



# Ametalin

Performance insulation for a greener world

## ThermalBreak 7™

Product Code: TB7

### Roof and wall home insulation

For R0.2 thermal break in-situ performance for steel framed residential construction

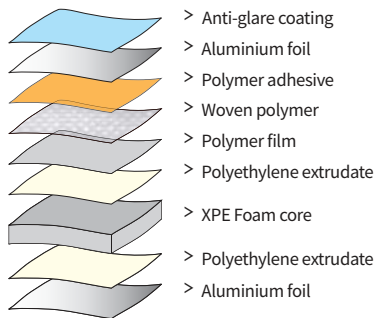


ThermalBreak 7™ is an Extra Heavy Duty three-in-one reflective insulation, Thermal Break and Class 2 Vapour Barrier for use in all roof and wall types. It meets the NCC requirements for in-situ material R-value of R0.20 for a thermal break in steel framed construction, and is also suitable for use in timber framed construction. Designed to manage heat gain and heat loss, ThermalBreak 7™ offers superior thermal performance to conventional insulation, and reduces thermal bridging and conductivity between building elements.

- > Extra Heavy Duty
- > Group 1 Fire performance classification
- > R0.2 Thermal Break in-situ
- > Acoustic dampener
- > Flammability low, suitable for all BALs in bushfire-prone areas
- > Can also be used for timber frame and commercial steel frame constructions

### Construction

ThermalBreak 7™ consists of a 7.8 mm core of chemically cross-linked, closed-cell XPE foam, one-layer of aluminium is laminated to one side with emissivity of 0.03 and one-layer of polymer weave to other side with emissivity of 0.05.



### Declared Total System R-Values

#### Residential Metal Roof

22° pitched metal roof, 190 mm raked ceiling with ThermalBreak 7™

Winter **R<sub>t</sub> 1.4**

Summer **R<sub>t</sub> 3.7**

#### Commercial Office Roof

suspended ceiling at 1000 mm, with ThermalBreak 7™

Winter **R<sub>t</sub> 1.4**

Summer **R<sub>t</sub> 4.6**

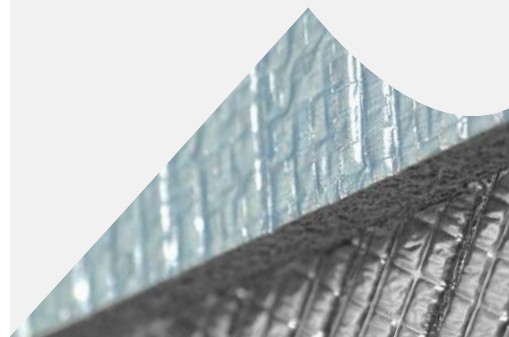
#### Double Brick

with ThermalBreak 7™

Winter **R<sub>t</sub> 2.3**

Summer **R<sub>t</sub> 2.1**

Ametalin ThermalBreak 7™ has a material R-value of R0.1. When it is incorporated into typical construction systems, the following thermal performance can be achieved: R-values apply to typical conditions for mainland Australian capital cities and have been calculated by an independent consulting engineer, in accordance with AS/NZS 4859.1:2002/ Amdt 1:2006. For detailed design of building systems readers are advised to seek advice from a qualified engineer, based on actual site conditions. The contributions of this product to the total system R-value depends on installation and environmental conditions.



## Material Properties and Classifications

ThermalBreak 7™ classifications in accordance with AS/NZS 4200.1:2017 and AS/NZS 4859.1:2002, Amdt 1:2006

| Criteria                               | Reference          | Result                                 | Requirement            |
|--|--------------------|--|------------------------|
| Flammability Index                     | AS 1530.2-1993     | Low ≤ 5                                | High (> 5) / Low (≤ 5) |
| Material Thermal Resistance            | ASTM C518          | 0.21 M2.K/W (Rm 0.21)                  | Classification         |
| Compressed Material Thermal Resistance | ASTM C518          | 0.20 M2.K/W (Rm 0.20)                  |                        |
| Duty                                   | AS/NZS 4200.1:2017 | Extra Heavy                            | Classification         |
| Tensile Strength Machine Direction     | AS 1301.448s-91    | 14.6 kN/m                              | Min 9.5 kN/m           |
| Tensile Strength Lateral Direction     | AS 1301.448s-91    | 13.6 kN/m                              | Min 6.0 kN/m           |
| Edge Tear Machine Direction            | TAPPI T 470 om-89  | 384 N                                  | Min 65 N               |
| Edge Tear Lateral Direction            | TAPPI T 470 om-89  | 293 N                                  | Min 65 N               |
| Vapour Control                         | ASTM E96           | Class 2 Vapour Barrier                 | Class 1 to 4           |
| Vapour Permeance                       | ASTM E96           | 0.0113 µg/N.s                          | Value                  |
| Water Control                          | AS/NZS 4201.4:1994 | Water Barrier                          | Classification         |
| Air Control                            | AS/NZS 4200.1:2017 | Air Barrier                            | Classification         |
| 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%                 |
| Electrical Conductivity                | AS/NZS 4200.1:2017 | Conductive                             | Classification         |
| Emittance Value                        | AS/NZS 4201.5:1994 | Anti-glare side: 0.05, Foil side: 0.03 | Value                  |
| Emittance Classification               | AS/NZS 4200.1:2017 | IR Reflective, IR Reflective           | Classification         |
| Emittance Category                     | AS/NZS 4200.1:2017 | RR                                     | Category               |

## NCC Compliant

ThermalBreak 7™ complies with AS/NZS 4859.1:2002/Amdt 1:2006 and AS/NZS 4200.1:2017, and therefore meets all of the requirements of the *National Construction Code* of Australia for insulation, pliable building membranes and sarking-type materials.

## Fire Performance

### Group Number Assessment

Group 1

Assessed in accordance with AS 5637.1:2015 *Determination of fire hazard properties* by Ignis Solutions professional fire engineers.

### 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 3959-2018 *Construction of buildings in bushfire-prone areas* for use in all BALs.

Seek independent advice regarding the selection of sarking prior to installation in the BAL design.

## Dimensions

1350 mm x 22.25 m + 150 mm flap (30 m<sup>2</sup>)

Nominal thickness: 7.8 mm

## Specification Notes

When specifying, state the following:

Product Name: Ametalin ThermalBreak 7™

The insulation to be installed shall be Ametalin ThermalBreak 7™ 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 and shall be installed in accordance with AS 4200.2:2017 *Pliable Building Membranes and Underlays, Part 2: Installation*.

Emittance Value: 0.05, 0.03

Emittance Classification: IR Reflective, IR Reflective

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

Vapour Control Classification: Class 2 Vapour Barrier, 0.0113 µg/N.s

Water Control Classification: Water barrier

Duty: Extra Heavy in accordance with AS/NZS 4200.1:2017

Complete details available on our website:

<https://www.ametalin.com>

## Handling and Storage

Store this product undercover in a clean, dry place in the pack provided out of contact with alkaline products, cement and mortar.

## Performance insulation for a greener world

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**Ametalin**

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

Australian designed for Australian conditions. Manufactured by: Ametalin 9-11 Playford Crescent, Salisbury North S 5108 T: +61 8 8285 6955 F: +61 8 8285 5911 E: [info@ametalin.com](mailto:info@ametalin.com)

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