for all products. Stack off the ground on a level surface and with accessories.

### 3.3 WEATHER

 Lay **Enviroclad** membrane in fair weather, with ambient air temperature no less than 7°C.

### 3.4 EQUIPMENT

 Viking Roofspec Approved Applicators to use the following equipment:

 - Hand welding machine

 - Robotic welding machine

 - Hand rollers

 - Roller (up to 75kg)

 **Application - preparation**

### 3.5 PRELIMINARY WORK

 Ensure that preliminary work, including formation of falls, flashing rebates, grooves, ducts, provision of battens and fixing of vents and outlets to levels, is complete and properly constructed to enable the system to work as intended. The substrate to be smooth, clean, dry and stable.

### 3.6 ACCEPTANCE OF SUBSTRATE

 Confirm that the substrate, including sumps, outlets and projections, will ensure work of the required standard. . Ensure the fall complies with [NZBC E2](http://www.masterspec.co.nz/redirect.aspx?pl=347)/AS1 8.5.6, **Roof and deck drainage,** including correct fall to rainwater outlets to avoid ponding.

### 3.7 CONCRETE SUBSTRATE

 Install to requirements of current Viking Roofspec Membrane Concrete Substrate Checklist. Ensure concrete substrate has been allowed to cure for at least 28 days before commencing application. If using a curing compound or sealer ensure compatibility with Viking membrane components prior to installation and follow the manufacturer’s instructions. The relative humidity of concrete substrates must be 75% or less before membrane application. Prepare the surface to leave smooth, clean, dry and free of debris.

### 3.8 PLYWOOD SUBSTRATE

 Install to requirements of current Viking Roofspec Enviroclad Plywood Substrate Checklist. Plywood to be;

 - a minimum of 17mm thick and complying with [AS/NZS 2269.0](http://www.masterspec.co.nz/redirect.aspx?pl=1046)

 - minimum CD structural grade with the sanded C side upwards

 - H3.2 treated (CCA) and kiln dried.

 Lay plywood with staggered joints (brick bond) with all edges of the sheets fully supported. Do not use tongue and groove plywood.

 Leave a 3mm gap between all sheets. Fix with 10 gauge x 50mm stainless steel countersunk screws. Fix at 50mm from the corners, 150mm centres on edges and 200mm centres on intermediate supports. No timber corner fillets are to be used. Chamfer all external edges with a minimum radius of 5mm where the membrane is to be wrapped over.

 Provide falls to a minimum of those stated in [NZBC E2](http://www.masterspec.co.nz/redirect.aspx?pl=347)/AS1, 8.5.1, - 1:30 for roofs, 1:40 for decks and 1:100 for gutters.

 Plywood and the timber substructure to have a maximum moisture content of 18% when the membrane is adhered.

 **Application - laying**

### 3.9 GENERAL

 Install to current application standards as detailed in Viking Roofspec Technical literature and Viking **Enviroclad** Applicators Manual.

### 3.10 POSITION AND RELAX

 Membrane to be unrolled onto the prepared substrate and allowed to relax for at least 20 minutes prior to installation. Position membrane over acceptable substrate and fold membrane back to expose half of the underside.

### 3.11 APPLY ADHESIVE - ENVIROCLAD

 Apply **Enviroclad** Bonding Adhesive, to the exposed underside of the membrane and to the corresponding substrate, using a plastic core medium nap paint roller at a coverage rate of 2m² per litre (includes coverage on both membrane and substrate).

### 3.12 INSTALL MEMBRANE SHEETS - ENVIROCLAD

 Allow adhesive to flash off until tacky. Lay the glued Enviroclad membrane onto the glued substrate. Brush down the bonded section of Enviroclad membrane immediately with a soft bristle broom. Fold back the unglued half of the sheet and repeat procedure.

### 3.13 LAP JOINTS

 Install adjoining **Enviroclad** membrane sheets in the same manner, overlapping edges to provide a minimum 40mm hot air weld.

### 3.14 HOT AIR WELD

 Clean all weld areas with Weathered Membrane Cleaner. Then weld the adjoining **Enviroclad** membrane sheets (minimum width of weld is 40mm).

### 3.15 MEMBRANE CLEANER

 Ensure that all membrane, including accessories, to be welded is cleaned using Weathered Membrane Cleaner. Wipe the surface where the **Enviroclad** membrane cleaner has been applied with a clean, dry HP Splice Wipe to remove residue prior to welding.

### 3.16 INSPECT

 Inspect and test joints all welds using a seam probe. Seal all cut reinforced membrane edges using Cut Edge Sealer, or roll the membrane edge using the correct welding technique. Flood test with a minimum 50mm depth of water for 24 hours.

### 3.17 PENETRATIONS AND JUNCTIONS

 Form and finish upstands, downturns, penetrations, outlets and vents to conform to current Viking Roofspec Standard Details. Confirm installation of all required flashings and terminations, to leave membrane watertight upon project completion.

### 3.18 VENTING – ROOF/DECK CAVITIES

 Provide adequate ventilation to [NZBC E2](http://www.masterspec.co.nz/redirect.aspx?pl=347)/AS1, 8.5.2, **General**. If applying roof mounted proprietary vents, install a minimum one Viking roof vent for the first 40m² of flat roof area and one vent per 90m² thereafter. Check that the cavity is cross ventilated to allow air movement across the entire cavity.

 **Finishing**

### 3.19 FOOT TRAFFIC

 Keep foot traffic to a minimum after laying the membrane. Lay protection as required for foot traffic or later works.

### 3.20 ACCESS BOARDS

 Provide access boards for later operations and remove when no longer needed.

### 3.21 ACCEPTANCE

 Inspect the completed work. Protect and maintain roofing until completion of the contract works.

### 3.22 SUBSEQUENT WORK

 Make good any damage and repair to Viking Roofspec specifications.

 **Completion**

### 3.23 CLEAN UP

 Clean up as the work proceeds.

### 3.24 LEAVE

 Leave work to the standard required by following procedures.

### 3.25 REMOVE

 Remove debris, unused materials and elements from the site.

## 4. SELECTIONS

 Substitutions are not permitted to the following, unless stated otherwise.

### 4.1 VIKING ENVIROCLAD MEMBRANE

 Location: ~

 Substrate: ~

 Brand/type: **Viking Enviroclad**

 Thickness: ~mm

 Size: 3.0 or 3.6 metres wide x 30.4 metres long

 Colour: ~

 Finish: smooth

 Accessories: ~