

MEMBRANES



VERRASHIELD

VapourTek

Titan

Heavy Duty Roof Membrane

- ▶ Heavy duty roof membrane to keep your Building dry, safe and thermally efficient.
- ▶ Self-supporting.
- ▶ NCC compliant.
- ▶ Roof membrane for residential Class 1 and Class 10 buildings.
- ▶ Suitable for Class 2 to Class 9 buildings constructed with timber and steel framing in accordance with the NCC 2022.
- ▶ For use with masonry tile, metal tile and profiled metal roof cladding.
- ▶ Fire retardant.



VerraShield VapourTek Titan is a five-layered roof membrane constructed using two layers of breathable film, and a layer of weave sandwiched between two layers of spun-bonded polyolefin. Titan is fire retardant, absorbant, and breathable.

VerraShield VapourTek Titan is designed as a means of managing condensation, water vapour transfer and water ingress in the most trying conditions including applications where roof pitch is 3 degrees and above.

Product Code	Width	Length	Coverage
100000087038	1500mm	30m	45m2*

* m2 relates to the size of the product when supplied in a roll. For actual coverage, allow for laps and joins.

Scope of Use

VerraShield VapourTek Titan can be used as a roof membrane on both residential and commercial buildings within the following scope.

- Class 1 and Class 10 buildings; and,
- Class 2 to Class 9 buildings subjected to specific weathertightness design; and,
- Constructed with timber and steel framing in accordance with NCC; and,
- With masonry tile, metal tile and profiled metal roof cladding; and,
- Situated in non-cyclonic wind zones up to, and including N3.
- Building designers are responsible for the incorporation of VerraShield VapourTek Titan roof membrane into their design in accordance with the declared properties and the instruction of VerraShield Insulation.
- Self-supporting - refer to installation guide regarding membrane support requirements.
- Not suitable for roof pitch less than 3 degrees.
- VerraShield VapourTek Titan is not designed to withstand prolonged exposure to the elements. Based on best practice the roof cladding should be installed as soon as possible and the Titan should not be exposed to UV for longer than 30 days. Install a temporary weather protection layer (e.g. a polythene sheet or a weatherproof tarpaulin) over the tile battens to shield the elements away from Titan, if the exposure period is expected to be longer than 30 days. Product that has been exposed should be inspected for damage and repaired or replaced prior to installation of the cladding to comply with the product warranty.

General

- Is fire retardant when tested to AS 1530.2
- Unaffected by Light Organic Solvent Preservatives (LOSP) or other solvent based treated timber. However, LOSP or other solvent based treated timber must have sufficient time for the solvent chemical to flash off in a well ventilated area. Recommended minimum 7 days.
- Tear resistant and strong.

Limitations

- Cannot be used as a wall wrap.
- Must NOT be exposed to the weather or UV for more than 30 days.
- Must NOT be used under translucent sheeting.
- Must NOT be used in any unlined applications, including but not limited to sheds, warehouses, garages, canopies, soffits and lean-to designs. Warranty void when used in unlined applications.
- Insulation materials must NOT be resting their full weight on top of VerraShield VapourTek Titan.

Compliance

When VerraShield VapourTek Titan roof membrane is used, installed and maintained in accordance with the statements and conditions outlined in VerraShield Insulation literature, the product will contribute to meeting the following provisions of the NCC:

- NCC 2022 Volume 1 – Class 2 to Class 9 Buildings Part F1 – Damp and Weatherproofing
- NCC 2022 Volume 2 – Class 1 and Class 10 Buildings Part 2.2 - Damp and Weatherproofing

Control of Condensation

In climatic regions where condensation risks are high, such as cold or high humidity areas, care needs to be taken in specifying the correct design and installation to prevent moisture build-up in the roof cavities.

Factors which adversely affect the condensation risk in roofing systems include:

- Humid, and/or cold climatic regions.
- Warm/Skillion roof construction.
- Low roof cavity air volume and restricted air movement.
- Omitting Vapour Control Layers.
- Occupancy activities which have high moisture loading on conditioned spaces.
- Ceiling penetrations and entry of warm air into roof cavities.
- Low pitched roof.
- Bulk insulation.
- The ability of a building structure to naturally dry construction moisture.

Skillion and Warm Roof Construction are particularly sensitive to moisture accumulation and the design and installation of roofing systems need to take into account the higher condensation risks.

Durability

VerraShield VapourTek Titan is expected to have a serviceable life equal to that of the roof cladding provided it is:

- Not damaged.
- Installed in accordance with relevant standards and VerraShield installation guides.
- Not exposed to direct weather or UV for more than 30 days.
- Compatible with roof cladding system used.*

* Note: Specifiers and installer must test for roof cladding system compatibility with the membrane before installation.

INSTALLATION INSTRUCTIONS

Application Method Corrugated roofing:

VerraShield VapourTek Titan can be installed via a direct fix or cavity fix method and must be installed in a manner that prevents ponding of water and span no more than 1200mm.

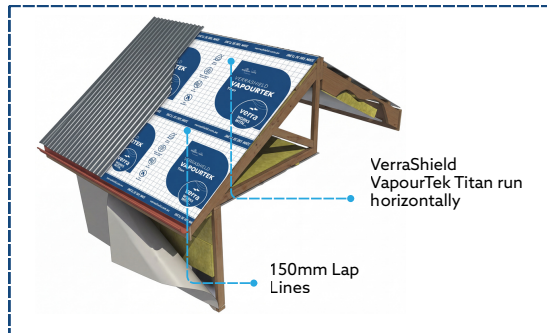


Figure 1. VerraShield VapourTek Titan direct fix method.

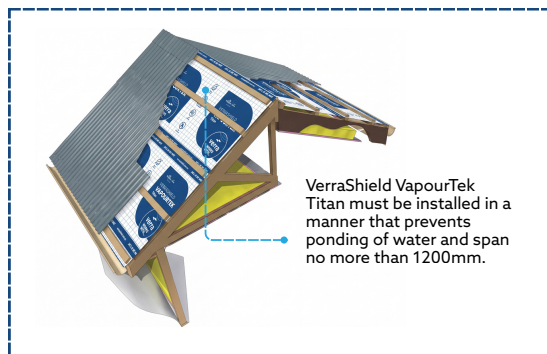


Figure 2. VerraShield VapourTek Titan cavity fix method.

Long run metal roofing:

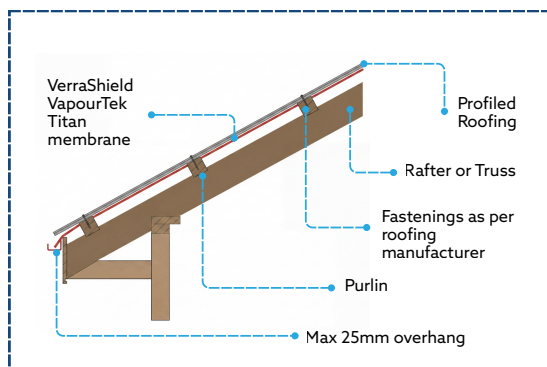


Figure 3. Wooden construction.



Figure 4. Steel construction.

Long-run metal roofing/vertical or horizontal installation method

- Fix using stainless steel 8-12mm staples or 20mm flat head clouts, or appropriate proprietary fastenings on timber framed structure. Fixing at 300mm centres.
- Refer to table below to determine membrane support requirements.

Roof Pitch	Span	Membrane Support Required	
		Horizontally Installed	Vertically Installed
$\geq 10^\circ$	$> 1200\text{mm}$	Yes	Yes
	$\leq 1200\text{mm}$	No	No
$3^\circ - 10^\circ$	$> 1200\text{mm}$	Yes	Yes
	$\leq 1200\text{mm}$	No	No

- VerraShield VapourTek Titan upper sheet lapped over lower sheets (shiplap) to ensure water is shed to the outer face.

Note: VerraShield VapourTek Titan can move downwards. To prevent this, it must be 'captured' by the fastenings at each purlin. Horizontal fix must not be used on purlin distance greater than 1100mm to allow for 150mm laps.

- Must be laid firmly (tight/taut) without creases. All laps either vertical or horizontal must be a minimum of 150mm.
- When membrane support is required, VerraShield recommends using Ausmesh Safety Mesh.

Note: Commercial Buildings may require the use of Safety Mesh under VerraShield VapourTek Titan. Titan can be installed above the battens or purlins for profiled metal roof claddings and otherwise in accordance with the NCC.

- If required to achieve a lap seal, use VerraShield VapourTek Aluband Window Flashing Tape or VerraShield VapourTek White General Purpose Tape.
- VerraShield VapourTek Titan will provide temporary weather protection during construction (maximum 30 days). Same day coverage is recommended.
- VerraShield VapourTek Titan may be unwound to the full length from the gutter to the ridge. However, when ridge ventilation is required Titan may be terminated or slit at the ridge purlin to allow a free passage of air.
- VerraShield VapourTek Titan must NOT overhang the gutter line by more than 25 mm, or if eaves flashing is used, terminate on the upper side of the flashing.
- Flue penetrations must have a minimum distance of 50mm from VerraShield VapourTek Titan.
- VerraShield VapourTek Titan must be free of tears and punctures, fit tightly and be lap taped around all penetrations (except flue penetrations), to provide drainage for any condensation, or surface water from leaks.

Note: Do not use VerraShield VapourTek Aluband on penetrations where Polybutene water pipes have been installed. Refer Pipe Manufacturers for instructions on sealing penetrations.

INSTALLATION INSTRUCTIONS

Concrete/metal tile roofing:

Tile roofing

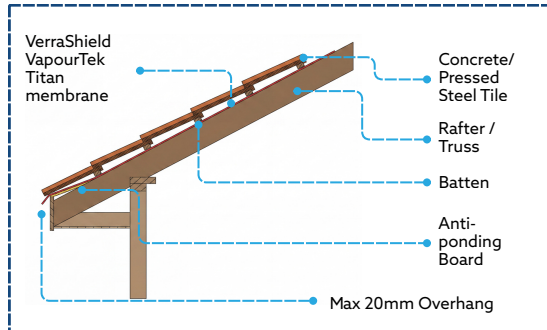


Figure 6.

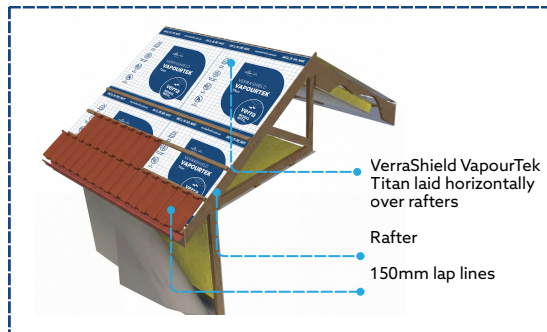


Figure 6.

Metal Tile roofing

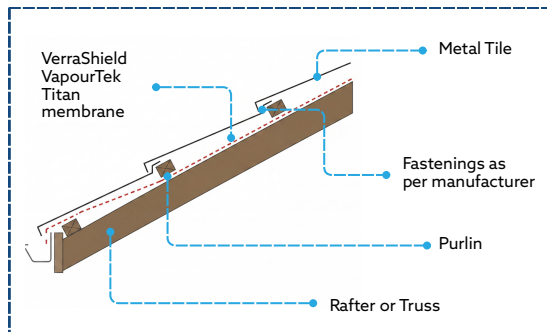


Figure 7.

Concrete/metal tile roofing installation method

- VerraShield VapourTek Titan must be laid over rafters prior to fixing the tile battens. The maximum span between rafters for VerraShield VapourTek Titan is 1200mm. Anti-ponding boards are recommended for masonry tile roofs.
- VerraShield VapourTek Titan may be laid over the top of the anti-ponding boards and draped into the gutter by no more than 20mm.

VerraShield VapourTek Titan must be installed by a relevant building professional.

Application Tips

- Unaffected by Light Organic Solvent Preservatives (LOSP) or other solvent based treated timber. However, LOSP or other solvent based treated timber must have sufficient time for the solvent chemical to flash off in a well ventilated area. Recommended minimum 7 days.

PRODUCT DATA AND WARRANTY

Property Performance AS/NZS 4200.1:2017

Property Description and Test Method/Standard	Property Performance	Classification
Resistance to Dry Delamination - AS/NZS 4201.1:1994	Pass	
Resistance to Wet Delamination - AS/NZS 4201.2:1994	Pass	
Moisture Shrinkage - AS/NZS 4201.3:1994	Machine Direction (MD) $\leq 0.5\%$	
	Cross Direction (CD) $\leq 0.5\%$	
Folding Endurance - AS/NZS 1301.423:2008	Machine Direction (MD) ≥ 2.00	
	Cross Direction (CD) ≥ 1.70	
Electrical Conductivity - AS/NZS 3100:2017		Non-Conductive
Duty - AS/NZS 4200.1:2017 (Table 1)		Heavy
Tensile Strength - AS 1301.448s:1991	Machine Direction (MD) $\geq 12.5\text{kN/m}$	Heavy
	Cross Direction (CD) $\geq 7.5\text{kN/m}$	Heavy
Edge Tear Resistance - AS/NZS 4200.1:2017	Machine Direction (MD) $\geq 90\text{N}$	Extra Heavy
	Cross Direction (CD) $\geq 90\text{N}$	Extra Heavy
Emittance - AS/NZS 4201.5:1994	> 0.15 (both faces)	NN (IR Non-Reflective)
Vapour Control - ASTM E96 Part B:2016	$\geq 1.1403 \text{ ug/N.s}$	Class 4 Vapour Permeable
Water Control - AS/NZS 4201.4:1994	Pass	Water Barrier
Flammability - AS 1530.2:1993	≤ 5	Low
Air Control - ISO 5636/5:2003	$\geq 0.1 \text{ MNs/m}^3$	Air Barrier
Surface Water Absorbency - AS/NZS 4201.6:1994	$\geq 100\text{g/m}^2$	High

Handling and Storage

VerraShield VapourTek Titan must be handled with care to prevent damage such as tearing and roll deformation.

The product must be stored under cover well away from direct moisture, rainfall contact and sunlight (UV). Care should be taken not stack other materials on top of the product.

Product Warranty

Standard Verra Insulation Warranty applies. Refer to VerraShield Insulation Warranty Statement for further details. This is available online at verrashield.com.au or call **1300 VERRA SHIELD**.

CONTACT DETAILS



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