



**BRANZ Appraised**

Appraisal No.632 [2008]

BRANZ Appraisals

Technical Assessments of products  
for building and construction

**BRANZ  
APPRAISAL  
No. 632 (2008)**

**PINK® BATTS®  
SNUGFLOOR™  
UNDERFLOOR  
INSULATION**

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## Product

1.1 Pink® Batts® SnugFloor™ is a resin bonded glasswool thermal insulation for under framed timber floors.



## Scope

2.1 Pink® Batts® SnugFloor™ has been appraised as a thermal insulation material for under floors of buildings within the following scope:

- timber framed floors in new or existing domestic and commercial buildings; and,
- installed where the insulation remains dry during its serviceable life.

2.2 Pink® Batts® SnugFloor™ must be installed in accordance with the Technical Literature to meet the stated thermal performance rating of the insulation. See Paragraph 6.1.

## Building Regulations

### New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, Pink® Batts® SnugFloor™ if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet or contribute to meeting the following provisions of the NZBC:

**Clause B2 DURABILITY:** Performance B2.3.1(a) not less than 50 years and B2.3.1(b) 15 years. Pink® Batts® SnugFloor™ meets these requirements. See Paragraph 8.1.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1. Pink® Batts® SnugFloor™ meets this requirement and will not present a health hazard to people.

**Clause H1 ENERGY EFFICIENCY:** Performance H1.3.1(a) and H1.3.2 E. Pink® Batts® SnugFloor™ will contribute to meeting these requirements. See Paragraphs 13.1 – 13.7.

3.2 This is an Appraisal of an **Acceptable Solution** in terms of New Zealand Building Code compliance. Pink® Batts® SnugFloor™ thermal resistance (R-value) has been determined by testing to AS/NZS 4859.1 which is an acceptable method.

## Technical Specification

4.1 Pink® Batts® SnugFloor™ is a resin bonded fibrous glasswool underfloor insulation. The main ingredients of Pink® Batts® SnugFloor™ are:

- Glass, recycled and/or virgin; and,
- Cured Urea Extended Phenolic Resin

4.2 Pink® Batts® SnugFloor™ is available in two sizes. 1220 mm long x 430 mm wide x 100 mm in thickness and 1220 mm long x 580 mm wide x 100 mm in thickness.

4.3 Pink® Batts® SnugFloor™ has a nominal material R-value of R 2.6 and each packet is supplied with labelling in compliance with AS/NZS 4859.1

4.4 Accessories used with Pink® Batts® SnugFloor™ which are supplied by the installer are:

- Plastic strapping – where plastic strapping is used to control the insulation material from movement that would affect the thermal insulation performance, strapping that meets the requirements of NZBC Clause B2 Durability: Performance B2.3.1(a) 50 years, must be used.
- Plastic strapping fixings – plastic strapping fixings such as hot dipped galvanised clouts or zinc plated staples that meet the requirements of NZBC Clause B2 Durability: Performance B2.3.1(a) 50 years.

## Handling and Storage

5.1 Pink® Batts® SnugFloor™ must be stored under cover and in dry conditions. Heavy objects must not be stacked on the packs. The packs must be stored in an orientation that avoids excessive compression of the product.

5.2 Compression packaged glasswool is subjected to a maximum combination of compression density and storage time after which the product may not loft to its nominal thickness and therefore may not achieve its designed thermal performance.

## Technical Literature

6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for Pink® Batts® SnugFloor™. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

## Design Information

### General

7.1 Pink® Batts® SnugFloor™ is designed to be used as thermal insulation to meet the NZBC insulation energy efficiency requirements, or to provide greater ratings when required by the designer, when installed in buildings as underfloor insulation.

7.2 The building envelope must be constructed to ensure the insulation remains dry during installation and throughout the life of the building.

7.3 Pink® Batts® SnugFloor™ is intended to be friction fitted and then strapped to fit between floor joists in new installations, or for retrofitting. See Figures 1 and 2 (over page).

7.4 Where the subfloor area is subject to wind such as pole houses or the subfloor venting is in excess of 7000 mm<sup>2</sup> per m<sup>2</sup> of floor area, the insulation must be protected with a suitable lining material such as oil tempered hardboard.

7.5 The material R-value of R 2.6 m<sup>2</sup> °C/W is designed to meet or exceed the minimum requirements of NZS 4218.

7.6 The clearances specified in the installation instructions, or specified by the manufacturer of heating appliances and floor heating vent openings must be adhered to. This factor must be taken into account in the assessment of compliance with NZBC Clause H1 Energy Efficiency.

7.7 Pink® Batts® in the density range of 9.1 kg/m<sup>3</sup> to 25 kg/m<sup>3</sup> have been shown to meet the requirements of AS 1530.1 and are defined as non-combustible.

## Durability

### Serviceable Life

8.1 Where the building is maintained so that provisions of NZBC Clause E2 are met, and where the insulation is not crushed or exposed to conditions that will diminish its thermal performance (e.g. moisture), Pink® Batts® SnugFloor™ is expected to have a serviceable life of at least 50 years. Pink® Batts® SnugFloor™ must be installed in a dry, protected under floor environment.

## Maintenance

9.1 The building must be maintained weatherproof at all times. If, during normal routine maintenance it is discovered that moisture has entered the building envelope, or that dampness has occurred because of leaking plumbing or some other source, then that source must be repaired immediately. Wet or damp insulation must be removed and then replaced with new insulation of an equivalent thermal rating. Floor construction must be clean, dry and free of all contaminants and mould before fitting new insulation. NZS 4246 Paragraph 3.3 gives guidance on thermal insulation maintenance due to water damage.

## Outbreak of Fire

10.1 Pink® Batts® SnugFloor™ must be separated or protected from sources of heat such as chimneys, fireplaces, flues and fuel burning appliances in accordance with the requirements of NZBC Acceptable Solution C/AS1 Part 9.

## External Moisture

11.1 The total building envelope must comply with the requirements of NZBC Clause E2 to ensure that the insulation remains dry in use.

11.2 The moisture content of the construction materials at the time of installing and enclosing the insulation must meet the requirements of NZBC Acceptable Solution E2/AS1 Paragraph 11.2(a), or a lower moisture content if required by the flooring manufacturer.

## Internal Moisture

12.1 Buildings other than Communal Non-residential, Commercial, Industrial, Outbuildings or Ancillary buildings, must be constructed with an adequate combination of thermal resistance, ventilation, and space temperature provided to all habitable spaces, bathrooms, laundries and other spaces where moisture may be generated or may accumulate.

## Energy Efficiency

### Building Thermal Envelope

13.1 NZBC Verification Method H1/VM1 can be used for Housing, Communal Residential, Communal Non-residential and Commercial buildings.

## Modelling of Housing and Smaller Buildings

13.2 The modelling method described in NZS 4218 Section 3.3 (as modified by NZBC Verification Method H1/VM1 Paragraphs 1.1.2 and 1.1.3) is a Verification Method for NZBC Clause H1.3.1(a) for the following types of buildings:

- Housing, regardless of total floor area (the method is also a means of compliance with H1.3.2 E, which applies only to housing), and
- Small buildings other than housing having a net lettable area no greater than 300 m<sup>2</sup>.

## Building Performance Index for Housing

13.3 Compliance with NZBC Clause H1.3.2 E (Building Performance Index or BPI) satisfies Clause H1.3.1(a).

## Modelling of Large Buildings Other Than Housing

13.4 The modelling method described in NZS 4243.1 Section 4.4 is a Verification Method for NZBC Clause H1.3.1(a) for buildings other than Housing having a net lettable area greater than 300 m<sup>2</sup>.

## Determining Thermal Resistance

13.5 The thermal resistance (R-values) of building elements may be verified by using NZS 4214. The BRANZ 'House Insulation Guide' Third Edition provides thermal resistances of common building elements and is based on calculations from NZS 4214.

## Building Thermal Envelope

13.6 NZBC Acceptable Solution H1/AS1 can be used for Housing, Communal Residential, Communal Non-Residential and Commercial buildings.

## Housing and Small Buildings

13.7 Construction in accordance with NZS 4218 Sections 3.1 or 3.2 (as modified by NZBC Acceptable Solution H1/AS1 Paragraphs 2.1.3 and 2.1.4) satisfies NZBC H1.3.1 (a) for housing of any size and all buildings having a net lettable area no greater than 300 m<sup>2</sup>.

13.8 Construction in accordance with NZS 4218 sections 3.1 or 3.2 (as modified by NZBC Acceptable Solution H1/AS1 Paragraphs 2.1.3 and 2.1.4) satisfies NZBC H1.3.2 E for housing of any size.

15.5 Pink® Batts® SnugFloor™ must not enclose electrical wiring. **Extreme caution** must be taken to ensure that no fixings can penetrate electrical cables or conduits.

15.6 Pink® Batts® SnugFloor™ must be neatly cut to fit around penetrations such as pipes and floor framing.

Figure 1

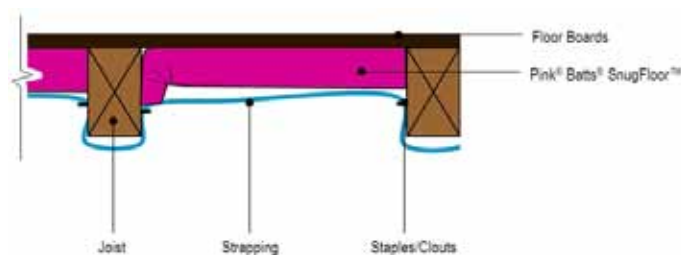
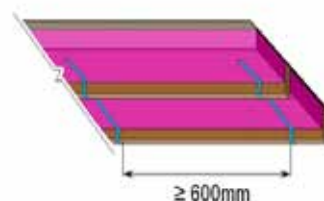


Figure 2



## Inspections

16.1 The Technical Literature and NZS 4246 must be referred to during the inspection of Pink® Batts® SnugFloor™ installations.

## Health and Safety

17.1 Pink® Batts® SnugFloor™ is easy to handle. NZS 4246 gives guidance for health and safety requirements such as personal protective clothing and installation hazard assessment.

## Installation Information

### Installation Skill Level Requirements

14.1 Installation of Pink® Batts® SnugFloor™ must be completed by an installer with an understanding of insulation installation.

### General

15.1 Installation of Pink® Batts® SnugFloor™ must be in accordance with the manufacturer's Technical Literature and this Appraisal. NZS 4246 should be used as a guide for installing insulation in residential buildings.

15.2 Pink® Batts® SnugFloor™ must be installed only when the building subfloor is weatherproof and when the construction materials have achieved the required maximum moisture content or less, to ensure the insulation does not become wet.

15.3 Pink® Batts® SnugFloor™ must be released from the packaging and allowed to re-loft prior to installation. The time to loft will depend upon the length of time the product has been packaged and stored.

15.4 Pink® Batts® SnugFloor™ must be friction fitted between floor joists, and then supported by strapping at a maximum of 600 mm centres. See Figures 1 and 2.

## Basis of Appraisal

The following is a summary of the technical investigations carried out:

### Tests

18.1 BRANZ has carried out thermal resistance testing of Pink® Batts® SnugFloor™ in accordance with AS/NZS 4859.1.

18.2 Tests have been carried out to AS 1530.1 on Pink® Batts® glass-fibre insulation. The results have been reviewed by BRANZ.

### Other Investigations

19.1 An assessment of the durability of Pink® Batts® SnugFloor™ has been made by BRANZ technical experts.

19.2 The manufacturer's Technical Literature has been reviewed by BRANZ and found to be satisfactory.

19.3 Site inspections have been undertaken by BRANZ to assess the practicability of installation.

## Quality

20.1 The manufacture of Pink® Batts® SnugFloor™ has been examined by BRANZ, including methods adopted for quality control. Details of the manufacturing processes, and quality and composition of the raw materials used were obtained and found to be satisfactory.

20.2 Tasman Insulation New Zealand Ltd is responsible for the quality of the product supplied.

20.3 Quality of installation of the product on site is the responsibility of the installer.

20.4 Quality of maintenance of the building to ensure the insulation material remains dry is the responsibility of the building owner.

## Sources of Information

- AS 1530.1: 1994 Combustibility test for materials.
- AS/NZS 4859.1: 2002 Materials for the thermal insulation of buildings.
- BRANZ House Insulation Guide, Third Edition 2007.
- NZS 4218: 2004 Energy efficiency – Housing and small building envelope.
- NZS 4243: 1996 Energy efficiency – Large buildings.
- NZS 4246: 2006 Energy efficiency – Installing insulation in residential buildings.
- Compliance Document for New Zealand Building Code Energy Efficiency Clause H1, Department of Building and Housing, Third Edition, August 2007.
- New Zealand Building Code Handbook and Approved Documents, Department of Building and Housing May 2007.
- The New Zealand Building Regulations 1992, up to, and including June 2007 Amendment.



**BRANZ**

**In the opinion of BRANZ, Pink® Batts® SnugFloor™ Underfloor Insulation is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.**

**The Appraisal is issued only to Tasman Insulation New Zealand Ltd, and is valid until further notice, subject to the Conditions of Appraisal.**

### Conditions of Appraisal

1. This Appraisal:
  - a) relates only to the product as described herein;
  - b) must be read, considered and used in full together with the technical literature;
  - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
  - d) is copyright of BRANZ.
2. [Tasman Insulation New Zealand Ltd](#):
  - a) continues to have the product reviewed by BRANZ;
  - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
  - c) abides by the BRANZ Appraisals Services Terms and Conditions.
3. Warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
4. BRANZ makes no representation or warranty as to:
  - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
  - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
  - c) any guarantee or warranty offered by [Tasman Insulation New Zealand Ltd](#).
5. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
6. BRANZ provides no certification, guarantee, indemnity or warranty, to [Tasman Insulation New Zealand Ltd](#) or any third party.

For BRANZ

P Burghout  
Chief Executive

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