

# ametalin ThermalBreak 8™

EXTRA HEAVY DUTY

DOUBLE SIDED REFLECTIVE FOAM INSULATION RESIDENTIAL & COMMERCIAL



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

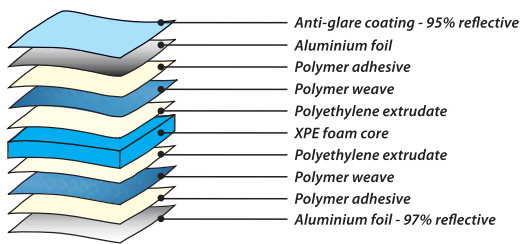
Product Code: TB8-30 | I/N: 0810967

ametalin ThermalBreak 8™ is an 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/BCA requirements for in-situ material R-value of R0.2 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™ offers superior thermal performance to conventional insulation, and reduces thermal bridging and conductivity between building elements.

- ▶ 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™ is made with aluminium foil laminates with reflectivity of 97% and emissivity of 0.03 to one side and 95% reflectivity and emissivity of 0.05 to the other, in compliance with ASTM Standard E 408-71 (Re-approved 2002). At its core is 8.4 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™ has a material R-value of R0.2 to meet thermal break requirements. When it is incorporated into typical construction systems, the following thermal performance can be achieved:

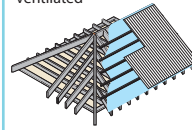
			WINTER	SUMMER
<b>Metal Roof</b>	unventilated	22° Pitched metal roof, 190 mm raked ceiling	Calc. Ref: 12239	R <sub>T</sub> 1.4 R <sub>T</sub> 3.7
<b>Metal Roof</b>	ventilated	22° Pitched metal roof with flat ceiling	Calc. Ref: 12335	R <sub>T</sub> 1.3 R <sub>T</sub> 2.8
<b>Metal Roof</b>	unventilated	22° Pitched metal roof with flat ceiling	Calc. Ref: 299/3723	R <sub>T</sub> 1.5 R <sub>T</sub> 2.4
<b>Tile Roof</b>	unventilated	22° Pitched tile roof with flat ceiling	Calc. Ref: 12084	R <sub>T</sub> 1.5 R <sub>T</sub> 2.4
<b>Commercial Office Roof</b>		Suspended ceiling at 1000 mm	Calc. Ref: 299/381	R <sub>T</sub> 1.4 R <sub>T</sub> 4.6
<b>Warehouse Shed Roof</b>		5° metal roof 100 mm ceiling	Calc. Ref: 299/380	R <sub>T</sub> 1.5 R <sub>T</sub> 3.2
<b>Warehouse Shed Roof</b>		5° metal roof with no ceiling	Calc. Ref: 299/382	R <sub>T</sub> 1.0 R <sub>T</sub> 2.0
<b>Steel Stud Framed Wall</b>		Metal cladding direct to 90 mm stud, no lining	Calc. Ref: 299w44	R <sub>T</sub> 1.3 R <sub>T</sub> 1.1

\* 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

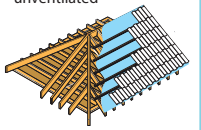


CALCULATION REF: 12335

WINTER	R <sub>T</sub> 1.3
SUMMER	R <sub>T</sub> 2.8

### TILE ROOF

22° pitched flat ceiling unventilated

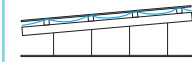


CALCULATION REF: 12164

WINTER	R <sub>T</sub> 1.5
SUMMER	R <sub>T</sub> 2.5

### COMMERCIAL OFFICE

5° pitched, 1000 mm ceiling

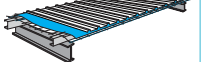


CALCULATION REF: 299/381

WINTER	R <sub>T</sub> 1.4
SUMMER	R <sub>T</sub> 4.6

### WAREHOUSE SHED

5° pitched, no ceiling



CALCULATION REF: 299/382

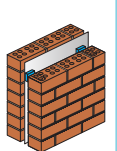
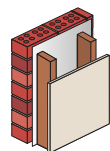
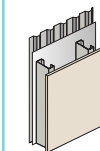
WINTER	R <sub>T</sub> 1.0
SUMMER	R <sub>T</sub> 2.0

### WALLS:

Stud Framed

Brick Veneer

Double Brick



CALCULATION REF: 12334

CALCULATION REF: 299w371

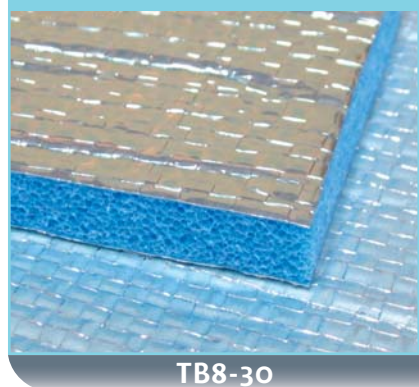
CALCULATION REF: 299w3811

WINTER	R <sub>T</sub> 1.9
SUMMER	R <sub>T</sub> 1.7

WINTER	R <sub>T</sub> 2.2
SUMMER	R <sub>T</sub> 1.9

WINTER	R <sub>T</sub> 2.3
SUMMER	R <sub>T</sub> 2.1

ametalin ThermalBreak 8™



TB8-30



### Classification

### DOUBLE SIDED REFLECTIVE FOAM INSULATION RESIDENTIAL & COMMERCIAL

ametalin THERMALBREAK 8™ classifications in accordance with AS/NZS 4200.1:1994 and AS/NZS 4859.1:2006

PRODUCT		ametalin THERMALBREAK 8™	AS/NZS 4200.1:1994
FLAMMABILITY INDEX	AS 1530.2-1993	Low	Low ≤ 5
THERMAL BREAK (THERMAL RESISTANCE)	ASTMC518	R0.21	
DUTY	AS/NZS 4200.1:1994	Extra Heavy	Classification
EMITTANCE	AS/NZS 4201.5:1994	Bright side: 0.03 Anti-glare side: 0.05	Value
REFLECTIVITY		Bright side: 97% Anti-glare side: 95%	Value
RESISTANCE TO WATER PENETRATION	AS/NZS 4201.4:1994	High	Pass
VAPOUR BARRIER	ASTM E96	Medium, PROCEDURE B, WET CUP TEST	Classification
MACHINE DIRECTION TENSILE STRENGTH	AS 1301.448s-91	21.4 kN/m	Min 13.0 kN/m
LATERAL DIRECTION TENSILE STRENGTH	AS 1301.448s-91	19.4 kN/m	Min 10.5 kN/m
MACHINE DIRECTION EDGE TEAR	TAPPI T 470 om-89	1078 N	Min 90 N
LATERAL DIRECTION EDGE TEAR	TAPPI T 470 om-89	939 N	Min 90 N
RESISTANCE TO DRY DELAMINATION	AS/NZS 4201.1:1994	Pass	Pass
RESISTANCE TO WET DELAMINATION	AS/NZS 4201.2:1994	Pass	Pass
SHRINKAGE	AS/NZS 4201.3:1994	< 0.0%	< 0.5%
RESISTANCE TO IMPACT TEST (SANDBAG)	AS 4040.4-2006 AFIMA MODIFIED	Pass	
SURFACE WATER ABSORBENCY	AS/NZS 4201.4:1994	Unclassified	Classification

PRODUCT CODE:	TB8-30
THICKNESS:	8.4 mm
ROLL SIZE:	1350 mm x 22.25 m + 150 mm flap (30 m <sup>2</sup> )
WEIGHT:	17.9 kg

AVERAGE THICKNESS:	8.5 mm
MINIMUM THICKNESS:	8.4 mm
UNCOMPRESSED R-VALUE:	R0.21
COMPRESSED R-VALUE:	R0.20

WATER VAPOUR TRANSMISSION RATE: 1.9 g/m<sup>2</sup>·24hr (23°C, 50% RH)

AMETALIN CLASSIFICATION: MEDIUM VAPOUR BARRIER

### Vapour Barrier Properties

ametalin THERMALBREAK 8™ 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/BCA Compliant

ametalin THERMALBREAK 8™ complies with AS/NZS 4859.1:2002/Amdt 1:2006 and AS/NZS 4200.1:1994, and therefore meets all the requirements of the *National Construction Code* and *Building Code of Australia* for insulation and pliable building membranes.

### BUSHFIRE ATTACK LEVELS

ametalin THERMALBREAK 8™ 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.

### Dimensions

ametalin THERMALBREAK 8™ is sold in size: 1350 mm x 22.25 m + 150 mm flap (30 m<sup>2</sup>)

### Specification Notes

When specifying, state the following:

**Product Name:** Ametalin THERMALBREAK 8™

The insulation to be installed shall be Ametalin ThermalBreak 8™ 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 R0.2. Product is manufactured by Ametalin and shall be installed in accordance with AS/NZS 4200.2: 1994 *Pliable Building Membranes and Underlays, Part 2: Installation Requirements*.

Emittance Bright Side: 0.03, Anti-glare Side: 0.05

Material R-value: R0.21 uncompressed / R0.20 in-situ

Water Vapour Transmission (WVT): 1.9 g/m<sup>2</sup>·24hr

Vapour Resistance: 64.89 MN·s/g

Vapour Barrier Classification: Medium

Water Barrier Classification: High

Duty: Extra Heavy in accordance with AS/NZS 4200.1:1994

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AUSTRALIAN DESIGNED, AUSTRALIAN OWNED.

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Manufacturers of building membranes | insulation products | flexible packaging



ametalin

raising the standard

## Health and Safety Information

Ametalin has assessed ametalin THERMALBREAK 8™ 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.

## 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. 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/](http://www.afia.com.au/news/health-and-safety/).**

ametalin THERMALBREAK 8™ should be installed in accordance with *AS/NZS 4200.2: 1994 Pliable Building Membranes and Underlays, Part 2: Installation Requirements*.

### GENERAL

ametalin THERMALBREAK 8™ 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, a 25 mm air space adjacent to each side of the product is recommended.

### ROOFS

In roofs, ametalin THERMALBREAK 8™ is to be installed as a continuous membrane, blue anti-glare side facing out and laid loosely over rafters on 450 mm centres with a minimum drape of 40 mm. For larger rafter spacings in metal roofs, the drape should be increased proportionally. Joins must be overlapped by no less than 150 mm to facilitate drainage. A 150 mm flap is provided for convenience. *AS 3959-2009 Construction of buildings in bushfire-prone areas* requires that all sarking products be installed under roof battens. When ametalin THERMALBREAK 8™ is used under tiles it must be installed under battens in order to comply with *AS/NZS 4200.2:1994*.

### FRAMED WALLS

In framed walls and gables, ametalin THERMALBREAK 8™ 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.

ametalin THERMALBREAK 8™ should extend from the top plate to the bottom plate on concrete slabs or bearers in timber construction. Fixings are to be no more than 450 mm

apart and should be galvanised clouts, or staples, for fastening to timber construction and tech screws for fastening to steel constructions. In high wind areas, it is recommended to install using flat punched multi-point fasteners or cap screws. Horizontal, vertical and end overlaps must be 150 mm if not taped or 50 mm taped with Ametalin Insulation/Ducting Tape, with all top layers overlapping the outside of lower layers to prevent water ingress. Stagger any vertical overlaps. Any damage made to ametalin THERMALBREAK 8™ during installation including holes and tears must be repaired.

Where ametalin THERMALBREAK 8™ is intended to act as a vapour barrier, tape and seal all overlapped joins, penetrations and discontinuities with Ametalin Insulation/Ducting tape to prevent air movement. When ametalin THERMALBREAK 8™ is installed as a sarking membrane, all penetrations shall be sealed or turned up to facilitate drainage around penetration. Ensure window and door openings are cut neatly and carefully and are properly fitted at flashing points. ametalin THERMALBREAK 8™ shall be cut back from any hot flue to avoid being a fire hazard. This can be achieved by a clear space of at least 50 mm, or as recommended by the manufacturer of the flue and approved by the local authority.

### DOUBLE BRICK AND MASONRY CAVITY WALLS

After the inner 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 outwards. Install one cavity spacer per square metre to ensure the required air space. Remove adhesive tape backing. Install ametalin THERMALBREAK 8™ horizontally, cut slits through the pliable building membrane at all brick tie positions, and place ametalin THERMALBREAK 8™ into position over the brick ties. Push the membrane and the cavity spacer into position against the inner back leaf.

### FLOORS

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

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