BRANZ Appraised
Appraisal No. 1229 [2023]

THERMAKRAFT COVERTEK 215 ROOF AND WALL UNDERLAY

Appraisal No. 1229 (2023)

Amended 19 June 2025

BRANZ Appraisals

Technical Assessments of products for building and construction.

Kingspan Thermakraft

Kingspan Insulation NZ Limited
11 Turin Place
Ōtara
Auckland 2013
Free phone: 0800 806 595
Email: info@kingspaninsulation.co.nz
Web: www.thermakraft.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

WFTAO
WORLD FEDERATION OF TECHNICAL ASSESSMENT ORGANISATIONS

Product

1.1 Thermakraft Covertek 215 Roof and Wall Underlay is a non-fire-retardant, synthetic building underlay for use under roof and wall claddings.

Scope

Roof Underlay

2.1 Thermakraft Covertek 215 Roof and Wall Underlay has been appraised for use as a roof underlay on lined buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 for timber-framed buildings; or,
- the scope limitations of NASH Building Envelope Solutions, Paragraph 1.1 for steel-framed buildings; and,
- with masonry tile roof cladding; and,
- with metal tile roof cladding; and,
- with profiled metal roof cladding; and,
- situated in NZS 3604 and NASH Standard Part 2 Wind Zones up to, and including, Extra High.

Flexible Wall Underlay

2.2 Thermakraft Covertek 215 has also been appraised for use as a flexible wall underlay for lined buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 for timber-framed buildings; or,
- the scope limitations of NASH Building Envelope Solutions, Paragraph 1.1 for steel-framed buildings; and,
- with direct-fixed absorbent and non-absorbent wall claddings; or,
- with absorbent and non-absorbent wall claddings installed over an 18 mm minimum drained cavity; or,
- with masonry veneer in accordance with NZBC Acceptable Solution E2/AS1 for timber-framed buildings or NASH Building Envelope Solutions for steel-framed buildings; and,
- situated in NZS 3604 and NASH Standard Part 2 Wind Zones up to, and including, Very High; or,
- situated in NZS 3604 and NASH Standard Part 2 Wind Zones up to, and including, Extra High when used over a rigid wall underlay in accordance with NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions, Paragraph 9.1.7.2.

Specific Design

2.3 Thermakraft Covertek 215 has also been appraised for use on buildings subject to specific weathertightness design. Building designers are responsible for the building design and for the incorporation of Thermakraft Covertek 215 into their design in accordance with the declared properties and the instructions of Kingspan Insulation NZ Limited.

Building Regulations

New Zealand Building Code (NZBC)

3.1 **In the opinion of BRANZ, Thermakraft Covertek 215 Roof and Wall Underlay, if used, designed, 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, B2.3.1 (b) 15 years and B2.3.2. Thermakraft Covertek 215 Roof and Wall Underlay meets these requirements. See Paragraphs 9.1 and 9.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. When used as part of the roof or wall cladding system, Thermakraft Covertek 215 Roof and Wall Underlay contributes to meeting this requirement. See Paragraphs 12.1 and 12.2.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Thermakraft Covertek 215 Roof and Wall Underlay meets this requirement.

Technical Specification

4.1 Thermakraft Covertek 215 Roof and Wall Underlay is a synthetic building underlay for use under roof and wall claddings. The product consists of a micro-porous, water-resistant film, laminated between two layers of non-woven spun-bonded polyolefin. Thermakraft Covertek 215 Roof and Wall Underlay is coloured grey on the top face and black on the bottom face.

4.2 The product is supplied in rolls 1.35 m wide x 18.6 and 37.1 m long, and 2.70 m wide x 33.4 m long. The product is printed with the Thermakraft Covertek 215 logo repeated along the length of the roll. The rolls are wrapped in clear polythene film.

Accessories

4.3 Accessories used with Thermakraft Covertek 215 Roof and Wall Underlay which are supplied by the installer are:

- **Fixings** - stainless steel staples, clouts, screws or proprietary underlay fixings, or other temporary fixings to attach the roof underlay to the framing.
- **Wall underlay restraint (timber frame)** – polypropylene strap, 75 mm galvanised mesh or galvanised wire, or vertical cavity battens where required to restrain the wall underlay in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.5.
- **Wall underlay restraint (steel frame)** – polypropylene strap, 75 mm galvanised mesh or galvanised wire, or vertical cavity battens where required to restrain the wall underlay in accordance with NASH Building Envelope Solutions, Paragraph 9.1.9.5.
- **Thermal break sheathing (steel framing)** – in accordance with NASH Building Envelope Solutions, Paragraph 11.4.3.2.

Handling and Storage

5.1 Handling and storage of the product, whether on-site or off-site, is under the control of the installer. The rolls must be protected from damage and weather. They must be stored on end, under cover, in clean, dry conditions and must not be crushed.

Technical Literature

6.1 This Appraisal must be read in conjunction with:

- Installation Guide, Thermakraft® Covertek 215, Issue 3.0, dated May 2025.
- Product Data Sheet, Thermakraft® Covertek 215, Issue 3.0, dated May 2025.

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 Thermakraft Covertek 215 Roof and Wall Underlay is intended for use as an alternative to conventional kraft paper roof underlays, which are fixed over timber or steel-framed roofs and walls. The underlay is intended to limit the entry of wind into roof and wall cavities. For roofs, the underlay assists in the moisture management of the roof cladding system and for walls it acts as a secondary barrier to wind-driven rain. Refer to Table 1 for material properties.

Table 1: Material Properties

NZBC E2/AS1 Table 23 Underlay Properties	Roof Property Performance Requirement	Wall Property Performance Requirement	Results
Absorbency	≥ 150 g/m^2	≥ 100 g/m^2	Pass*
Vapour Resistance	≤ 7 MN s/g	≤ 7 MN s/g	Pass
Water Resistance	≥ 100 mm	≥ 20 mm	Pass
pH of Extract	≥ 6.0 and ≤ 9.0	≥ 6.0 and ≤ 9.0	Pass
Shrinkage	≤ 0.5%	≤ 0.5%	Pass
Mechanical		Edge tear and tensile strength	**Edge tear (Average):** Machine direction = 185 N Cross direction = 130 N **Tensile strength (Average):** Machine direction = 6.4 kN/m Cross direction = 4.8 kN/m
Air Barrier	Not applicable	Air resistance ≥ 0.1 MN s/m^3	Pass. Covertek 215 can be used as an air barrier

* *Evaluated for roofs by testing to section 8 of BRANZ Study Report SR 228 (2010)*

7.2 The material also provides a degree of temporary weather protection during early construction. However, the product will not make the roof weathertight and some wetting of the underlying structure is always possible before the roof cladding is installed. Hence, the entire building must be closed-in and made weatherproof before moisture sensitive materials such as ceiling linings and insulation materials are installed.

7.3 Thermakraft Covertek 215 Roof and Wall Underlay must not be exposed to the weather or ultraviolet (UV) light for a total of more than 7 days before being covered by the roof cladding, or for more than 60 days when used as a wall underlay. During use, Covertek 215 Roof and Wall Underlay must not be exposed to the building interior.

7.4 Thermakraft Covertek 215 Roof and Wall Underlay must not be used under translucent wall or roof claddings.

Timber and Steel Framing

7.5 Timber and steel framing must be provided in accordance with the requirements of the NZBC and the cladding manufacturer.

Use as a Roof Underlay

7.6 Thermakraft Covertek 215 Roof and Wall Underlay is suitable for use under roof claddings on buildings as a roof underlay in accordance with NZBC Acceptable Solution E2/AS1, Table 23 for timber-framed buildings or NASH Building Envelope Solutions, Table 23 for steel-framed buildings.

7.7 Thermakraft Covertek 215 Roof and Wall Underlay is suitable for use at roof pitches 3° and above. When used at pitches less than 10°, Thermakraft Covertek 215 Roof and Wall Underlay can be installed horizontally when spanning no greater than 1,200 mm in one direction, or it can be installed vertically when fully supported by a corrosion resistant material.

7.8 At pitches 10° and greater, Thermakraft Covertek 215 Roof and Wall Underlay can be installed vertically or horizontally and must span no greater that 1,200 mm in one direction.

7.9 At roof pitches less than 10° (minimum 3°), Thermakraft Covertek 215 Roof and Wall Underlay may be run horizontally, or vertically if installed over a roof underlay support.

7.10 Refer to Table 2 for a summary of the roof underlay support requirements.

Table 2: Roof Underlay Support Requirements

Roof Pitch	Span	Roof Underlay Support Required?	
		Horizontally Installed	Vertically Installed
10° or more	Greater than 1,200 mm	Yes	Yes
	1,200 mm or less	No	No
Less than 10° (minimum 3°)	Greater than 1,200 mm	Yes	Yes
	1,200 mm or less	No	Yes

Use as a Wall Underlay

7.11 Thermakraft Covertek 215 Roof and Wall Underlay is suitable for use under wall claddings as a wall underlay in accordance with NZBC Acceptable Solution E2/AS1, Table 23 on timber-framed buildings and NASH Building Envelope Solutions Table 23 on steel-framed buildings, including non-absorbent wall claddings such as vinyl and metal-based weatherboards in direct-fixed situations.

7.12 Thermakraft Covertek 215 Roof and Wall Underlay is suitable for use as an air barrier where walls are not lined, such as attic spaces at gable ends, in accordance with NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions, Paragraph 9.1.4 (c), but must not be exposed to the building interior.

7.13 In cavity installations where the cavity battens are installed at greater than 450 mm centres, Thermakraft Covertek 215 Roof and Wall Underlay must be restrained between the battens to prevent the underlay bulging into the cavity space when bulk insulation is installed in the wall frame cavity. Refer to NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.5 for timber framing or NASH Building Envelope Solutions, Paragraph 9.1.9.5 for steel framing. Wall underlay restraint options include polypropylene strap, 75 mm galvanised mesh or galvanised wire, or vertical cavity battens or thermal break sheathing (steel frame only).

Structure

8.1 Thermakraft Covertek 215 Roof and Wall Underlay is suitable for use in all Wind Zones of NZS 3604 and NASH Standard Part 2 up to, and including, Very High when used as a stand-alone flexible wall underlay, and all Wind Zones of NZS 3604 up to, and including, Extra High when used as an overlay for rigid wall underlays or as a roof underlay.

Durability

9.1 Thermakraft Covertek 215 Roof and Wall Underlay meets code compliance with NZBC Clause B2.3.1 (a) not less than 50 years for roof underlays used where the roof or wall cladding durability requirement or expected serviceable life is not less than 50 years, e.g. behind masonry roof tile cladding or masonry veneer. It also meets code compliance with NZBC Clause B2.3.1 (b) 15 years for roof underlays used where the roof or wall cladding durability requirement is 15 years.

Serviceable Life

9.2 Thermakraft Covertek 215 Roof and Wall Underlay is expected to have a serviceable life equal to that of the cladding. This is provided the cladding is maintained in accordance with the cladding manufacturer's instructions, the cladding remains weather-resistant and the underlay is covered by an internal lining. In addition, the product must not be exposed to the weather or UV light for a total of more than 7 days when used as a roof underlay prior to installation of the roofing. When used as a wall underlay, a total exposure of 60 days applies prior to installation of the wall cladding.

Control of Internal Fire and Smoke Spread

10.1 Thermakraft Covertek 215 Roof and Wall Underlay has an AS 1530 Part 2 flammability index of greater than 12. Kingspan Insulation NZ Limited requires that Covertek 215 Roof and Wall Underlay is covered by an internal lining in all applications.

Prevention of Fire Occurring

11.1 Separation or protection must be provided to Thermakraft Covertek 215 Roof and Wall Underlay 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.

External Moisture

12.1 Thermakraft Covertek 215 Roof and Wall Underlay must only be used under roof and wall claddings that meet the requirements of the NZBC, such as those covered by NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions, or claddings covered by a valid BRANZ Appraisal.

12.2 Thermakraft Covertek 215 Roof and Wall Underlay, when installed in accordance with the Technical Literature and this Appraisal, will assist in the total cladding system's compliance with NZBC Clause E2.

Installation Information

Installation Skill Level Requirement

13.1 All design and building work must be carried out in accordance with the Thermakraft Covertek 215 Roof and Wall Underlay Technical Literature and this Appraisal by competent and experienced tradespeople conversant with Thermakraft Covertek 215 Roof and Wall Underlay. Where the work involves Restricted Building Work (RBW), this must be completed by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant Licence Class.

Underlay Installation

14.1 Thermakraft Covertek 215 Roof and Wall Underlay must be fixed at maximum 300 mm centres to all framing members with large-head clouts 20 mm long, 6-8 mm stainless steel staples, self-drilling screws or proprietary underlay fixings. The membrane must be pulled taut over the framing before fixing.

14.2 Thermakraft Covertek 215 Roof and Wall Underlay may be installed horizontally or vertically at roof pitches 3° and above (refer to Table 2 for further guidance). It must extend from the ridge and overhang the fascia board by 20-25 mm. Vertical laps must be no less than 150 mm wide. Horizontal laps must also be no less than 150 mm, with the direction of the lap ensuring that water is shed to the outer face of the underlay. End laps must be made over framing and be no less than 150 mm wide. To assist with achieving the correct lap dimension, Thermakraft Covertek 215 Roof and Wall Underlay has a 150 mm lap line printed continuously along the top face.

14.3 When fixing the product in windy conditions, care must be taken due to the large sail area created.

14.4 Any damaged areas of Thermakraft Covertek 215 Roof and Wall Underlay, such as tears, holes or gaps around service penetrations, must be repaired. Damaged areas can be repaired by covering with new material lapping the damaged area by at least 150 mm and taping, or by taping small tears.

Inspections

14.5 The Technical Literature must be referred to during the inspection of Thermakraft Covertek 215 Roof and Wall Underlay installations.

Basis of Appraisal

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

Tests

15.1 The following tests have been carried out on Thermakraft Covertek 215 Roof and Wall Underlay in accordance with NZBC Acceptable Solution E2/AS1 and NASH Building Envelope Solutions Table 23: tensile strength, edge-tear resistance, resistance to water vapour transmission, shrinkage, resistance to water penetration, surface water absorbency and pH of extract in accordance with NZS 2295. A range of these tests were completed before and after the underlay was exposed to UV light.

15.2 Testing and evaluation was completed to determine the underlays ability to perform as a self-supporting roof underlay.

15.3 BRANZ has completed testing to evaluate the long-term corrosion potential of Thermakraft Covertek 215 Roof and Wall Underlay in contact with galvanised steel.

15.4 Testing was completed to the Surface Water No-Drip Test method contained in BRANZ Study Report SR 228.

Other Investigations

16.1 A durability opinion has been given by BRANZ technical experts.

16.2 An evaluation of the expected performance of Thermakraft Covertek 215 Roof and Wall Underlay in direct contact with metal roof cladding has been completed by BRANZ.

16.3 The practicability of installation of Thermakraft Covertek 215 Roof and Wall Underlay has been assessed by BRANZ and found to be satisfactory.

16.4 The Technical Literature, including installation instructions, has been examined by BRANZ and found to be satisfactory.

Quality

17.1 The manufacture of Thermakraft Covertek 215 Roof and Wall Underlay has not been examined by BRANZ, but details of the quality and composition of the materials used were obtained and found to be satisfactory. BRANZ undertakes an ongoing review of product quality on an inwards goods basis

17.2 The quality of supply to the market is the responsibility of Kingspan Insulation NZ Limited.

17.3 Building designers are responsible for the design of the building, and for the incorporation of the underlay into their design in accordance with the instructions of Kingspan Insulation NZ Limited.

17.4 Quality of installation is the responsibility of the installer in accordance with the instructions of Kingspan Insulation NZ Limited.

Sources of Information

- BRANZ Study Report SR 228 (2010) Study of the Moisture Management Properties of Roof Underlays.
- NASH Building Envelope Solutions:2019 Light steel-framed buildings.
- NASH Standard Part Two:2019 Light steel-framed buildings.
- NZS 2295:2006 Pliable, Permeable Building Underlays.
- NZS 3604:2011 Timber-framed buildings.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

Amendments

Amendment No. 1, dated 19 June 2025

This Appraisal has been amended to include use as a wall underlay, to update the Technical Literature, Table 1 and the fire statements. It has also been updated to add a requirement that the product must be covered by an internal lining in all installations.

BRANZ

In the opinion of BRANZ, Thermakraft Covertek 215 Roof and Wall Underlay 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 Kingspan Insulation NZ Limited, 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. Kingspan Insulation NZ Limited:
   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 Kingspan Insulation NZ Limited.
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 Kingspan Insulation NZ Limited or any third party.

For BRANZ

Chelydra Percy
Chief Executive

Date of Issue:
18 January 2023