

Permastop® Building Blanket

Reflective faced thermal and acoustic 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 lapping the blanket.

Applications

Permastop® Building Blanket is suitable for use in both commercial and residential metal roof applications. The product is also suitable for wall applications in commercial steel frame construction. Permastop® can also be used in 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.

Product limitations of use

- Not to be used or exposed to weather in any condition including prior, during and after installation. Product must be kept dry at all times.
- Not suitable for applications where high humidity is present within building (wet climates for a long period).
- This product can not be classified to AS1530.1 as an assembly, and is not suitable where non-combustible material is required, however, where such requirement exist, laying the required blanket and foil separately may comply.
- Can be used as internal exposed lining but not suitable if smooth appearance is critical.
- Not suitable for under tiled roofs.
- The foil facing is a vapour barrier, not to be used where vapour permeable facing is required.
- Modifications not permissible, as suitability and/or compliance may be compromised.
- Product needs to be allowed to fully recover before installation.
- Suitable roof ventilation must be installed in accordance with the requirements of the NCC.

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 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 unnecessary 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 m ² K/W | Thickness mm | Width mm | Length m | Sisalation® Facing |
|--|-----------------|-------------|-------------|--------------------|
| R1.3 | 55 | 1200 | 15 & 20 | LD, MD, HD |
| R1.4 | 60 | 1200 | 15 & 20 | LD, MD, HD |
| R1.8 | 75 | 1200 | 15 | LD, MD, HD |
| R2.5 | 100 | 1200 | 10 | LD, MD, HD |
| 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: 340 Reflective Foil Facing: 70 | °C |
| Fungi resistance of insulation materials | ASTM C1338-14 | Pass (No growth) | - |

Fire hazard properties

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

| Property | Test method/ standard | Test Results | | | |
|--|--------------------------|-----------------|----------------------------------|-------------------------------|-------------------------------|
| | | Unfaced | Sisalation® LD Facing Foil | Sisalation® MD Facing Foil | Sisalation® HD Facing Foil |
| Combustibility (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 | AS/NZS 1530.3 | | 0 | | |
| Ignitability Index | | | 0 | | |
| Spread of Flame Index | | | 0 | | |
| Heat Evolved Index | | | 0 | | |
| Smoke Developed Index | | | 2 | | |
| Group number | AS 5637.1 | | 1 | 2 | 2 |
| Heat Release Rate & SMOGRA | AS ISO9705 | | < 100 | | |
| BAL Compliance | AS 3959 | | Low-40 | | |

Compliance

NCC 2019

- Complies with AS/NZS 4859.1 as referenced in NCC 2019, Volume 1 Clause J1.2(a) and NCC 2019, Volume 2 Clause 3.12.1.1.
- Complies with the Group number requirements of NCC 2019 Volume 1, Specification C1.10 Clause 4 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 2019 Volume 1, Specification C1.10 Clause 7 for insulation materials.
- Complies with the requirements of AS 3959 Bushfire Attack Level Low-40 under metal clad roofs.

NCC 2022

- 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 clad 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 (α_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), Medium duty (MD) or Heavy Duty (HD) foil facing achieves the following sound absorption coefficients when tested in accordance with AS ISO 354.

| Property | Thickness mm | Sound absorption coefficients at frequencies (Hz) of: | | | | | | NRC | α_w |
|---------------------------------------|-----------------|--|------|------|------|------|------|------|------------|
| | | 125 | 250 | 500 | 1000 | 2000 | 4000 | | |
| Permastop® Building Blanket (LD) R1.3 | 55 | 0.15 | 0.57 | 1.10 | 0.71 | 0.32 | 0.22 | 0.70 | 0.35 (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 | 0.54 | 1.20 | 0.91 | 0.60 | 0.43 | 0.26 | 0.80 | 0.45 (LM) |
| Permastop® Building Blanket (LD) R3.0 | 130 | 0.51 | 1.37 | 0.85 | 0.44 | 0.3 | 0.15 | 0.75 | 0.40 (LM) |
| Permastop® Building Blanket (MD) R3.0 | 130 | 0.57 | 1.13 | 0.79 | 0.56 | 0.42 | 0.23 | 0.75 | 0.35 (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 (HD) R3.6 | 130 | 0.99 | 1.16 | 0.90 | 0.75 | 0.40 | 0.20 | 0.80 | 0.40 (LM) |

Health and safety

Permastop® Building Blanket is manufactured from FBS-1 Glasswool Bio-Soluble Insulation®. Refer to Fletcher Insulation SUIS for more information.

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 provides 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.

Maintenance and conditions of use

- Product should be kept dry at all times, not to be exposed to weather in any condition including prior, during and after installation.
- Foil facing should not be in contact with any corrosive environments, water or alkaline materials such as wet concrete etc.
- Use of pressure cleaners or mineral based cleaners must not be used on the facing product.
- If product is compressed it will reduce the thermal performance of the product, it is recommended, where permissible, Roof Razor® is installed, to allow the product to recover to its nominal thickness to achieve the declared material R-value.
- Where Insulation can be inspected, ensure any tears in the facing are repaired with appropriate tape as highlighted in the product's installation guidelines.
- When storing, ensure product is protected from physical damage. Avoid storing product packaging under UV light (direct sunlight) for extended periods.
- When product is installed as per the product installation guidelines, no further maintenance is required for this product.

Technical specification

When specifying, please state the following:

The insulation material must be Fletcher Insulation Permastop® Building Blanket _____ (specify foil facing duty rating LD, MD or HD) with a Material R-value of R_____m²K/W (specify Material R-value) at a nominal thickness of _____mm (specify nominal thickness). Compliant with the thermal testing requirements of AS/NZS 4859.1.

The following performance attributes must be specified:

- Product must be FBS-1 Biosoluble.
- Product must recover to the requirements of AS/NZS 4859.1. *Where sound performance is required for the project, Sound Absorption level must be _____.

Installation instructions

For the correct installation method, follow the Installation Guidelines available from insulation.com.au

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