

### Fire resistant reflective insulation

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



FireSark® is an Extra Heavy Duty radiant barrier, designed for multi-purpose use in all roof and wall types where fire performance is a priority. The reflective foil side provides extra R-Value when installed facing an air cavity, and the non-combustible glass fabric multi-layer structure provides excellent fire and ember resistance, as well as superior strength, flexibility and durability.

Classified as a Water Barrier, and Class 2 Vapour Barrier. FireSark® is a barrier to embers, radiant heat, moisture ingress, draughts and dust penetration.

- > Ember-proof
- > Ideal for all BAL zones to FZ bushfire-prone areas
- > Water and Air Barrier
- > Class 2 Vapour Barrier
- > 97% Reflective

### Applications

FireSark® is designed for superior fire performance where water barrier and Class 2 Vapour Barrier properties are required for use as a roof sarking and wall wrap. The 97% reflective foil face provides extra R-value when installed facing an air cavity.

This product is Class 2 Vapour Barrier, suitable for use in

- > Building Classes 1, 2 and 4 Walls in ABCB Climate Zones 1 to 3.
- > Typical pitched flat ceiling roofs with ventilated attic space, located in ABCB Climate Zones 1 to 8.

### Limitations

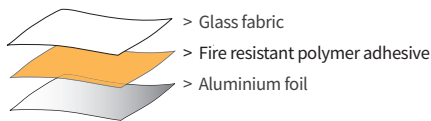
This product contains aluminium foil and is therefore electrically conductive.

This product is not suitable for use in Building Class 1, 2 and Class 4 walls in ABCB Climate Zones 4 to 8.

This product is not suitable for use in Cathedral or Raked tile roofs located in ABCB Climate Zones 6 to 8.

### Construction

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



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

### NCC Compliant

FireSark® complies with NCC Deemed-to-Satisfy Provisions for non-combustible constructions *Volume 1 C2D10 Non-combustible building elements (6)(g) – Bonded laminated materials (iii)*; and *AS/NZS 4200.1:2017*, and therefore meets all of the general requirements of the *National Construction Code* of Australia for insulation, pliable building membranes and sarking-type materials.

### Dimensions

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

Nominal thickness: 0.20 mm

### Total System R-Values

#### Residential Roof

22° pitch with FireSark®, unventilated

Winter **R, 0.93**

Summer **R, 1.51**

#### Light Weight Cladding

battened out with FireSark® + R2.7 fibrous batt

Winter **R, 2.75**

Summer **R, 2.62**

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® classifications in accordance with AS/NZS 4200.1:2017

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 Indices	AS/NZS 1530.3-1999	0, 0, 0, 2	0 – 20, 0, 0 – 10, $\leq 3$
Thickness		0.20 mm	$\leq 1$ mm
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 2 Vapour Barrier	Class 1 to 4
Vapour Permeance	ASTM E96	0.003 $\mu\text{g}/\text{N}\cdot\text{s}$	Value
Water Control	AS/NZS 4201.4:1994	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: 0.90, Foil 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

FireSark® is suitable for use in Non-Combustible construction in compliance with NCC C2D10 Non-combustible building elements (6)(g) – Bonded laminated materials (iii). Superior fire performance results from the choice of Non-Combustible fibreglass weave for the bulk of the material and naturally non-combustible aluminium.

### FireSark® 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® achieves 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 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®

The insulation to be installed shall be Ametalin FireSark® 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 2019, 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 Value: 0.90, 0.03

Emittance Classification: IR Non-reflective, IR Reflective

Vapour Control Classification: Class 2 Vapour Barrier, 0.003  $\mu\text{g}/\text{N}\cdot\text{s}$

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. Ametalin 9-11 Playford Crescent, Salisbury North SA 5108 T: +61 8 8285 6955 F: +61 8 8285 5911 E: [info@ametalin.com](mailto:info@ametalin.com)

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