

Trade Select™ FireSark® Micro-perforated Technical Data Sheet

Extra Heavy Duty, Fire resistant permeable reflective wall insulation

For use in all roof and wall types in Non-Combustible constructions and ideal for use in all BAL zones 12.5 to FZ.



Trade Select™ 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 *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. Trade Select™ FireSark® Micro-perforated also acts as a barrier to air, radiant heat, draughts and dust penetration.

- > Ember-proof
- > Ideal for all BAL zone wall systems to FZ bushfire-prone areas
- > 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.

Construction

Trade Select™ 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.



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

NCC Compliant

Trade Select™ FireSark® Micro-perforated 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 and sarking-type materials.

Trade Select™ 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.

Vapour Permeance

Vapour Permeance: 0.8698 µg/N-s
 Vapour Resistance: 1.150 MN•s/g
 WVTR: 105.53 g/m²•24hr
 Tested in accordance with *AS/NZS 4200.1:2017*.

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

Total System R-values

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.

For full details of Declared Total System R-values go to our website <http://www.tradeselect.co/>

Declared Total System R-Values

Brick Veneer Wall

with Trade Select™ FireSark® Micro-perforated

Winter **R_t 1.3**

Summer **R_t 1.3**

Aerated Concrete Clad Wall

with Trade Select™ FireSark® Micro-perforated + R2.0 fibrous batt

Winter **R_t 3.7**

Summer **R_t 3.4**

Brick Veneer Wall

with Trade Select™ FireSark® Micro-perforated +2.5 Fibrous Batt

Winter **R_t 3.2**

Summer **R_t 3.0**

Material Properties and Classifications

Trade Select™ FireSark® Micro-perforated classifications in accordance with AS/NZS 4200.1:2017 and AS/NZS 4859.1:2002, Amdt 1:2006.

Criteria	Reference	Result	Requirement
Combustibility	AS 1530.1-1993	Not deemed combustible	Fibreglass weave
Flammability Index	AS 1530.2-1993	Low ≤ 5	High (> 5) / Low (≤ 5)
Early Fire Hazard Indices	AS 1530.3-1993	0, 0, 0, 2	0 - 20, 0, 0 - 10, ≤ 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%	$< 0.5\%$
Electrically Conductive	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

Trade Select™ FireSark® Micro-perforated is suitable for use in non-combustible construction in compliance with 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® 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. Trade Select™ FireSark® Micro-perforated has a Flammability Index of 1 or Low (≤ 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 Trade Select™ 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 3959-2009 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.

Specification Notes

The insulation to be installed shall be Trade Select™ FireSark® Micro-perforated single-sided reflective laminate and shall be installed in accordance with AS 4200.2: 2017 Pliable Building Membranes and Underlays, Part 2: Installation.

Emittance Classification: IR Non-reflective, IR Reflective, 0.90, 0.03
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:
<http://www.tradesselect.co/>

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 m²)

Nominal thickness: 0.20 mm

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

AUSTRALIAN DESIGNED, AUSTRALIAN OWNED. Manufactured by: Ametalin 9-11 Playford Crescent Salisbury North SA 5108 T: +61 8 8285 6955 F: +61 8 8285 5911 E: info@tradesselect.co
W: tradesselect.co

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Performance insulation for a greener world

9-11 Playford Crescent Salisbury North SA 5108

T: +61 8 8285 6955 F: +61 8 8285 5911

E: info@tradesselect.co W: tradesselect.co