Fletcher Insulation
Building Better, Together

Technical Data Sheet

# PERMASTOP® BUILDING BLANKET
## REFLECTIVE FACED GLASSWOOL INSULATION BLANKET

### Description
Permastop® Building Blanket is a glasswool blanket containing up to 80% recycled content faced with a high quality Sisalation® reflective foil laminate on one side. For ease of installation, the reflective foil laminate has a 150mm overlap along one side (lengthwise) for sealing the blanket.

### Applications
Permastop® Building Blanket is suitable for use in both commercial and residential metal roof and wall applications, as well as under slab concrete soffit applications, when installed behind a ceiling or wall lining. It provides effective thermal and acoustic properties by reducing heat transfer and minimising the internal reverberation and flow of unwanted nuisance noise generated from adjacent buildings/rooms and/or the external environment. Additionally, Permastop® Building Blanket aids in minimising the risk of condensation that can form in metal cladding.

### Features and Benefits

| | |
|---|---|
| Combines two effective types of insulation to offer one product solution. | Saves time and costs toward your overall construction project. |
| Reduces the risk of condensation forming under metal roofs. | Prevents damage to ceilings often caused by the development of mould. |
| Assists in heavily reducing unwanted external noise inside a building often caused by weather conditions. | Provides a more comfortable living and working space. |
| Delivers overall building energy efficiency keeping buildings cool in summer and warm in winter. | Reduces future ongoing costs on energy bills and unneccessary stress on HVAC systems. |
| Available in a range of thicknesses. | Effectively meeting the NCC 2022 energy efficiency provision. |
| Environmentally positive made from up to 80% recycled material. | Minimal impact on the environment. |

### Product Data

| Material R-value m² K/W | Thickness mm | Width mm | Length m | Sisalation® Facing |
|---|---|---|---|---|
| R1.3 | 55 | 1200 | 15 & 20 | LD, MD, HD, HDP |
| R1.4 | 60 | 1200 | 15 & 20 | LD, MD, HD |
| R1.8 | 75 | 1200 | 15 | LD, MD, HD, HDP |
| R2.5 | 100 | 1200 | 10 | LD, MD, HD, HDP |
| R3.0 | 130 | 1200 | 10 | LD, MD, HD |
| R3.2 | 130 | 1200 | 10 | LD, MD, HD |
| R3.6 | 130 | 1200 | 6.5 | LD, MD, HD |

## Physical Properties

| Property | Test Method/Standard | Result | Unit |
|---|---|---|---|
| Thermal Resistance R-value | AS/NZS 4859.1 | Complies | $m^2$ K/W |
| Moisture absorption | When exposed to environmental conditions of 50°C and 95% relative humidity for four days | 0.2 | % by volume |
| Maximum service temperature | ASTM C411/C447 | Glasswool: 350<br>Reflective Foil Facing: 70 | °C |
| pH | ASTM C871 | 9<br>(does not contribute to the corrosion of steel structures) | |

## Fire Hazard Properties

Permastop® Building Blanket exhibits the following characteristics when tested in accordance with the following standards:

| | | Test Results | | | |
|---|---|---|---|---|---|
| Property | Test Method/ Standard | Unfaced | Sisalation® LD Facing Foil | Sisalation® MD Facing Foil | Sisalation® HD Facing Foil |
| Combustability (Unfaced Pink® Building Blanket only) | AS/NZS 1530.1 | Non combustible | Not applicable on faced products | | |
| Flammability Index (Sisalation Facing Foils) | AS/NZS 1530.2 | | ≤ 5 | | |
| Early Fire Hazard Indices<br>Ignitability Index<br>Spread of Flame Index<br>Heat Evolved Index<br>Smoked Developed Index | AS/NZS 1530.3 | 0<br>0<br>0<br>2 | | | |
| Group Number | AS 5637.1 | | 1 | 2 | 2 |
| Heat Release Rate & SMOGRA | AS ISO9705 | | < 100 | | |
| BAL Compliance | AS 3959 | | Low–40 | | |

## Compliance

- Complies with AS/NZS 4859.1 as referenced in NCC 2022, Volume 1 Clause J4D3 (1) and NCC 2022, Volume 2 ABCB Housing provisions Clause 13.2.2.
- Complies with the Group Number requirements of NCC 2022 Volume 1, S7C4 for wall and ceiling linings.
- When tested to AS/NZS 1530.3, this product does not exceed the ‘Spread of Flame’ or ‘Smoke Developed’ indices as required by NCC 2022 Volume 1, S7C7 for insulation materials.
- Complies with the requirements of AS 3959 Bushfire Attack Level Low–40 under metal sheet roofs.

## Acoustic Performance

### Sound Absorption

The performance of sound absorption for insulation is described by the Noise Reduction Coefficient (NRC). In sound absorption application, the NRC is used as an acoustic performance measure. The higher the NRC, the greater the sound absorption at the representative frequencies. The Noise Reduction Coefficient (NRC) is calculated according to ASTM C423-90A and the average result of four frequencies: 250 Hz, 500 Hz, 1000 Hz and 2000 Hz. The Weighted Sound Absorption Coefficient ($\alpha$w) of the sample determined in accordance with AS ISO 11654 'Acoustics: Sound Absorbers for Use in Buildings – Rating of sound absorption'.

Permastop® Building Blanket with Light Duty (LD) or Heavy Duty Perforated (HDP) foil facing achieves the following sound absorption coefficients when tested in accordance with AS ISO 354.

| | | Sound Absorption Coefficients at Frequencies (Hz) of: | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Product** | **Thickness mm** | **125** | **250** | **500** | **1000** | **2000** | **4000** | **NRC** | **$\alpha$w** |
| Permastop® Building Blanket (LD) R1.3 | 55 | 0.23 | 0.83 | 1.14 | 0.53 | 0.23 | 0.18 | 0.70 | 0.30 (LM) |
| Permastop® Building Blanket (LD) R1.8 | 75 | 0.34 | 1.22 | 0.97 | 0.43 | 0.26 | 0.13 | 0.70 | 0.25 (LM) |
| Permastop® Building Blanket (LD) R2.5 | 100 | 0.49 | 1.33 | 0.92 | 0.52 | 0.29 | 0.11 | 0.75 | 0.30 (LM) |
| Permastop® Building Blanket (LD) R3.0 | 130 | 0.51 | 1.37 | 0.85 | 0.44 | 0.3 | 0.15 | 0.75 | 0.30 (LM) |
| Permastop® Building Blanket (LD) R3.2 | 130 | 0.53 | 1.19 | 0.75 | 0.45 | 0.23 | 0.11 | 0.65 | 0.25 (LM) |
| Permastop® Building Blanket (LD) R3.6 | 130 | 0.59 | 1.35 | 0.93 | 0.66 | 0.33 | 0.13 | 0.80 | 0.35 (LM) |
| Permastop® Building Blanket (HDP) R1.8 | 75 | 0.35 | 0.80 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 (LM) |
| Permastop® Building Blanket (HDP) R2.5 | 100 | 0.46 | 0.85 | 1.14 | 1.07 | 1.00 | 0.90 | 1.00 | 1.00 (LM) |

## Flow Resistivity

Acoustic performance of Permastop® Building Blanket products used in sound absorption applications can be measured by their bulk insulation resistance to air flow, this is recognised as flow resistivity.

Flow resistivity performance is valuable when evaluating products of the same thickness and density that have varying fibre attributes.

Tested in accordance with ASTM Standard C522-03 Standard Test method for Airflow Resistance of Acoustic Materials.

The following table rates the flow resistivity of Permastop® Building Blanket products with foil facing removed:

| Product | Thickness mm | RAYLS/m |
|---|---|---|
| Permastop® Building Blanket R1.3 | 55 | 3930 |
| Permastop® Building Blanket R1.4 | 60 | 4900 |
| Permastop® Building Blanket R1.8 | 75 | 4750 |
| Permastop® Building Blanket R2.5 | 100 | 5930 |
| Permastop® Building Blanket R3.0 | 130 | 3950 |
| Permastop® Building Blanket R3.2 | 130 | 4110 |
| Permastop® Building Blanket R3.6 | 130 | 10890 |

## Health and Safety

Permastop® Building Blanket is manufactured from FBS-1 Glasswool Bio-Soluble Insulation®. FBS-1 Glasswool Bio-Soluble Insulation® is safe to use and is classified as non-hazardous according to the criteria of Safe Work Australia. Fletcher Insulation™ glasswool can be used with confidence in any residential, commercial or HVAC application. Permastop® Building Blanket contains aluminium foil and can conduct electricity. To avoide electrocution, care should be taken to ensure products do not come into contact with electrical wiring during installation or use.

## Environmental Properties

The glasswool component of Permastop® Building blanket is manufactured from up to 80% recycled content which would otherwise go into landfill and be unsuitable for alternative manufacturing processes.

Fletcher Insulation avoids the use of Ozone Depleting Potential (ODP) substances in the manufacture or composition of its FBS-1 Glasswool Bio-Soluble Insulation® and Sisalation® reflective foil products.

The use of Permastop® Building Blanket guarantees the use of Zero ODP insulation while also ensuring that no harmful levels of Volatile Organic Compounds (VOCs) are released. This allows the incorporation of environmentally preferable insulation whilst also maintaining indoor air quality.

## Technical Specification

When specifying, state the following:
The insulation material shall be Fletcher Insulation Permastop® Building Blanket _____ (specify foil duty rating LD, MD or HD) with a Material R-value of R_____$m^2$ K/W (specify Material R-value) at a nominal thickness of _____mm (specify nominal thickness).



**For more information call 1300 654 444**
**email info@insulation.com.au or web www.insulation.com.au**

PermaStop®
PREMIUM ROOFING BLANKET