

# **Application**

When standard insulation is too thick, use Pink® Batts® Skillion Roof insulation to maintain required clearances from roofing materials while providing the level of comfort and savings that comes with higher R-values.

Pink® Batts® Skillion Roof is designed to be used in skillion roof constructions while still achieving the minimum 25mm clearance between the roof underlay and insulation in:

- New buildings and retrofits of existing ceilings
- Modern 'lean to' style extensions on existing homes
- Low profile roof design and restricted roof cavities

Cathedral style roofs and raked ceilings are generally skillion roof constructions where the ceiling line and roof line are in parallel.

### Features and Benefits

- Specifically designed for Skillion Roofs provides New Zealand Building Code (NZBC) levels of thermal insulation while providing minimum ventilation clearances
- Easy to install Lightweight, flexible and simple design makes the installation fast and easy
- Internationally certified for Indoor Air Quality Gives assurance that products meet strict chemical emissions limits
- Non-combustible will not easily burn in the event of a fire
- Made from over 80% recycled glass making sustainable use of waste
- Made in New Zealand designed for New Zealand building conditions and reduces emissions associated with the importing of overseas manufactured product



## **Critical Design Considerations**

Historically there have been moisture related problems with skillion roofs. The following design factors should be considered to ensure your roof's performance and durability.

#### Internal moisture and condensation

- To prevent internal moisture entering the roof space, use vapour resistant lining in wet areas such as kitchens and bathrooms (e.g. gloss/oil based paint systems)
- Reduce airflow into the roof cavity through ceiling linings that are resistant to airflow (e.g. for a tongue and groove ceiling) by using a breather type air barrier
- Reduce penetrations through ceilings e.g. use sealed recessed downlights
- Special situations: Ski lodges, indoor pools/spas, cold stores may require an additional fully sealed vapour barrier (e.g. Sisalation® Heavy Duty 450)

#### Ventilation

- A minimum 25mm clearance between the top of the insulation and the building underlay is required to provide a minimum amount of ventilation and reduce moisture build up in the roof cavity. However in areas of high humidity and/or large temperature differences, additional ventilation may be required to compensate for higher levels of condensation and water vapour
- Ensure the insulation product you specify or install is guaranteed not to over recover or loft above the rafter depth; often nominal thickness measurements are not the maximum loft that segments will achieve

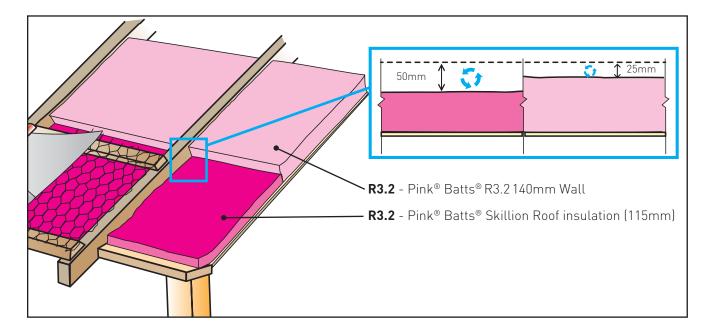
#### Trapped moisture

■ To avoid trapping excessive levels of construction moisture into the roof cavity ensure timber, concrete and other building materials are dry before enclosing building

For more detailed information please refer to BRANZ Bulletin 525

### How to reduce moisture related problems in skillion roofs

By providing additional ventilation, Pink® Batts® Skillion roof insulation achieves 100% more ventilation clearance, while still maintaining the same R-value as R3.2 140mm Wall (or R3.6 180mm) insulation products.





### **Environment**

Pink® Batts® insulation is a sustainable and energy efficient product.

- Manufactured using over 80% recycled glass, making sustainable use of waste
- Energy used during the manufacture of Pink® Batts® products is offset by the energy saved by a home fully insulated with Pink® Batts® products within 3-15 months¹
- Locally manufactured in New Zealand minimising shipping distances
- Recyclable packaging

#### Green Star N7 Credits

Green Star is a comprehensive environmental rating system for buildings; materials with certain attributes can receive points that contribute to the overall score of a rated home.

New Zealand Green Building Council (NZGBC) does not test or certify products; they rely on the work done by third party certification bodies and eco labels like Environmental Choice. Further information is available at **nzgbc.org.nz.** 

#### **Environmental Choice**

All Pink® Batts® ceiling insulation products have Environmental Choice New Zealand Accreditation (refer to Product Specifications on page 5 for accredited products)



### Independently assessed for:

- Waste Minimisation: Recycled content, and recycling of process waste
- Energy Management: Effective energy management policies and procedures
- Manufacturing Process: Not manufactured using blowing agents with a Global Warming Potential (GWP) or Ozone Depleting Potential (ODP)
- Product Characteristics: Durability and performance

While only BRANZ appraised products are eligible for Environmental Choice, all Pink® Batts® insulation products are manufactured in the same environmentally considerate way.

 $^{\rm 1}$  (Beca Carter Hollings & Ferner Ltd, Energy Economics of Fibreglass Insulation, 2005)



### **Health and Safety**

### **Product Safety**

Pink® Batts® insulation is a non-hazardous, safe product.

- IARC (International Agency for Research on Cancer) classifies the glass wool formulation used to manufacture Pink® Batts® products as Group 3: 'Not classifiable as to its carcinogenicity to humans'. This is the same classification as caffeine, tea, hair colouring, chlorinated drinking water and saccharin
- Pink® Batts® insulation is bio-soluble. In the unlikely event any fibres are inhaled into the lungs they will dissolve in the body fluids and be cleared from the body



### Indoor Air Quality

Pink® Batts® insulation is certified under the GREENGUARD Certification Program. Being certified
for indoor air quality gives an assurance that products meet strict chemical emissions limits
(including minimal levels of VOCs and formaldehyde), to help create healthier indoor environments



#### General Health

- Pink® Batts® insulation will assist in meeting the World Health Organisation recommendation for houses to be maintained at a minimum temperature of 18°C to provide a healthy and comfortable home
- A Wellington School of Medicine study found insulated houses resulted in families with fewer sick days and the economic benefit was double the initial cost of the insulation<sup>2</sup>

### **Technical Data**

Properties	Result		Test/Method/Standard	Test Results	
Combustibility	Non-Combustible	<b>~</b>	AS/NZS 1530.1:1994	Group Number 1S	
Early Fire Hazards		<b>✓</b>	AS/NZS 1530.3:1993 - Ignitability (Range 0-20) - Spread of Flame Index (Range 0-10) - Heat Evolved Index (Range 0-10) - Smoke Developed Index (Range 0-10)	= 0 = 0 = 0 = 0-1	
R-value	Various*	<b>✓</b>	AS/NZS 4859.1:2002		
Corrosion	Non-Corrosive	N/A	AS/NZS 4859.1:2002-Glass wool exempt		
Moisture Absorption	Non-Hygroscopic	N/A	AS/NZS 4859.1:2002-Glass wool exempt		
Vermin Resistance	No Food Source	<b>✓</b>	AS/NZS 4859.1:2002-Glass wool exempt		

<sup>\*</sup> Refer to product specifications

## **Acoustic Properties**

Pink® Batts® insulation will assist with noise control, however penetrations in ceilings and walls will transmit sound readily. Superior noise control can be achieved by using Pink® Batts® insulation products in conjunction with good acoustic design.



<sup>&</sup>lt;sup>2</sup> Howden-Chapman, P. et al. "Effect of insulating existing houses on health inequality: cluster randomised study in the community" British Medical Journal, 2007, p334:460

### New Zealand Building Code (NZBC) and Limitations

Pink® Batts® ceiling insulation when used, installed and maintained in accordance with the requirements outlined in this datasheet, will meet or contribute to meeting the following provisions of the NZBC:

NZBC Clause B2: Durability

Meets the requirement NZBC B2.3.1 a) 50 years and NZBC B2.3.1 b) 15 years

NZBC Clause E3: Internal Moisture Contributes to meeting these requirements

NZBC Clause F2: Hazardous Building Materials

Meets this requirement and will not present a health hazard to people

NZBC Clause H1: Energy Efficiency

Contributes to meeting this requirement

### Limitations

To meet the provisions of the NZBC as outlined in this datasheet, Pink® Batts® ceiling insulation MUST be:

- Installed and maintained in a dry protected environment
- Installed in a building where the provisions of NZBC E2 and E3 are met
- Installed to the requirements of NZS 4246:2016: Energy Efficiency-Installing bulk thermal Insulation in Residential Buildings

Pink® Batts® ceiling insulation should NOT be crushed or folded

# **Product Specifications**

ROOF - Thermal Insulation	PRODUCT CODE	SIZE (mm)	NOMINAL STABILISED THICKNESS (mm)*	NOMINAL TOTAL AREA PER BALE (m²)	APPROX. TOTAL AREA PER BALE (m²)**	ENVIRONMENTAL CHOICE
R3.2 Pink® Batts® Skillion Roof R3.2	7110232	1220 x 432	115 max	3.7	3.9	<b>✓</b>
R3.6 Pink® Batts® Skillion Roof R3.6	7110236	1220 x 432	165 max	6.3	6.6	<b>✓</b>
R4.5 Pink® Batts® Skillion Roof R4.5	7110245	1220 x 432	165 max	3.2	3.3	<b>✓</b>

<sup>\*</sup> Stated thicknesses are maximum values.

# **Accreditations/Appraisals/Certifications**















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<sup>\*\*</sup>Coverage relates to standard structure and actual coverage may vary.