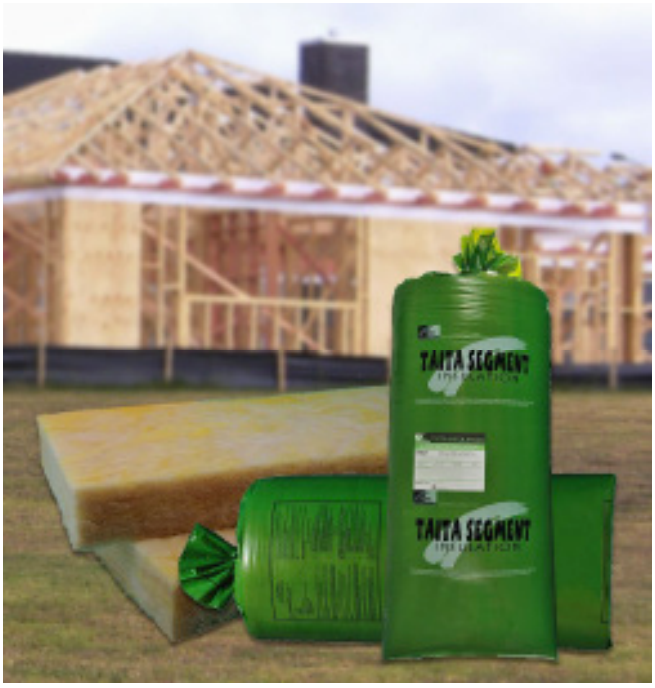
BRANZ Appraised
Appraisal No. 755 [2022]

TAITA GLASSWOOL INSULATION



Appraisal No. 755 (2022)

This Appraisal replaces BRANZ Appraisal No. 755 [2017]

BRANZ Appraisals

Technical Assessments of products for building and construction.

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Product

1.1 Taita Glasswool Insulation is a range of resin-bonded, fibrous glass wool thermal insulating material for use in walls, ceilings and roofs of buildings. Taita Glasswool Insulation is pre-cut to suit a range of suitable framing spaces.

Scope

2.1 Taita Glasswool Insulation has been appraised as a thermal insulating material for framed or part-framed walls, ceilings and roofs of domestic and commercial buildings. In bushfire prone areas, the provisions of NCC Volume Two Part 3.10.5 must be complied with.

Building Regulations

Building Code of Australia (BCA)

3.1 **In the opinion of BRANZ, Taita Glasswool 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 National Construction Code (NCC):**

NCC 2019 Building Code of Australia - Volume One (NCC Volume One)

Section J ENERGY EFFICIENCY: Performance Requirement JP1. Taita Glasswool Insulation will satisfy this requirement. See Paragraphs 13.1 and 13.5.

NCC 2019 Building Code of Australia - Volume Two (NCC Volume Two)

Part 2.6 ENERGY EFFICIENCY: Performance Requirement P2.6.1. Taita Glasswool Insulation will satisfy this requirement. See Paragraphs 13.2-13.5.

Technical Specification

4.1 Taita Glasswool Insulation is a resin-bonded, fibrous, glass wool insulation manufactured from recycled and/or virgin glass and phenol-formaldehyde resin binder. Taita Glasswool Insulation is available as set out in Table 1.

Table 1: Taita Glasswool Insulation product range.

R-value	Nominal Thickness (mm)	Length (mm)	Width (mm)	Density (kg/m³)
2.0	90	1,200	580	10
2.5 HD	90	1,200	580	20
2.7 HD	90	1,200	580	32

4.2 Taita Glasswool Insulation is yellow in colour and is packaged in plastic compression packaging with labelling in compliance with AS/NZS 4859.1.

4.3 Accessories used with Taita Glasswool Insulation, which are supplied by the insulation installer, are wire netting, plastic strapping and fixings.

Handling and Storage

5.1 Taita Glasswool Insulation 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 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 This Appraisal must be read in conjunction with:

- Taita Segment Glasswool Insulation V2 (Australia), 10 December 2015.

6.2 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 Taita Glasswool Insulation is intended for use as thermal insulation to meet the energy efficiency requirements of the BCA. Taita Glasswool Insulation can be used to meet the Deemed-to-Satisfy provisions of the BCA. Greater construction R-values can be achieved where specific design is used. Product R-values and dimensions are given in Table 1.

7.2 Taita Glasswool Insulation is designed to be friction-fitted between wall, ceiling or roof framing, or laid directly over the ceiling lining, ceiling battens or joist/truss chords. In other horizontal situations, it must be adequately supported by wire netting or some other suitable durable material.

7.3 The insulation thickness should be selected to suit the framing cavity. Taita Glasswool Insulation must not be compressed into cavities less than the insulations nominal thickness. In walls, the insulation should be a snug fit between the interior lining and the wall sarking. Support may be needed to prevent insulation encroaching into wall cavity spaces.

7.4 To prevent moisture transfer and provide roof ventilation, a separation of 25 mm minimum is required between the insulation and any rigid substrate or flexible roof sarking or underlay.

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

7.6 The clearance requirements for heating appliances and downlights must be met and reference made to the manufacturer's instructions and the BCA. See Paragraphs 10.1 and 15.6. The clearances must be taken into account in the assessment of BCA Energy Efficiency.

Durability

Serviceable Life

8.1 Where the building is maintained so that the Damp and Weatherproofing provisions of the BCA are met, and where the insulation is not crushed or exposed to conditions that will diminish its thermal performance, (e.g. moisture), Taita Glasswool Insulation can be expected to be fit for its intended purpose and have a serviceable life similar to other glass wool insulation products.

Maintenance

9.1 Insulation that has become damp must be removed and the cause of the dampness repaired. Cavities must be clean and dry before fitting new insulation of an equivalent thermal rating.

Fire Safety

10.1 The Technical Literature must be read for instructions on the required separation distances from sources of heat. The separation distances must be followed for compliance to the BCA.

10.2 Where Taita Glasswool Insulation is used in bushfire areas and not protected by non-combustible building elements, consideration must be given to the provisions of NCC Volume Two Part 3.10.5.

Damp and Weatherproofing

11.1 The total building envelope must comply with the Damp and Weatherproofing requirements of the BCA to ensure that the insulation remains dry in use.

11.2 The moisture content of the construction materials at the time of enclosing the insulation must meet the requirements of the lining manufacturer.

Internal Moisture

12.1 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.

Energy Efficiency

13.1 Taita Glasswool Insulation complies with AS/NZS 4859.1 as required by NCC Volume One Deemed-to-Satisfy Provision J1.2. Taita Glasswool Insulation satisfies NCC Volume One Performance Requirement JP1 through compliance with the Deemed-to-Satisfy Provisions of J1.1 to J1.6, where required.

13.2 Taita Glasswool Insulation complies with AS/NZS 4859.1 as required by NCC Volume Two Acceptable Construction Practice 3.12.1.1. Taita Glasswool Insulation satisfies NCC Volume Two Performance Requirement P2.6.1 through compliance with the provisions of Acceptable Construction Practice 3.12.1.1 to 3.12.1.5.

13.3 Contribution to the overall thermal performance and energy rating of houses needs to be considered. The individual thermal conductivity of the insulation contributes to the overall thermal energy rating, but thermal conductivity on its own cannot be used to determine the contribution to the overall energy rating and thermal efficiency of the house.

13.4 A thermal calculation method that complies with the ABCB Protocol for House Energy Rating Software must be used.

13.5 For details of State and Territory Variations, refer to the BCA.

Installation Information

Installation Skill Level Requirement

14.1 All design and building work must be carried out in accordance with Taita Glasswool Insulation Technical Literature and this Appraisal. All building work must be undertaken by competent and experienced tradespersons conversant with Taita Glasswool Insulation.

General

15.1 Installation of Taita Glasswool Insulation must be in accordance with the Technical Literature, and this Appraisal. AS 3999 should be used as a guide for installing insulation in residential buildings.

15.2 The product must be installed only when the building is enclosed and when construction materials have achieved the required maximum moisture content or less.

15.3 Taita Glasswool 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.

15.4 Taita Glasswool Insulation must be 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 and thermal convection. In ceilings or roofs, the insulation must be continuous across the entire roof or ceiling plane between top plates of external walls, and fitted either between or over rafters, ceiling joists or truss chords. The insulation must be butted tightly so that the potential for gaps and convection heat loss is reduced.

15.5 The insulation must not be folded, tucked or compressed. A close even fit provides the most efficient thermal performance. Wherever possible, the insulation should be fitted beneath wiring or plumbing. Electrical installation requirements must be followed.

15.6 The clearance requirements for heating appliances and downlights must be followed and reference made to the BCA, local or national safety requirements.

Inspections

15.7 The Technical Literature, this Appraisal and AS 3999 must be referred to during the inspection of Taita Glasswool Insulation installations.

Health and Safety

16.1 When handling Taita Glasswool Insulation, it is recommended that installers follow the recommendations contained in the National Code of Practice for the safe use of synthetic mineral fibres. A dust mask and eye protection is recommended when handling the product to provide protection from loose fibres and dust that may be disturbed.

16.2 Biosolubility has not been assessed for Taita Glasswool Insulation material and is outside the scope of this Appraisal.

Basis of Appraisal

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

Tests

17.1 BRANZ has carried out thermal resistance testing of Taita Glasswool Insulation in accordance with AS/NZS 4859.1.

Other Investigations

18.1 An assessment of the durability of the Taita Glasswool Insulation was made by BRANZ technical experts.

18.2 The Technical Literature has been examined by BRANZ and found to be satisfactory.

Quality

19.1 The manufacture of Taita Glasswool 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.

19.2 Taita Chemical Co Ltd is responsible for the quality of the product supplied.

19.3 Quality of installation of the product on-site is the responsibility of the installer.

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

Sources of Information

- AS 3999:2015 Bulk thermal insulation - Installation.
- AS/NZS 4859.1:2018 Thermal insulation materials for buildings.
- BRANZ House Insulation Guide, Fifth Edition 2014.
- National Construction Code, Building Code of Australia 2019, Australia Building Codes Board.

BRANZ

In the opinion of BRANZ, Taita Glasswool 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 Taita Chemical Co 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. Taita Chemical Co 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 Taita Chemical Co 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 Taita Chemical Co Ltd or any third party.

For BRANZ

Chelydra Percy
Chief Executive

Date of Issue:
12 October 2022