ThermalLiner™ Installation Guide

Product Code: TB4

Reflective roof and wall insulation

For tile or metal roofs and walls in residential and commercial buildings

ELECTRICAL SAFETY PRECAUTIONS BEFORE YOU START

Ametalin stresses the importance of safe installation practices for electrically conducted foil-based insulation as critical to installer and consumer safety. Risk assessment and hazard control measures contained in federal, state and territory WHS legislation have to be followed.

Aluminium Foil Insulation Association Inc. (AFIA) has prepared Work Methods Statement and Hazard Management forms to assist contractors and installers in safe installation of reflective insulation products, these are available on ***2009 AFIA WMS & Hazard Management*** www.afia.com.au/news/health-and-safety/

INSTALLATION

ThermalLiner™ should be selected and installed to fulfil the function specified in the design in accordance with *AS 4200.2:2017 Pliable Building Membranes and Underlays, Part 2: Installation Requirements*.

GENERAL

This product is not designed to withstand prolonged direct exposure to the elements. Accordingly, the outer construction envelope should be installed without delay.

Aluminium foil should not come into contact with wet concrete or mortar, as the aluminium is susceptible to alkali corrosion. If installed within 500 metres of the sea, or in a non-residential building where foil surfaces may be exposed to a corrosive atmosphere (including agricultural sheds), foil surfaces should face an enclosed, unventilated air space.

To ensure optimum thermal insulation performance, as well as satisfactory durability, an air space adjacent to each side of the product is recommended.

The membrane must be cut back from any hot flue to avoid being a fire hazard. This can be achieved with a clear space of at least 50 mm and sealing edge with fire rated Ametalin Reinforced Insulation/ Ducting Tape or a fire rated collar or as recommended by the manufacturer of the flue and approved by the local authority.

Any damage done to membrane during installation including holes and tears must be repaired.

ROOFS

Common to all roofs, install in compliance with *AS 4200.2:2017* with blue anti-glare side facing out. Joints must be overlapped not less than 150 mm untaped or overlapped not less than 50 mm and taped on the exterior face.

All end joints must be positioned over supporting members.

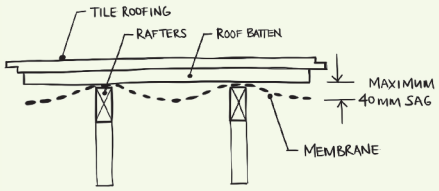
Where the product is intended to act as a water control membrane, ensure slope is ≥2° to facilitate drainage. Ensure all upper sheets overlap lower sheets. Terminations at penetrations, valleys, fascia and barges must comply with *AS 4200.2:2017* and facilitate drainage to building flashings.

When intended to act as a thermal control membrane, ensure the air gap to the low emittance side of the product is maintained and must be ≥20 mm.

Where intended to act as an air or vapour control membrane, tape and seal all overlapped joins, penetrations and discontinuities with Ametalin Reinforced Insulation/Ducting Tape to prevent air movement.

Tile Roofs

When used under tiles it must be installed below roof battens with a drape of ≤40 mm, unrolled across the roof trusses, parallel to the fascia and drain into the gutter via an anti-ponding device in order to comply with *AS 4200.2:2017.*



Metal Roofs

Under metal roofing the preferred installation is also under the battens, installed parallel to fascia.

Installation can be above the battens, but performance may be reduced and problems may arise under certain environmental conditions. Specifically, condensation forming under the roof may pool behind battens. Condensation may also form on the underside of this productwhere contact is made with the roofing material.

For Steel Purlin constructions, the product should be pulled taught, ensuring an equal amount on each consecutive run, to accommodate sagging due to wider spans and high temperatures in close proximity to the metal roofing. This is an important aspect where install temperatures are below 20°C.

For guidance on protection against condensation, see *AS 4200.2:2017, Appendix C.*

WALLS

ABCB Climate Zones 1 to 8

> SHED ROOF / WALLS

ABCB Climate Zones 1 to 3

> TIMBER & STEEL FRAMED CONSTRUCTION
> BRICK VENEER
> REVERSE BRICK VENEER
> LIGHT WEIGHT CLADDING DIRECT TO STUD
> LIGHT WEIGHT CLADDING ON BATTENS

ABCB Climate Zones 4 to 8

> NOT SUITABLE FOR CLASS 1 BUILDINGS in ABCB Climate Zones 4 to 8
> Check the location of your building installation to find your ABCB Climate Zone, and the label for applications where this product can be used.

Common to all walls, install in compliance with *AS 4200.2:2017* with blue anti-glare side facing out. Joints must be lapped not less than 150 mm untaped; lapped not less than 50 mm and taped; or alternatively, butt-joined and taped where the combined uncompressed nominal material thickness could compromise cladding installation or prevent maintaining a reflective air gap. All end laps must be fixed at a stud to form a continuous membrane.

Where the product is intended to act as a water control membrane, ensure upper sheets lap lower sheets to ensure water is shed to the outside face of the membrane, and all penetrations must be sealed or turned up to facilitate drainage. Ensure window and door openings are cut neatly, dressed carefully and are properly fitted at flashing points.

Where intended to act as a thermal control membrane, ensure the air gap to the low emittance side is maintained and must be ≥20 mm.

Where intended to act as an air or vapour control membrane, tape and seal all overlapped joins, penetrations and discontinuities with Ametalin Reinforced Insulation/Ducting Tape to prevent air movement.

The product should extend from the top plate to the bottom plate on concrete slabs or top plate to the bearers in timber constructions. Stagger any vertical overlaps.

Fixing

For fastening to timber construction, use mechanical fixings in the form of Ametalin Cap Nails, galvanised clouts or staples. Fix at ≤150 mm centres, prior to cladding.

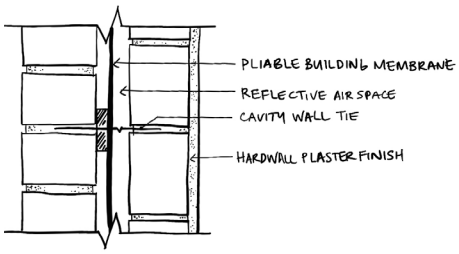
For fastening to steel frame construction, use Ametalin Double Sided Insulation Fixing Tape along all framing members and secure with capped tek screws at the top of each horizontal run at least every second stud, prior to cladding.

DOUBLE BRICK & MASONRY CAVITY WALLS

After the outer leaf of the double brick or masonry cavity wall is laid, place cavity spacers onto the brick ties. Install one cavity spacer per square metre to ensure the required air space is maintained.

Install membrane horizontally, cut slits through the product at all brick tie positions, and place membrane into position over the brick ties.

Push the membrane and the cavity spacer into position against the outer leaf of bricks, continue to lay the inner leaf of brick or masonry.



Mortar must not be allowed to contaminate the reflective surfaces.

FIRE PERFORMANCE FLAMMABILITY INDEX

Low (≤5)

Tested in accordance with *AS 1530.2-1993 Methods for fire tests on building materials, components and structures Part 2: Test for flammability of materials.*

BUSHFIRE ATTACK LEVELS

Complies with *AS 3959-2009 Construction of buildings in bushfire-prone areas* for use in roof systems BAL– LOW to BAL – 40 and wall systems BAL – LOW to BAL – FZ.

HEALTH AND SAFETY INFORMATION

Ametalin has assessed ThermalLiner™ according to the criteria outlined in the *National Occupational Health and Safety Commission (NOHSC): 1008 (2004)* and *List of Designated Hazardous Substances, NOHSC, Canberra*.

As a result of the assessment, this product is classified as non-hazardous.

To reduce risk of UV damage when installing this product, wear protective clothing, safety glasses and sunscreen, and work in the shade wherever practical.

Cutting should not be performed with membrane in place. Exposure to intense heat, sparks, flames or abrasive tools must be avoided.

HANDLING AND STORAGE

Store this product upright and under cover in a clean, dry place in the pack provided.

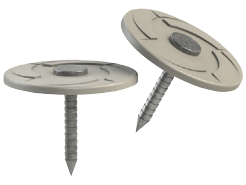
AMETALIN ACCESSORIES

It is recommended to use the following when required to secure, join or seal this product:

Ametalin Double Sided Fixing Tape
Product Code: DSFT-3850
Size: 38 mm x 50 m

Ametalin Reinforced Insulation/ Ducting Tape
Product Code: IDTR-7250
Size: 72 mm x 50 m

Ametalin Cap Nails
Product Code: CN-250
Cap Nail Size: 25 mm x 25 mm
Quantity: 250 cap nails per box; supplied as 10 units per sheet, 25 sheets per box.



Durability may be affected by environmental factors, including chemical and airborne pollutants, if used in industrial or farm buildings.

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