



BRANZ Appraised

Appraisal No. 238 [2012]

PINK® BATTS® INSULATION

Appraisal No. 238 [2012]

This Appraisal replaces BRANZ
Appraisal No. 238 [2008].

Amended 09 September 2015



BRANZ Appraisals

Technical Assessments of
products for building and
construction.



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Product

- 1.1 Pink® Batts® insulation is a range of resin bonded fibrous glasswool thermal insulating material for use in walls, ceilings and roofs of buildings. Pink® Batts® insulation is pre-cut to suit a range of framing spacings.

Scope

- 2.1 Pink® Batts® insulation has been appraised as a thermal insulating material for framed or part-framed walls, ceilings and roofs of domestic and commercial buildings.

Building Regulations

New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, Pink® Batts® insulation, 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® insulation will meet these requirements. See Paragraph 8.1.

Clause E3 INTERNAL MOISTURE: Performance E3.3.1. Pink® Batts® insulation will contribute to meeting this requirement. See Paragraphs 13.1 and 13.2.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Pink® Batts® insulation 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® insulation will contribute to meeting these requirements. See Paragraphs 14.1 and 14.2.

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

Technical Specification

- 4.1 Pink® Batts® insulation is a resin bonded fibrous glasswool insulation manufactured from recycled and/or virgin glass and cured urea extended phenolic resin.
- 4.2 Pink® Batts® insulation is manufactured in a range of sizes to suit framing centres and cavity depths. Building Insulation Blanket (BIB) is supplied in rolls for commercial applications. Pink® Batts® insulation is available as set out in Table 1.

Table 1: Pink® Batts® insulation product table.

R-value	Nominal Thickness [mm]	Width [mm]	Length [mm]	Nett Area [m ²]	Density [kg/m ³]
Ceiling Insulation					
1.8	95	432	1220	13.7	8.3
2.2	115	432	1220	12.6	8.2
2.6	140	432	1220	10.5	8.0
3.2	170	432	1220	8.4	7.3
3.6 ¹	180	432	1220	7.4	7.8
3.6	180	432	1220	7.4	8.8
4.0 ¹	195	432	1220	6.3	8.1
4.6 ¹	215	432	1220	5.3	9.4
5.0 ¹	220	432	1220	4.2	11.0
6.0 ¹	235	432	1220	3.7	13.0
6.3 ¹	250	432	1220	3.2	12.3
7.0 ¹	260	432	1220	2.6	15.8
Wall Insulation					
1.8	90	580	1140	17.2	9.0
2.2	90	580	1140	13.9	12.0
2.4	90	580	1140	10.6	16.6
2.6 ¹	90	580	1140	9.9	20.0
2.8 ¹	90	580	1140	6.6	28.6
3.2 ¹	140	580	1140	9.9	11.0
3.6 ¹	140	580	1140	7.3	14.0
4.0 ¹	140	580	1140	5.3	21.6
Building Insulation Blanket					
1.8	75	1200	8000	19.2	12.0
Masonry Wall Insulation					
1.0	40	580	1220	21.2	14.0
Narrow Wall Insulation					
2.2	90	380	1140	9.5	12.0
2.6 ¹	90	380	1140	7.8	20.0
Steel Wall Insulation					
2.2	90	610	1220	15.6	12.0
2.6 ¹	90	610	1220	9.7	20.0

1. Pink® Batts® Insulation products that have the Environmental Choice license.

- 4.3 Pink® Batts® insulation is pink in colour and is baled in pink polythene bags with labelling in compliance with AS/NZS 4859.1.
- 4.4 Accessories used with Pink® Batts® insulation, which are supplied by the insulation installer, are wire netting, plastic strapping and fixings.

Handling and Storage

- 5.1 Pink® Batts® insulation must be stored under cover and in dry conditions. Heavy objects must not be stacked on the bales. The bales must be stored in an orientation that avoids excessive compression of the product.
- 5.2 In general, insulation products are sensitive to the length of time they are stored in compression packaging. Product that does not recover to its nominal thickness may not achieve the stated R-value.

Technical Literature

- 6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for Pink® Batts® insulation. 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® insulation is intended for use as thermal insulation to meet the requirements of the NZBC. Pink® Batts® insulation can be used to meet the minimum schedule method R-values of NZBC Verification Method H1/VM1 or NZBC Acceptable Solution H1/AS1. Greater construction R-values can be achieved where specific design is used. For construction R-values refer to the BRANZ House Insulation Guide. Product R-values and dimensions are given in Table 1.
- 7.2 Pink® Batts® insulation is designed to be friction-fitted between wall, ceiling or roof framing. It can also be laid directly on a ceiling lining, over ceiling battens or joists/truss chords. In other horizontal situations, it must be adequately supported by galvanised wire netting or some other suitable durable material.
- 7.3 Where the insulation is installed in exterior walls, the nominal thickness of the insulation material must be selected to provide a snug close fit which touches all sides of the insulation cavity between the wall underlay and the interior wall lining.
- 7.4 Building Insulation Blanket is designed specifically for commercial roof and commercial wall applications. In residential applications, installation must be completed in line with NZS 4246.
- 7.5 When the insulation is installed in a wall with a drained cavity, it is recommended that specific wall products with a controlled nominal thickness be used. Where the stud spacings are greater than 450 mm, an intermediate means of restraining the insulation from bulging into the cavity must be installed in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.5.
- 7.6 To prevent moisture transfer and to provide roof ventilation, a separation of 25 mm minimum is required between the insulation and any rigid substrate or flexible roof underlay. Selecting specifically designed skillion roof insulation products with a controlled nominal thickness can assist with this requirement.
- 7.7 The building envelope must be constructed to ensure the insulation remains dry during installation and throughout the life of the building.
- 7.8 The clearance requirements for heating appliances and downlights must be met and reference made to the manufacturers instructions and NZS 4246. See Paragraphs 10.1 - 10.3.

Durability

Serviceable Life

- 8.1 Where the building is maintained so that provisions of NZBC Clauses E2 and E3 are met, and where the insulation is not crushed or exposed to conditions that will diminish its thermal performance (e.g. moisture), Pink® Batts® insulation can expect to have a serviceable life of at least 50 years.

Maintenance

- 9.1 Insulation that has become damp must be removed and the cause of dampness repaired. Cavities must be clean and dry before fitting new insulation of an equivalent thermal rating. NZS 4246 gives guidance on thermal insulation maintenance due to water damage.

Prevention of Fire Occurring

- 10.1 Pink® Batts® Insulation is considered a non-combustible material and need not to be separated from heat sources such as fire places, heating appliances, flues and chimneys. However, when used in conjunction with, or attached to heat sensitive materials, the heat sensitive material must be separated from fireplaces, heating appliances, flues and chimneys in accordance with the requirements of Part 7 of NZBC Acceptable Solutions C/AS1 to C/AS6 and NZBC Verification Method C/VM1.

Downlights

- 10.2 Recessed luminaires shall be of type and be installed in accordance with NZBC Acceptable Solution C/AS1 to C/AS6, Section 7.4.
- 10.3 Insulation materials must maintain a clearance of 100 mm to undefined recessed luminaires in existing buildings.

Control of Internal Fire and Smoke Spread

- 11.1 Pink® Batts® Insulation meets the requirements of AS 1530.1 and is defined as non-combustible. Unless foamed plastics building materials are also used as part of the wall or ceiling construction, there are no internal surface finish requirements in Risk Group SH in accordance with NZBC Acceptable Solution C/AS1. Refer to NZBC Acceptable Solutions C/AS2 to C/AS6 for the specific internal surface finish requirements for walls or ceilings in other Risk Groups.

External Moisture

- 12.1 The total building envelope must be weathertight and comply with the requirements of NZBC Clause E2 to ensure that the insulation remains dry in use.
- 12.2 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 10.2 (a), or a lower moisture content if required by the lining manufacturer.

Internal Moisture

- 13.1 Buildings must provide an adequate combination of thermal resistance, ventilation and space temperature to all habitable spaces, bathrooms, laundries and other spaces where moisture may be generated or may accumulate. This does not apply to Communal Non-residential, Commercial, Industrial, Outbuildings or Ancillary buildings.
- 13.2 Roofs and walls of housing complying with the Schedule Method for Compliance with Clause H1.3.2 E will have adequate thermal resistance. Other buildings may require more thermal insulation to satisfy the requirements of NZBC Acceptable Solution E3/AS1 than that to satisfy the energy efficiency provisions alone.

Energy Efficiency

- 14.1 Pink® Batts® insulation will contribute to meeting the requirements of NZBC Clause H1, Performance H1.3.1 (a) and H1.3.2 E by compliance with NZBC Verification Method H1/VM1 or NZBC Acceptable Solution H1/AS1. Refer to Paragraphs 7.1 - 7.8.
- 14.2 Pink® Batts® insulation R-values have been determined by BRANZ testing to AS/NZS 4859.1 and are given in Table 1.

Installation Information

Installation Skill Level Requirements

- 15.1 Installation of Pink® Batts® insulation must be completed by an installer with an understanding of insulation installation.

General

- 16.1 Installation of Pink® Batts® insulation must be in accordance with the Technical Literature and this Appraisal. NZS 4246 should be used as a guide for installing insulation in residential buildings.
- 16.2 The product must be installed only when the building is enclosed and when the construction materials have achieved the required maximum moisture content or less.
- 16.3 Pink® Batts® insulation 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.
- 16.4 Pink® Batts® insulation is supplied in segment and blanket form [see Table 1] to suit framing layouts. The product is able to be cut to suit wall cavities and when fitted between roof or ceiling framing. The insulation must be neatly friction-fitted between framing members so that the potential for gaps and convective heat loss is reduced. In wall cavities the insulation must be neatly friction-fitted between framing members to prevent sagging. In ceiling or roofs, the insulation may be fitted between framing members or fitted over framing members and butted tightly. The insulation must extend to the external wall top plate. The insulation must not be folded or compressed. A close even fit provides the most efficient thermal performance. Whenever possible, the insulation should be fitted beneath wiring or plumbing.
- 16.5 The clearance requirements for heating appliances and downlights must be followed. Refer also to NZS 4246.

Inspections

- 16.6 The Technical Literature, this Appraisal and NZS 4246 must be referred to during the inspection of Pink® Batts® Insulation Installations.

Health and Safety

- 17.1 Refer to the Technical Literature and NZS 4246 for guidance on health and safety requirements such as personal protective clothing and installation hazard assessment.

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® insulation in accordance with AS/NZS 4859.1.
- 18.2 Tests have been carried out in accordance with AS 1530.1. Pink® Batts® insulation is not deemed combustible according to the test criteria. The results have been reviewed by BRANZ technical experts.

Other Investigations

- 19.1 An assessment of the durability of Pink® Batts® insulation has been made by BRANZ technical experts.
- 19.2 The manufacturer's Technical Literature including installation instructions have 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® insulation 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 The range of Pink® Batts® products have been assessed for their environmental impact by the New Zealand Ecolabelling Trust and comply with the requirements of the Environmental Choice Specification, Licence No. 2504017 - Thermal [resistive type] Building Insulants. The products that have the Environmental Choice license are noted in Table 1.
- 20.3 Tasman Insulation New Zealand Ltd is responsible for the quality of the product supplied.
- 20.4 Quality of installation of the product on site is the responsibility of the installer.
- 20.5 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.
- NZS 4246: 2006 Energy efficiency - Installing insulation in residential buildings.
- BRANZ Bulletin Number 525 Preventing moisture problems in timber-framed skillion roofs.
- BRANZ House Insulation Guide, Fifth Edition 2014.
- Compliance Document for New Zealand Building Code Energy Efficiency Clause H1, Department of Building and Housing, Third Edition, October 2007 (including Amendment 2, October 2011).
- Ministry of Business, Innovation and Employment record of Amendments for Compliance Documents and Handbooks.
- The Building Regulations 1992.

Amendments

Amendment No. 1, dated 09 September 2015.

This Appraisal has been amended to update the Appraisal text, Product Range as set out in Table 1 and to update clause changes as required by the introduction of NZBC Fire Clauses C1 to C6 Protection from Fire and A3 Building Importance Levels.



In the opinion of BRANZ, **Pink® Batts® 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.
 - d) 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.
3. 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**.
4. 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.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to **Tasman Insulation New Zealand Ltd** or any third party.

For BRANZ



Pieter Burghout

Chief Executive

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