# Technical Datasheet

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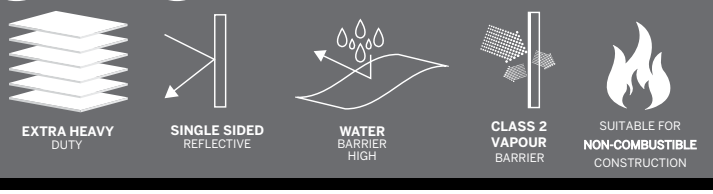
Revision Level A

# THERMOSEAL FIRESPEC

DESCRIPTION: Extra Heavy Duty Sarking for Non-Combustible Construction
SUITABILITY: Residential and Commercial Applications requiring BCA compliant Non-Combustible Construction
ADDITIONAL INFORMATION: Refer to the Technical Product Statement for more information




## IMPORTANT INFORMATION

- This product is only recommended for the applications listed in this datasheet unless advised otherwise by an official Bradford technical representative.
- This product is a vapour barrier and is not recommended for use behind lightweight cladding except in tropical climate zone 1 - its suitability should be checked with the cladding manufacturer prior to application.
- This product is not designed to withstand prolonged exposure to UV or weather. Please reference the Weather Exposure statement on Page 2 under the 'Installation Guidance' section.
- Prior to installation, this product should be stored in a cool dry place away from sunlight, and should not come into contact with wet concrete or alkaline based materials.
- This product contains aluminium foil which conducts electricity. To avoid electrocution, care should be taken to ensure that this product or conductive fasteners used to secure this product, do not come into contact or close proximity with electrical wiring during installation or use.
- To maintain the water barrier property of this material, it should not be creased, crushed or sharply folded during installation.

## PRODUCT DESCRIPTION

Bradford Thermoseal™ Firespec is an Extra Heavy Duty aluminium foil and fiberglass fabric weather barrier that is laminated together using a laminating adhesive.

- This product meets the requirements of the AS/NZS 4200.1 and is suitable for use in Australian residential and commercial applications.
- This product meets the non-combustibility requirements of the BCA 2016 Volume 1, Amendment 1 clause C1.9 (e) (vi) and Volume 2 clause 3.7.1.2 and is suitable for use in non-combustible Type A and B construction.

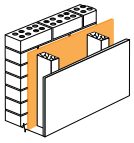
## CLIMATE ZONE

This product is recommended for use in hot to cold climate zones where there are lower levels of insulation used in the wall cavity and vapour and water barrier properties are required.

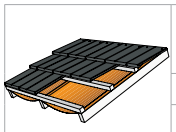
## CLASSIFICATION

| This product meets the requirements of AS/NZS 4200.1 | | |
|---|---|---|
| **CRITERIA** | | **RESULT** |
| Product Identifier | | Firespec |
| Duty Classification (AS/NZS 4200.1) | | Extra Heavy Duty |
| Tensile Strength (AS/NZS 1301.448s) | Machine | ≥ 13 |
| | Lateral | ≥ 10.5 |
| Edge Tear Resistance (TAPPI T470) | Machine | ≥ 90 |
| | Lateral | ≥ 90 |
| Water Control Classification (AS/NZS 4201.4) | | Water Barrier |
| Vapour Classification (ASTM E96) | | Class 2 Vapour Barrier |
| Vapour Permeability (ASTM E96) | | < 0.1429 µg/N.s |
| Emissivity (AS 4201.5) | Inward Facing | Reflective (0.05) |
| | Outward Facing | Non-Reflective (0.9) |
| Flammability Index (AS 1530.2) | | ≤ 5 (Low) |
| Electrical Conductivity (AS/NZS 3100) | | Conductive |
| Resistance to Dry Delamination (AS/NZS 4201.1) | | Pass |
| Resistance to Wet Delamination (AS/NZS 4201.2) | | Pass |
| Shrinkage (AS/NZS 4201.3) | | ≤ 0.5% |
| Classifications in accordance with AS/NZS 4200.1. This product should be installed in accordance with AS 4200.2 | | |

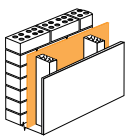
## APPLICATION TABLES



| Brick Cavity Wall | |
|---|---|
| Summer | Winter |
| $R_T$ 1.2 | $R_T$ 1.3 |



| Pitched Tile Roof Non-Ventilated Roof Space | |
|---|---|
| Summer | Winter |
| $R_T$ 1.5 | $R_T$ 0.98 |



| Brick Veneer Wall | |
|---|---|
| Insulation | |
| R2.5 | |
| Summer | Winter |
| $R_T$ 2.8 | $R_T$ 2.8 |

## APPLICATION DETAIL

Bradford Thermoseal™ Firespec is suitable for residential or commercial brick veneer walls, or cement and terracotta tiled roofs. The reflective aluminium side should face inward towards the internal stud cavity and the non-reflective fiberglass side should face outward. The product is designed to provide a reflective air-gap R-Value when there is no insulation up against the reflective aluminium surface.

- This product is suitable for use in BAL regions 12.5 to 40 in accordance with AS 3959.

For more information on how to install this product correctly see the installation details on the next pages.

## PRODUCT DIMENSIONS

| PRODUCT NAME | WIDTH (mm) | LENGTH (m) | m² PER ROLL | WEIGHT (kg) | PRODUCT CODE |
|---|---|---|---|---|---|
| Firespec | 1500 | 30 | 45 | 15.65 | 164674 |

## PRODUCT CONSTRUCTION


*This image is only illustrative of product construction, any adhesive or product layer will have 100% coverage.

## CONDENSATION CONSIDERATION

Please consider condensation risk prior to use. This product is classified as a Vapour Barrier and when positioned on the cold side of the construction it may increase the risk of condensation entrapment within the structure. To reduce this risk, particularly in cooler climate zones, consider the use of the Bradford Enviroseal vapour permeable range of products.

## R-VALUE ASSUMPTIONS

Product performance is calculated in accordance with AS/NZS 4859.1 and the stated thermal performance is the depicted applications Total R–Value. The contribution of this product to the Total R-Value depends upon installation and environmental conditions, and will be reduced in those cavities that are ventilated. In brick veneer wall applications, a minimum brick cavity air gap of 40mm and stud cavity air gap of 90mm is required to contribute to thermal performance. Addition of bulk insulation to the wall stud cavity diminishes the reflective air gap R-Value contribution of this product.

- Calculations are based upon a temperature difference of 6°C for heat flow out and 12°C for heat flow in.
- Emittance of reflective surface ≤0.05 and non-reflective surface ≥0.90.

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# TECHNICAL PRODUCT STATEMENTS

## APPLICATION DETAIL

This product is designed for use as a wall wrap or roof sarking where a non-combustible vapour barrier is specified. It may also be suitable as a roof sarking in BAL regions or where there is a need to build entirely from non-combustible materials.

## COMPLIANCE WITH THE NCC

Firespec meets the non-combustibility requirements of BCA 2016 Volume 1, Amendment 1 clause C1.9 (e) (vi) and Volume 2 clause 3.7.1.2, or where there is a requirement to construct from non-combustible materials.

## EVIDENCE OF SUITABILITY

Available supporting data:

- AS1530 Part 1/2/3 test reports
- CSIRO non-combustibility report FCO-3235 Rev E

## LIMITATIONS OF USE

This product is classified as a Class 2 Vapour Barrier in accordance with AS/NZS 4200.1 and is only suitable behind Lightweight Clad when stated by the cladding manufacturer. Additionally, this product is not suitable for applications that require condensation control.

This product is not suitable for use as a wall or ceiling lining which require a Group Rating in accordance with AS ISO 9705.

## INSTRUCTIONS FOR DESIGN/CONSTRUCTION/INSTALLATION

This product should be handled with care during installation to avoid creasing or bending which may damage the foil facing and subsequently compromise the waterhold-out properties of the product.

Install in accordance with project specification and/or AS/NZS 4200.2:2017 Pliable building membrane and underlays Part 2: Installation. Further details are provided in the 'Installation Guidance' portion of this product datasheet.

## CONDITIONS OF STORAGE, USE & MAINTENANCE

Storage prior to use should be in a cool, dry location out of direct sunlight.

Avoid contact with wet concrete during and after installation.

Do not pressure clean or use mineral based cleaners on this product.

## INSTALLATION GUIDANCE - WALLS

This product should be installed in accordance with AS/NZS 4200.2:2017 Pliable Building Membranes and Underlays - Installation.

Recommended instructions for a compliant installation:

- The printed, non-reflective or antiglare surface of this product must be installed facing outward
- The product should be applied to a corner stud and rolled around the wall frame horizontally
- When wrapping around corners, a minimum 150mm should extend around that corner
- When applying a new roll horizontally it should overlap the previous roll a minimum 50mm
- Affix using galvanised staples/metal fixings every 150mm or galvanised screws/nails with plastic washers every 300mm - where possible all overlaps and end joins should be fixed onto a wall stud
- When applying the top layer of wrap, it must overlap a minimum 150mm with the bottom layer of wrap
- To create an air barrier, all overlaps should be taped.

* All damage, punctured or torn material should be replaced to maintain the original properties of this product.
* When this product is being used as an air barrier, to achieve air tightness, it is recommended that the building have mechanical ventilation.
* For more installation guidance, refer to AS/NZS 4200.2:2017

## INSTALLATION GUIDANCE - ROOFS

This product should be installed in accordance with AS/NZS 4200.2:2017 Pliable Building Membranes and Underlays - Installation.

Recommended instructions for a compliant installation:

- The printed, non-reflective or antiglare surface of this product must be installed facing outwards
- Product must be installed under battens with a maximum sag of 40mm to manage thermal performance and be angled at >2° to facilitate drainage
- When the product is installed under the battens it must be rolled out horizontally
- Regardless of direction, a minimum 150mm overlap is required when joining two rolls together. If rolling horizontally the top wrap should always overlap the bottom wrap
- Affix using galvanised staples/metal fixings every 150mm or galvanised screws/nails with plastic washers every 300mm - all overlaps and end joins should be fixed onto a rafter or batten
- At the fascia, the product must only overlap the fascia edge by 25mm and not restrict drainage to the gutter
- To create an air barrier, all overlaps should be taped.

* All damage, punctured or torn material must be replaced to maintain the original properties of this product
* For more detailed installation guidance, refer to AS/NZS 4200.2:2017 or the Bradford Roof Sarking Installation Guide.

**Weather Exposure:** This product is a secondary sarking material and is not designed to withstand prolonged direct exposure to the elements - accordingly, the exterior cladding should be installed without delay. Product exposed to harsh weather conditions, or for more than 6 weeks for wall or 2 weeks for roof applications, should be inspected for damage prior to installation of the exterior cladding and damaged product should be repaired or replaced to comply with the product warranty.

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