July 2023

PRODUCT DATA SHEET

Roofspec Viking
Taking care of detail

Viking Epiclad EPDM

Version: EP-PDS-V1.0

Introduction:

This Data Sheet is to serve as a reference guide for Viking Roofspec Licensed Installers who are already familiar with Viking Roofspec's systems and are responsible for Viking roof-system installations. The following guide contains precautions, best uses and application procedures for the correct installation of Viking Epiclad

Viking Epiclad EPDM (Ethylene Propylene Diene Monomer) is an exceptional synthetic rubber waterproofing membrane system crafted from EPDM rubber polymer. Supplied in the form of a single-ply, flexible synthetic rubber sheet in roll form, Epiclad stands out as a robust and versatile solution for a wide range of waterproofing applications.

- Unrivalled Resilience and Weather Resistance: Epiclad exhibits remarkable resistance to UV rays, ozone, and weathering, ensuring longevity and durability in the most demanding environmental conditions. Its unparalleled ability to withstand the elements makes it a reliable choice for long-lasting waterproofing protection.
- Flexibility and Elasticity for Dynamic Substrates: In the dynamic environment of timber buildings where substrates flex and move with seasonal changes, Epiclad shines. Its superior elasticity, tensile strength, and elongation properties make it impervious to splitting or tearing under substrate movement, making it a preferred choice for resilient waterproofing solutions.
- Outstanding Elongation at Break Property: Epiclad is distinguished by its extraordinary "elongation at break" property, boasting an impressive 480% elongation capacity. This exceptional quality enables it to outperform other membranes under similar duress, making it an unmatched option for enduring and challenging conditions.
- Seamless Performance for Expansive Projects: Engineered with wide-sheets, Epiclad minimizes the number of seams, making it an ideal choice for large-scale commercial and residential projects. From expansive roofs to waterproofing under decks, balconies, parapets, wider gutters, pond liners, and reservoirs, Epiclad offers a seamless solution for projects of varying complexities.
- Versatility for Irregular Designs: Epiclad's pliable nature enables it to readily conform to irregular angles, curves, and contours, effortlessly adapting to challenging designs and shapes. Whether facing intricate architectural features or unconventional layouts, Epiclad's flexibility ensures a smooth and precise installation.
- Tailored for Diverse Climates: Formulated to thrive in a wide range of climatic conditions, Epiclad proves its adaptability, excelling both inland and in coastal environments. No matter the climate, it delivers consistent and reliable waterproofing performance.

Viking Epiclad sets a new standard for high-performance EPDM rubber waterproofing membranes, offering unmatched resilience, flexibility, and ease of application. With its exceptional properties and adaptability to various project types, Epiclad is the ultimate choice for architects, contractors, and builders seeking a dependable and enduring waterproofing solution.

Properties

Product Code	Product	Thickness	Size	Weight Per Roll
SEE203	Epiclad Black	1.14mm	3.0m x 15.2m	70kg
SEE206	Epiclad Black	1.14mm	6.0m x 15.2m	140kg
SEE503	Epiclad Black	1.52mm	3.0m x 15.2m	99kg
SEE506	Epiclad Black	1.52mm	6.0m x 15.2m	196kg
Epiclad EPDM Membrane is sold by Roll				

Physical Property	Test Method	Spec (PASS)	Typical	
			1.14mm	1.52mm
Tolerance on Nominal Thickness, %	ASTM D412	±10	±10	±10
Weight, lbm/ft² (kg/m²)			0.29 (1.4)	0.39 (1.9)
Tensile Strength, min, psi (MPa)	ASTM D412	1305 (9)	1600 (11.0)	1600 (11.0)
Elongation, Ultimate, min, %	ASTM D412	300	480	465
Tear Strength, min, (kN/m)	ASTM D624 (Die C)	150 (26.3)	200 (35.0)	200 (35.0)
Factory Seam Strength, min	Modified ASTM D816	Membrane Rupture	Membrane Rupture	Membrane Rupture
Resistance to Heat Aging* Properties after 28 days @ 240°F (116°C) Tensile Strength, min, psi (MPa) Elongation, Ultimate, min, % Tear Strength, min, lbf/in (kN/m) Linear Dimensional Change, max, %	 ASTM D573 ASTM D412 ASTM D412 ASTM D624 ASTM D1204	 1205 (8.3) 200 125 (21.9) ±1.0	 1500 (10.3) 225 215(37.6) -0.4	 1450 (10.0) 280 215(37.6) -0.50
Ozone Resistance* Condition after exposure to 100 pphm Ozone in air for 168 hours @ 104°F (40°C) Specimen is at 50% strain	ASTM D1149	No Cracks	No Cracks	No Cracks
Brittleness Temp., max, °F (°C)*	ASTM D746	-49 (-45)	-49 (-45)	-49 (-45)
Resistance to Water Absorption* After 7 days immersion @ 158°F (70°C) Change in mass, max, %	ASTM D471		2	2
Water Vapor Permeance* Max, perms	ASTM E96 (Proc. B or BW)	0.1	0.05	0.03
Flexibility/Torsion DMA	ASTM D5279-08	N/A	225 MPa @ -40°F	225 MPa @ -40°F
Fungi Resistance	ASTM G21	N/A	(No Growth)	(No Growth)
Resistance to Outdoor (Ultraviolet) Weathering* Xenon-Arc, total radiant exposure at 0.70 W/m² irradiance, 80°C black panel temperature	ASTM G155	No Cracks No Crazing 7,560 kJ/m² 3,000 hrs	No Cracks No Crazing 41,580 kJ/m² 16,500 hrs	No Cracks No Crazing 41,580 kJ/m² 16,500 hrs
At 0.35 W/m² irradiance, 80°C black panel temperature		6,000 hrs	33,000 hrs	33,000 hrs

Note: Viking Dusted Non-Reinforced EPDM membrane meets or exceeds the minimum requirements set forth by ASTM D4637 for Type I non-reinforced EPDM single-ply roofing membranes.

Installation

Clean

- Clean Sand, sweep and/or vacuum the substrate to provide a clean smooth surface.
- The substrate must meet all the requirements laid out in the substrate checklist or relate back to NZ3604 as per the building code

Prime

- Use a 50/50 mix of BMA solvent, and the Epiclad adhesive to prime the entire substrate.

Bond-Break Tape

- Use 25 mm polyethylene release tape over all ply joins and junctions before application of the membrane

Relax

- Unroll the membrane alongside the area to be laid, and allow 20 minutes for the membrane to relax. This is vital to the workability, and will reduce the chance of creasing. Membrane must also be allowed to relax before cutting to required length.

Position

- Align the membrane where it is to be laid. Allow 75mm for laps where adjoining a previous sheet.

Butterfly

- Fold back half the sheet to be adhered (gluing half and half is usual- but on larger or trickier areas, sheets can also be glued in smaller sections as required).
- Ensure a clean, straight edge at the fold, without creases.

Adhere

- Using Epiclad adhesive (SEA200) for Epiclad, use a brush or medium nap roller to apply adhesive to the substrate surface and to the underside of the folded membrane.
- Do not thin the adhesive.
- Take care to apply the adhesive evenly, globules can dry to be visible once the membrane is laid.
- A straight edge at the fold is important to ensure no gaps are left when you come to gluing the next section of membrane.
- Allow the adhesive to tack off. The adhesive is ready when it is tacky without transfer to a dry finger. Note that weather conditions- ambient temperature, moisture fog, rain etc will all affect the tack time of the adhesive. Adhesive needs good temperatures and airflow to allow proper solvent evaporation. Use of high powered fans are especially useful in tented situations and cooler climates. If dew forms on the adhesive it is too cold to work. There is risk of poor adhesion and vapour bubbles forming

Lap joints

- Clean the area to be lapped using BMA solvent and a soft scouring pad or rag (75mm on the underside of the top sheet, and 75mm of the lower sheet.
- The lower sheet edge should be fully adhered to the substrate).
- Use SEC034 WeatherBOND Multipurpose Lap Primer with a soft scouring pad to prime both surfaces of the lap. Primer is ready to install Lap-tape when tacky without transfer to a dry finger. If primer is dry, re-apply.
- Position Lap-tape carefully without creases, allowing approximately 1-2mm of Lap-tape to the outside edge of the seam.
- Apply the 76mm Viking Lap-tape to the bottom, primed sheet. Leave the protective plastic strip on top of the tape in place so that the upper sheet doesn't prematurely bond to it.
- Now Pressure Roll the Lap-tape to the primed lower sheet.

Finishing the Lap

Lower the top sheet into place over the Lap-tape, and pull out the plastic cover as you smooth the upper sheet to the Lap-tape with your hand to ensure no creases or bubbles. Pressure Roll the lap closed.

- Ensure you roll from side to side (across the lap direction to minimise bubbles)
- Roll with even pressure
- Covering the entire lap surface

Precautions

- Check substrates using Substrate Checklist
- Prime all Substrates 1:1 mix of Adhesive and SES225 Solvent
- Use 25 mm polyethylene release tape over all ply joins and junctions before application of the membrane
- Use lap-tapes for all sheet Laps, terminations (drip-edges) and under-flashings EG External Corners
- Clean, prime, pressure roll all lap seams and details
- Follow all of Viking typical details and specifications
- Use 1.5mm thickness under trafficable floating decks and internal gutters 1mt + wide.
- Don't ever cut Rubber Membrane to the base of the fillet.
- Don't ever rely on glued laps
- Don't ever trim membrane without having a hard-surface between layers.
- Don't ever mix different suppliers adhesives, primers, tapes or accessories.

Storage

Handling and storage of all materials whether on or off site is under the control of the Viking Roofspec Licensed and Trained Installers. Dry storage must be provided for all products, do not let products get crushed under weight of stacking pallets on top of each other.

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
- 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
- For 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