



BRANZ Appraised

Appraisal No. 1026 [2024]

FORMAN ROOFX THERMAL BREAK



Appraisal No. 1026 [2024]

This Appraisal replaces BRANZ
Appraisal No. 1026 [2018]

BRANZ Appraisals

Technical Assessments of
products for building and
construction.



Tasman Insulation NZ Ltd [T/A Comfortech Building Solutions]

27 Smales Road
East Tamaki
Auckland

Tel: 0800 45 4000

Web: www.comfortech.co.nz



BRANZ

BRANZ

1222 Moonshine Rd,
RD1, Porirua 5381
Private Bag 50 908
Porirua 5240,
New Zealand
Tel: 04 237 1170
branz.co.nz



Product

- 1.1 Forman RoofX is a non-structural roof thermal break manufactured from extruded foamed polystyrene.

Scope

- 2.1 Forman RoofX has been appraised for use as a non-structural thermal break for use with steel-framed pitched roof construction on buildings within the following scope:
 - subject to specific design where a thermal break is required; and,
 - situated on top of purlins under long run metal roof cladding.
- 2.2 The use of Forman RoofX for the means of demonstrating compliance to NZBC Clause H1 Energy Efficiency is outside the scope of this Appraisal.

Building Regulations

New Zealand Building Code [NZBC]

- 3.1 In the opinion of BRANZ, Forman RoofX Thermal Break, 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 B1 STRUCTURE: Performance B1.3.1, B1.3.2 and B1.3.4. Forman RoofX meets the requirements for loads arising from gravity loads and impact [i.e. B1.3.3 (b) and (j)]. See Paragraphs 8.1 and 8.2.

Clause B2 DURABILITY: Performance B2.3.1 (b) 15 years and B2.3.2. Forman RoofX meets these requirements. See Paragraphs 9.1 and 9.2.

Clause E3 INTERNAL MOISTURE: Performance E3.3.1. Forman RoofX contributes to meeting this requirement. See Paragraph 13.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Forman RoofX meets this requirement.



Technical Specification

- 4.1 Forman RoofX is manufactured from extruded foamed polystyrene. The thermal breaks are black in colour and are cut to a finished size of the purlin width plus 15 mm overhang either side, or as required. Forman RoofX is available in black in the following thicknesses: 10 mm, 15 mm, 20 mm and 30 mm.
- 4.2 Forman RoofX thermal resistance [R-value] has been determined by testing to ASTM C518 [un-aged]. The R-values are:
 - 10 mm [black] R-value 0.30.
 - 15 mm [black] R-value 0.45.
 - 20 mm [black] R-value 0.60.
 - 30 mm [black] R-value 0.91.

Handling and Storage

- 5.1 Handling and storage of Forman RoofX, whether on-site or off-site, is under the control of the building contractor. Forman RoofX must be protected from direct sunlight and physical damage, and should be stored flat and under cover.

Technical Literature

- 6.1 This Appraisal must be read in conjunction with:
 - Forman RoofX Thermal Break, Version 1, October 2018.
- 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 Forman RoofX is intended for use as a thermal break to meet the requirements of the NZBC. The 10 mm thick Forman RoofX can be used to meet the minimum R-value required for thermal breaks of 0.25 m²C/W. The other thicknesses will provide a better performance.
- 7.2 Forman RoofX is designed to create a thermal break between the steel frame and the cladding. The thermal break strips will prevent direct contact between the steel frame and the cladding, ensuring the overall thermal performance of the system is not adversely affected by thermal bridging.
- 7.3 Forman RoofX is designed to be used with long run metal roof claddings to a specific design. Roof fixings must take into account the thickness of the thermal break strips for roof fixing penetration into the supporting structure.

Structure

- 8.1 Forman RoofX must be treated as non-structural thermal breaks only.

Impact Resistance

- 8.2 Forman RoofX have adequate resistance to impact loads likely to be encountered in normal residential and commercial use. They also have adequate resistance to compressive loads likely to be encountered during fixing of the cladding. They will withstand normal foot traffic and the function of the product will not be impaired by such traffic.

Durability

- 9.1 Forman RoofX meets the performance requirements of NZBC Clause B2.3.1 [b] 15 years, provided the product is not exposed to weather or ultraviolet [UV] light for a total of more than 21 days.

Serviceable Life

- 9.2 Forman RoofX will have a durability equivalent to that of the roof cladding to meet code compliance with NZBC Clause B2.3.2, provided the cladding system is maintained in accordance with this Appraisal and the thermal breaks are continually protected from UV light.

Maintenance

- 10.1 No maintenance is required for Forman RoofX. Regular checks, at least annually, must be made of the roof cladding, flashings and penetrations to ensure that water will not penetrate the cladding.

Prevention of Fire Occurring

- 11.1 Separation or protection must be provided to Forman RoofX from heat sources such as fireplaces, heating appliances and chimneys. Part 7 of NZBC Acceptable Solution C/AS1 and NZBC Acceptable Solution C/AS2 provide methods for separation and protection of combustible materials from heat sources.

Fire Affecting Areas Beyond the Fire Source

Control of Internal Fire and Smoke Spread

- 12.1 Thermal breaks are exempted from surface finish requirements by NZBC Acceptable Solution C/AS1, Paragraph 4.2.2.1 [e] and NZBC Acceptable Solutions C/AS2, Paragraph 4.17.6 [e].

External Moisture

- 13.1 Forman RoofX must only be used under long run metal roof claddings that meet the requirements of the NZBC, such as those covered by NZBC Acceptable Solutions E2/AS1.
- 13.2 The detailing of the roof cladding system, including junctions, is the responsibility of the building designer. These details have not been assessed as part of this Appraisal.

Internal Moisture

- 14.1 Forman RoofX has an R-value of 0.3 m²C/W for the 10 mm thick product. Where a long run metal roof cladding manufacturer specifies a thermal break that complies with NZBC Acceptable Solution E3/AS1, Paragraph 1.1.1 d) as part of their system, Forman RoofX may be used. Forman RoofX must be installed over the purlins to provide a thermal break.

Installation Information

Installation Skill Level Requirement

- 15.1 Installation must always be carried out in accordance with the Forman RoofX Technical Literature and this Appraisal by, or under the supervision of, a Licensed Building Practitioner [LBP] with the relevant License Class.

System Installation

Roof Underlay Installation

- 16.1 The selected roof underlay must be installed in accordance with the underlay manufacturer's instructions, prior to the installation of Forman RoofX.

Roof Cladding

- 16.2 Long run metal roof cladding, including flashings and stop ends, must be to a specific design. Roof cladding fixing penetrations into supporting steel must be to specific design.

Thermal Breaks

- 16.3 The thermal breaks must be installed over the purlins. The Forman RoofX Thermal Breaks are taped to the top of the purlins before the underlay and roof cladding. The roof fixing screws are then screwed through the thermal break, into the purlin. The thermal breaks must be installed in continuous lengths.

Inspections

- 16.4 The Technical Literature must be referred to during the inspection of Forman RoofX installations.

Health and Safety

- 17.1 There are no specific health and safety requirements for Forman RoofX, however safe use and handling procedures for the components that make up the cladding system must be followed, in accordance with the requirements of the relevant manufacturer's Technical Literature.



Basis of Appraisal

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

Tests

- 18.1 The following testing has been completed by BRANZ:
- Forman RoofX were heat-aged and compressed to assess the structural and durability performance.
 - Thermal testing of Forman RoofX was completed.

Other Investigations

- 19.1 A durability opinion has been given by BRANZ technical experts.
- 19.2 The practicability of installation of the Forman RoofX has been assessed by BRANZ and found to be satisfactory.
- 19.3 The Technical Literature, including installation instructions, for the Forman RoofX have been examined by BRANZ and found to be satisfactory.

Quality

- 20.1 The manufacture of the Forman RoofX has not been examined by BRANZ, but details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory
- 20.2 The quality of supply to the market is the responsibility of Tasman Insulation NZ Ltd (T/A Comfortech Building Solutions).
- 20.3 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems, building underlays, flashing tapes, air seals and cladding system, in accordance with the instructions of the designer.
- 20.4 The quality of the installation, handling and storage on-site of the Forman RoofX is the responsibility of the installer.

Sources of Information

- NASH Building Envelope Solutions: 2019.
- Ministry of Business, Innovation and Employment Record of Amendments - Acceptable Solutions, Verification Methods and Handbooks.
- The Building Regulations 1992.



BRANZ Appraised
Appraisal No. 1026 (2024)

BRANZ Appraisal
Appraisal No. 1026 (2024)
13 March 2024

FORMAN ROOFX THERMAL
BREAK



In the opinion of BRANZ, **Forman RoofX Thermal Break** 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 NZ Ltd [T/A Comfortech Building Solutions]**, 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 NZ Ltd [T/A Comfortech Building Solutions]**:
 - 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 quality of work;
 - 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 NZ Ltd [T/A Comfortech Building Solutions]**.
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 NZ Ltd [T/A Comfortech Building Solutions]** or any third party.

For BRANZ

Claire Falck
Chief Executive

Date of Issue:
13 March 2024