AMETALIN THERMALBREAK 8 PLUS™

EXTRA HEAVY DUTY

DOUBLE SIDED REFLECTIVE FOAM INSULATION | RESIDENTIAL & COMMERCIAL

MEETS NCC REQUIREMENTS FOR A THERMAL BREAK OF R0.2 IN STEEL FRAMED CONSTRUCTION

Product Code: TB8-30 | I/N: 0810967

AMETALIN THERMALBREAK 8™ PLUS is a dual weave Extra Heavy Duty three-in-one reflective insulation, thermal break and medium vapour barrier for use in all roof, wall and floor types. It meets the NCC requirements for in-situ material R-value of R0.20 for a thermal break in steel framed construction, and is also suitable for use in timber framed construction.

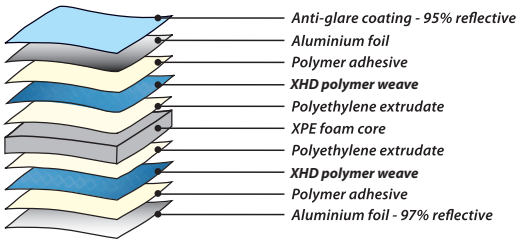
Designed to manage heat gain and heat loss, AMETALIN THERMALBREAK 8™ PLUS offers superior thermal performance over conventional insulation, and reduces thermal bridging and conductivity between building elements.

- Dual weave construction for superior durability and tear resistance.
- 150 mm flap provided for increased coverage and reduced wastage.
- Made with high-density XPE foam; compression in-situ is minimised.
- Contributes a reflective R-value when installed adjacent to an air cavity.
- Highly effective in dampening noise.
- Fibre-free and non-allergenic.
- Water resistant, fire resistant.
- Rigorously tested by independent recognised accredited laboratories in compliance with *AS/NZS 4859.1:2002/Amdt 1:2006* to ensure all product claims are met.

Construction

AMETALIN THERMALBREAK 8™ PLUS is made with aluminium foil laminates with emissivity of 0.03 to one side and emissivity of 0.05 to the other. At its core is 8.0 mm of chemically cross-linked, closed-cell high-density XPE foam.

Ametalin utilises Advanced Laminating Technology; the polymer adhesive remains tacky for an indefinite period and provides superior resistance to heat, fire and delamination.



Declared Total System R-values for Typical Systems*

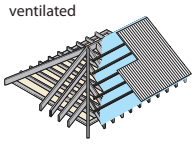
AMETALIN THERMALBREAK 8™ PLUS has a material R-value of R0.21 to meet thermal break requirements. When it is incorporated into typical construction systems, the following thermal performance can be achieved:

		WINTER	SUMMER
Metal Roof unventilated	22° Pitched metal roof, 190 mm **raked ceiling** CALC. REF: 12239	R_T1.4	R_T3.7
Metal Roof ventilated	22° Pitched metal roof with **flat ceiling** CALC. REF: 12335 / 299r404	R_T1.3	R_T2.8
Metal Roof unventilated	22° Pitched metal roof with **flat ceiling** CALC. REF: 299r405	R_T1.5	R_T2.5
Tile Roof unventilated	22° Pitched tile roof with **flat ceiling** CALC. REF: 12164	R_T1.5	R_T2.5
Commercial Office Roof	Suspended ceiling at 1000 mm CALC. REF: 299r381	R_T1.4	R_T4.6
Warehouse Shed Roof	5° metal roof 100 mm ceiling CALC. REF: 299r380	R_T1.5	R_T3.2
Warehouse Shed Roof	5° metal roof with no ceiling CALC. REF: 299r382	R_T1.0	R_T2.0
Steel Stud Framed Wall	Metal cladding direct to 90 mm stud, no lining CALC. REF: 299w44	R_T1.3	R_T1.1

** The contribution of this product to the total system R-value depends on installation and environmental conditions. The R-values will be reduced in the event of the accumulation of dust on upward facing surfaces and in those cavities that are ventilated.*

DECLARED TOTAL SYSTEM R-VALUES*

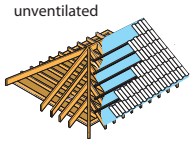
METAL ROOF
22° pitched flat ceiling ventilated



CALCULATION REF: 299r404

WINTER	R_T1.3
SUMMER	R_T2.8

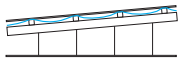
TILE ROOF
22° pitched flat ceiling unventilated



CALCULATION REF: 12164

WINTER	R_T1.5
SUMMER	R_T2.5

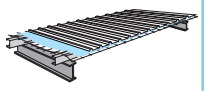
COMMERCIAL OFFICE
5° pitched, 1000 mm ceiling



CALCULATION REF: 299r381

WINTER	R_T1.4
SUMMER	R_T4.6

WAREHOUSE SHED
5° pitched, no ceiling

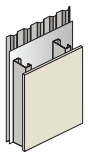


CALCULATION REF: 299r382

WINTER	R_T1.0
SUMMER	R_T2.0

WALLS:

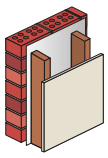
Stud Framed



CALCULATION REF: 299w510

WINTER	R_T1.9
SUMMER	R_T1.7

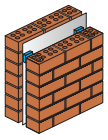
Brick Veneer



CALCULATION REF: 299w371

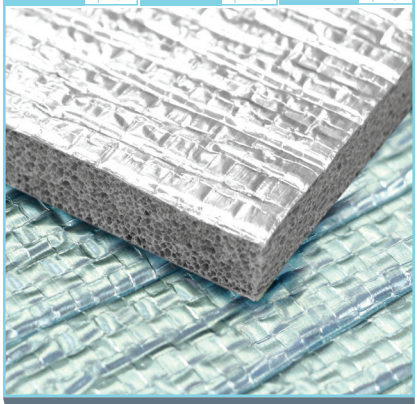
WINTER	R_T2.2
SUMMER	R_T1.9

Double Brick



CALCULATION REF: 299w3811b

WINTER	R_T2.3
SUMMER	R_T2.1



TB8-30

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Material Properties and Classifications

AMETALIN THERMALBREAK 8 PLUS™ classifications in accordance with *AS/NZS 4200.1:2017* and *AS/NZS 4859.1:2006*

CRITERIA	REFERENCE	RESULT	REQUIREMENT
MATERIAL THERMAL RESISTANCE	*ASTMC518*	0.21 m^2·K/W (R_M 0.21)	
MATERIAL THERMAL RESISTANCE COMPRESSED		0.20 m^2·K/W (R_M 0.20)	
DUTY	*AS/NZS 4200.1:2017*	Extra Heavy	Classification
TENSILE STRENGTH MACHINE DIRECTION	*AS 1301.448s-91*	21.4 kN/m	Min 13.0 kN/m
TENSILE STRENGTH LATERAL DIRECTION	*AS 1301.448s-91*	19.4 kN/m	Min 10.5 kN/m
EDGE TEAR MACHINE DIRECTION	*TAPPI T 470 om-89*	1078 N	Min 90 N
EDGE TEAR LATERAL DIRECTION	*TAPPI T 470 om-89*	939 N	Min 90 N
VAPOUR CONTROL	*ASTM E96*	Class 2 (Medium)	Class 1 to 4
VAPOUR PERMEANCE	*ASTM E96*	0.0371 µg/N.s	µg/N.s
WATER CONTROL	*AS/NZS 4201.4:1994*	Water Barrier	Water Barrier or Non-Water Barrier
RESISTANCE TO DRY DELAMINATION	*AS/NZS 4201.1:1994*	Pass	Pass
RESISTANCE TO WET DELAMINATION	*AS/NZS 4201.2:1994*	Pass	Pass
SHRINKAGE (REPEATED WETTING & DRYING)	*AS/NZS 4201.3:1994*	0.0%	< 0.5%
FLAMMABILITY INDEX	*AS 1530.2-1993*	Low ≤ 5	High (>5) / Low (≤ 5)
ELECTRICAL CONDUCTIVITY	*AS 4200.1:2017* *AS/NZS 3100.1:2017*	Electrically Conductive -	Electrically Conductive or Electrically Non-conductive
EMITTANCE VALUE	*AS/NZS 4201.5:1994*	Bright side: 0.03 Anti-glare side: 0.05	Value
EMITTANCE CLASSIFICATION	*AS/NZS 4200.1:2017*	IR Reflective, IR Reflective - RR	IR Reflective ≤ 0.05
PRODUCT DIMENSION		1350 mm x 22.25 m (30 m^2) + 150 mm flap	
THICKNESS		8 mm	
NOMINAL WEIGHT		17.9 kg	

Vapour Control Properties

AMETALIN THERMALBREAK 8™PLUS has a Water Vapour Transmission (WVT) rate of 1.92 grams per square metre per 24 hours tested at 23°C, 50% Relative Humidity (RH).

NCC Compliant

AMETALIN THERMALBREAK 8™ PLUS complies with *AS/NZS 4859.1:2002/Amdt 1:2006* and *AS/NZS 4200.1:2017*, and therefore meets all the requirements of the *National Construction Code* for insulation and pliable building membranes.

BUSHFIRE ATTACK LEVELS

AMETALIN THERMALBREAK 8™ PLUS 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.

Total System R-values

R-values apply to typical conditions for mainland Australian capital cities and have been calculated in accordance with *AS/NZS 4859.1:2002/Amdt 1:2006*. For detailed design of building systems, seek advice based on actual site conditions from a qualified licensed engineer.

Storage

This product should be stored upright and under cover in a clean, dry place in the pack provided.

Specification Notes

When specifying, state the following:

Product Name: AMETALIN THERMALBREAK 8™ PLUS

The insulation to be installed shall be Trade Select™ THERMALBREAK 8™ PLUS double sided reflective, fibre-free thermo-reflective insulation, comprised of cross-linked, closed-cell core XPE foam with anti-glare foil facing on one side and plain foil facing on the other side, and 150 mm overlap piece included. Material R-value in-situ R0.20. Product is manufactured by Ametalin and shall be installed in accordance with *AS 4200.2:2017 Pliable Building Membranes and Underlays, Part 2: Installation Requirements*.

Emittance Value: Bright Side 0.03, Anti-glare Side 0.05
Emittance Classification: IR Reflective, IR Reflective
Material R-value: R0.21 uncompressed / R0.20 in-situ
Vapour Permeance: 0.0371 µg/N•s
Water Vapour Transmission (WVT): 1.9 g/m^2•24 hr
Vapour Resistance: 64.89 MN•s/g
Vapour Control Classification: Class 2, (Medium)
Water Control Classification: Water Barrier
Flammability Index: ≤5 (Low)
Duty: Extra Heavy in accordance with *AS/NZS 4200.1:2017*

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Manufacturers of building membranes | insulation products | flexible packaging

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Health and Safety Information

Ametalin has assessed AMETALIN THERMALBREAK 8™ PLUS according to the criteria outlined in the *National Occupational Health and Safety Commission (NOHSC):1008 (1998)* and *NOHSC: 1005 (1999)*. As a result of the assessment, this product is classified as non-hazardous according to the NOHSC criteria. 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 shall be avoided.

Installation

ELECTRICAL SAFETY PRECAUTIONS - BEFORE YOU START:

Ametalin stresses the importance of safe installation practices for foil-based insulation as critical to installer and consumer safety. The installation process should ensure that this membrane does not impair the electrical safety of the building. 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 Method Statements and Hazard Management forms to assist contractors and installers in safe installation of reflective insulation products. These documents are available under 2009 AFIA WMS & Hazard Management, at www.afia.com.au/news/health-and-safety/.

AMETALIN THERMALBREAK 8™ PLUS 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

AMETALIN THERMALBREAK 8™ PLUS 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, un-vented 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.

ROOFS

In roofs, AMETALIN THERMALBREAK 8™ PLUS is to be installed as a continuous membrane, blue anti-glare side facing out and laid over rafters. Joins must be overlapped by no less than 150 mm or not less than 50 mm taped on the exterior face, with all top layers to the outside of bottom layers to facilitate drainage. A 150 mm flap is provided for convenience. All end joins shall be positioned over supporting members. When AMETALIN THERMALBREAK 8™ PLUS is used under tiles it must comply with the above and also: be installed below roof battens with a drape of ≤40mm, unrolled across the roof trusses, parallel to the facia and drain into the gutter via an anti-ponding device in order to comply with *AS 4200.2:2017*.

FRAMED WALLS & GABLES

In framed walls and gables, Ametalin ThermalBreak 8 Plus™ should be installed horizontally as a continuous membrane by fixing to all framing members with the blue anti-glare side facing out and overlapped by no less than 150 mm to facilitate drainage. A 150 mm flap is provided for convenience. Alternatively, all joins can be butt-joined and taped with Ametalin 72 mm Reinforced Insulation/ Ducting Tape if overlapping will compromise cladding installation. All end laps shall be fixed at a stud to form a continuous membrane.

AMETALIN THERMALBREAK 8™ PLUS should extend from the top plate to the bottom plate on concrete slabs or bearers in timber construction. For fastening to timber construction; fixings are to be no more than 150 mm apart and should be galvanised clouts, or staples prior to fixing cladding. For fastening to steel constructions, tek screws at 300mm centres for cavity walls or Ametalin Double Sided Insulation Fixing Tape for direct to stud fastening, prior to fixing cladding.

In high wind areas, it is recommended to install using flat punched multi-point fasteners or cap screws. Any damage made to AMETALIN THERMALBREAK 8™ PLUS during installation including holes and tears must be repaired.

Where AMETALIN THERMALBREAK 8™ PLUS is intended to act as an air or vapour barrier, tape and seal all overlapped joins, penetrations and discontinuities with Ametalin 72 mm Reinforced Insulation/Ducting tape to prevent air movement. When

AMETALIN THERMALBREAK 8™ PLUS is installed as a water control membrane ensure slope is no less than 2° and all penetrations shall be sealed or turned up to facilitate drainage around penetration. Ensure window and door openings are cut neatly, dressed carefully and are properly fitted at flashing points.

Where AMETALIN THERMALBREAK 8™ PLUS is installed as a thermal control membrane, ensure airgap to low emittance side is ≥20mm. AMETALIN THERMALBREAK 8™ PLUS shall be cut back from any hot flue to avoid being a fire hazard. This can be achieved with a clear space of 50 mm and sealing edge with fire rated Ametalin Reinforced Insulation and Ducting Tape or a fire rated collar, or as recommended by the manufacturer of the flue and approved by the local authority.

DOUBLE BRICK & MASONRY CAVITY WALLS

After the outer leaf of the double brick or masonry cavity wall is laid, place Ametalin Cavity Spacers™ onto the brick ties via the vertical slit provided, with the white adhesive side facing inwards. Install one cavity spacer per square metre to ensure the required air space. Remove adhesive tape backing. Install AMETALIN THERMALBREAK 8™ PLUS horizontally, cut slits through the pliable building membrane at all brick tie positions, and place Ametalin ThermalBreak 8 Plus™ 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 shall not be allowed to contaminate the reflective surfaces.

FLOORS

Adequate drainage provisions must be given for all floor applications. Contact our technical department for more information about use in floors.

AMETALIN TAPE RANGE

It is recommended to use the following when required to secure, join or seal AMETALIN THERMALBREAK 8™ PLUS

Ametalin Double Sided Fixing Tape – DSFT-3850, 38 mm x 50 m
Ametalin Reinforced Insulation and Fixing Tape – IDTR-7250,

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