



# Ametalin

Performance insulation for a greener world

## FireSark® Micro-perforated

Product Code: FS-B

### Fire resistant permeable reflective wall insulation

For use in all wall types in Non-Combustible constructions and ideal for use in all BAL zones



FireSark® Micro-perforated is an Extra Heavy Duty, Vapour Permeable reflective wall wrap designed to reduce the risk of interstitial condensation in building systems while delivering superior fire performance to exceed the requirements of the 2019 National Construction Code for bushfire-prone areas.

Classified as Class 3 Vapour Permeable, a dense pattern of micro-perforations allows water vapour to escape from the wall structure making it ideal for drained cavity systems in Climate Zones 6 - 8. FireSark® Micro-perforated also acts as a barrier to air, radiant heat, draughts and dust penetration.

- > Ember-proof and suitable for all BAL zones
- > Air Barrier, Class 3 Vapour Permeable
- > Ultra-strong material
- > Chemically inert / long life components
- > Superior heat resistance
- > 97% Reflective

### Application

Class 3 Vapour Permeable wall wraps are not recommended for wet tropical climate zones.

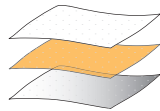
### Vapour Permeance

Vapour Permeance: 0.8698 µg/N·s  
Vapour Resistance: 1.150 MN·s/g  
WVTR: 105.53 g/m<sup>2</sup>·24hr  
Tested in accordance with AS/NZS 4200.1:2017.

A detailed hygrothermal analysis is recommended for moisture control in building design.

### Construction

FireSark® Micro-perforated is a flexible three-layer product made with a combination of non-combustible E-glass fabric, 97% reflective aluminium foil, and fire-resistant polymer adhesive.



- > Glass fabric
- > Fire resistant polymer adhesive
- > Aluminium foil

Ametalin utilises Advanced Laminating Technology; the polymer fire resistant adhesive remains tacky indefinitely and provides superior resistance to heat, fire and delamination.

### NCC Compliant

FireSark® Micro-perforated complies with NCC 2019 Deemed-to-Satisfy Provisions for non-combustible constructions *Volume 1 C1.9, Volume 2 Part 3.7.1.1, AS/NZS 4859.1:2018 and AS/NZS 4200.1:2017*, and therefore meets all of the requirements of the 2019 National Construction Code of Australia for insulation and sarking-type materials.

FireSark® Micro-perforated is classified as a Non-Water Barrier under AS/NZS 4200.1:2017 *Pliable building membranes and underlays, Part 1: Material*, which requires testing under a 100 mm water column.

### Total System R-Values

**Aerated Concrete Clad Wall**  
with FireSark® Micro-perforated  
+ R2.5 fibrous batt

Winter **R<sub>t</sub> 3.18**

Summer **R<sub>t</sub> 3.03**

**Brick Veneer Wall**  
with FireSark® Micro-perforated  
+2.7 fibrous Batt

Winter **R<sub>t</sub> 2.93**

Summer **R<sub>t</sub> 2.78**

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 4859.2:2018. 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

FireSark® Micro-perforated classifications in accordance with AS/NZS 4200.1:2017, AS/NZS 4859.1:2018 and NCC Volume One, C1.9 and NCC Volume Two, Part 3.7.4.1.

Criteria	Reference	Result	Requirement
Combustibility	AS 1530.1-1994	Not deemed combustible	Fibreglass weave
Flammability Index	AS 1530.2-1993	Low $\leq 5$	High ( $> 5$ ) / Low ( $\leq 5$ )
Early Fire Hazard Indices	AS/NZS 1530.3-1999	0, 0, 0, 2	0 – 20, 0, 0 – 10, $\leq 3$
Duty	AS/NZS 4200.1:2017	Extra Heavy	Classification
Tensile Strength Machine Direction	AS 1301.448s-91	58 kN/m	Min 13.0 kN/m
Tensile Strength Lateral Direction	AS 1301.448s-91	26 kN/m	Min 10.5 kN/m
Edge Tear Machine Direction	TAPPI T 470 om-89	381 N	Min 90 N
Edge Tear Lateral Direction	TAPPI T 470 om-89	440 N	Min 90 N
Vapour Control	ASTM E96	Class 3 Vapour Permeable	Class 1 to 4
Vapour Permeance	ASTM E96	0.8698 $\mu\text{g}/\text{N}\cdot\text{s}$	Value
Water Control	AS/NZS 4201.4:1994	Non-Water Barrier	Classification
Air Control	ISO 6536/5-2003	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	Printed side: 0.9, Bright side: 0.03	Value
Emittance Classification	AS/NZS 4200.1:2017	IR Non-reflective, IR Reflective	Classification
Emittance Category	AS/NZS 4200.1:2017	RN	Category

## Fire Performance

### Use in Non-combustible Construction

FireSark® Micro-perforated is suitable for use in non-combustible construction in compliance with 2019 NCC Volume One C1.9(e)(vi) and Volume Two Part 3.7.1.1(f). Superior fire performance results from the choice of non-combustible fibreglass weave for the bulk of the material and naturally non-combustible aluminium.

### FireSark® Micro-perforated Offers a Triple Crown of Safety:

**AS 1530.1—1994** *Methods for fire tests on building materials, components and structures Part 1: Combustibility tests for materials.*

The fibreglass fabric and aluminium foil have achieved a result of **not deemed combustible**.

**AS 1530.2—1993** *Methods for fire tests on building materials, components and structures Part 2: Test for flammability of materials.* FireSark® Micro-perforated has a Flammability Index of 1 or Low ( $\leq 5$ ).

**AS/NZS 1530.3:1999** *Methods for fire tests on building materials, components and structures Part 3: Simultaneous determination of ignitability, flame propagation, heat release and smoke release.* The early fire hazard indices determined for FireSark® Micro-perforated as per AS/NZS 1530.3:1999 are:

Ignitability: 0, Spread of flame: 0, Heat evolved: 0, Smoke developed: 2

### 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.

## Specification Notes

When specifying, state the following:

Product Name: Ametalin FireSark® Micro-perforated

The insulation to be installed shall be Ametalin FireSark® Micro-perforated single sided reflective laminate, tested in accordance with AS 1530.1-1994 *Methods for fire tests on building materials, components and structures Part 1: Combustibility test for materials* to satisfy NCC, Vol 1, C1.9 for non-combustible constructions and shall be installed in accordance with AS 4200.2: 2017 *Pliable Building Membranes and Underlays, Part 2: Installation*.

Combustibility: Not deemed combustible

Flammability Classification: Low (1)

Early Fire Hazard Indices: 0, 0, 0, 2

Emittance Classification: IR Non-reflective, IR Reflective, 0.90, 0.03

Vapour Control Classification: Vapour Permeable, 0.8698  $\mu\text{g}/\text{N}\cdot\text{s}$

Water Control Classification: Non-water Barrier

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

Nominal thickness: 0.20 mm

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.

## Dimensions

1350 mm x 30 m (40.5 m<sup>2</sup>)

Nominal thickness: 0.20 mm

## Performance insulation for a greener world

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

Australian designed for Australian conditions. 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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