

## ONE WRAP SYSTEM

- 12 Products
- One System
- One BRANZ Appraisal
- One Warranty
- One Product Statement



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**BRANZ Appraised**  
Appraisal No.962 [2017]



# Thermakraft One Wrap System



## Introduction

Thermakraft Ltd has over 30 years of experience in providing Flexible roof and wall underlay solutions for the New Zealand building industry, products have been developed to satisfy the requirements of the various stakeholders in the industry. Designers, builders, homeowners and the regulators. With knowledge of the market and confidence in the products, Thermakraft has taken the step of having a System Appraisal to compliment the individual products appraisals this ensures compatibility and suitability of the Thermakraft products and system, with a full warranty back up.

## Products and overview

The Thermakraft flexible wall membrane system is a multi-product integrated system designed to assist with the passive control of air and moisture in buildings constructed in compliance with NZS3604:2011 and the requirements of all relevant compliance documents. (see Scope section)  
The products specified in the system are all compatible and comply with the relevant Performance Requirements of the NZBC. When installed as intended Thermakraft offers a full System Warranty.

The products covered by this system.

## SECTION 1

### Flexible Wall underlays



#### Watergate Plus 295

BRANZ Appraisal 695 [2017]

For all wall systems.

Watergate Plus is a fire retardant, flexible synthetic wall underlay for use under direct fixed and non-direct fixed wall cladding on timber and steel framed buildings. The product is manufactured from coated, non-woven polyolefin and is coloured white.



#### Steelwrap 290

BRANZ Appraisal 867[2016]

Ideal for steel frame construction.

Steelwrap 290 is a fire retardant, flexible synthetic wall underlay for use under direct fixed and non-direct fixed wall cladding on timber and steel framed buildings. The product consists of a micro-porous water resistant film ultrasonically bonded to a layer of non-woven polyolefin and is coloured white.



#### Thermakraft 220

BRANZ Appraisal 912 [2016]

Ideal for Timber framing.

Thermakraft 220 is a fire retardant, flexible synthetic wall underlay for use under direct fixed and non-direct fixed wall cladding on timber framed buildings. The product is manufactured from non-woven, spun bonded polypropylene and is coloured white.



#### Covertex 403 Plus

BRANZ Appraisal 918 [2016]

Suitable for roof and wall use.

Covertex 403 Plus is a fire retardant, flexible synthetic wall underlay for use under direct fixed and non-direct fixed wall cladding on timber and steel framed buildings. The product consists of a micro-porous water resistant film ultrasonically bonded between two layers of non-woven polyolefin and is coloured white.

### Window Flashing Tape

#### Aluband (Bituminous)

BRANZ Appraisal 878 [2014]

Thermakraft Aluband Window Flashing Tape in conjunction with the Thermakraft Corner moulded Piece is a flexible flashing tape system for use around framed joinery openings as a secondary weather resistant barrier. The system is installed into and around the framed joinery opening over the wall underlay and exposed frame to cover both the face and edge of the opening framing. Thermakraft Aluband Window Flashing tape is also used at joinery heads to seal flashing upstands to the wall underlay.

#### Aluband Acrylic

BRANZ Appraisal 919 [2016]

A high strength acrylic adhesive with a foam core that accommodates imperfections on the frame surface. Aluband Acrylic is ideal where solvent based adhesives and sealants may be present.

Thermakraft Aluband Acrylic Window Flashing Tape in conjunction with the Thermakraft Corner moulded Piece is a flexible flashing tape system for use around framed joinery openings as a secondary weather resistant barrier. The system is installed into and around the framed joinery opening over the wall underlay and exposed frame to cover both the face and edge of the opening framing. Thermakraft Aluband Window Flashing tape is also used at joinery heads to seal flashing upstands to the wall underlay.

#### Aluband Xtreme

BRANZ Appraisal 947 [2017]

Aluband Xtreme has a high strength Co-polymer adhesive on a strong thin section tape ideally suited in tight fitting window installations. Aluband Xtreme is ideal where solvent based adhesives and sealants may be present.

Thermakraft Aluband Xtreme Window Flashing Tape in conjunction with the Thermakraft Corner moulded Piece is a flexible flashing tape system for use around framed joinery openings as a secondary weather resistant barrier. The system is installed into and around the framed joinery opening over the wall underlay and exposed frame to cover both the face and edge of the opening framing. Thermakraft Aluband Xtreme Window Flashing tape is also used at joinery heads to seal flashing upstands to the wall underlay.

### Pipe and Cable Seals

#### Thermakraft Multi-fit cable and pipe seals

BRANZ Appraisal 942 [2016]

Manufactured from UV resistant EDPM material, with a strong acrylic adhesive tape. Designed to form an airtight seal on pipes, cables and other penetrations through underlays, Thermakraft Multi-Fit Pipe seals have pre-punched markings suitable for a range of sizes.

Associated, Non Appraised Products

### Underlay strap

For underlay support and restricting bellowing of wall underlays.

**Thermastrap** Polypropylene woven strap 25mm.

**Thermakraft Stud Strap 201** Polythene strap 19mm.

### Joining and Repair Tape

**White General purpose tape** A polypropylene tape with an acrylic adhesive 60mm x 66m.

**Thermakraft Xtreme Tape** Co-polymer adhesive tape designed for use in extreme conditions with excellent performance in joining, sealing and repairing underlays.

## SECTION 2

### Technical Literature

Refer to the cited BRANZ appraisals for individual product code compliance information.

[www.branz.co.nz/Appraisals](http://www.branz.co.nz/Appraisals)

Refer to the Thermakraft website [[www.thermakraft.co.nz](http://www.thermakraft.co.nz)] for details of the current Technical Literature for product information. The Technical Literature must be read in conjunction with the BRANZ appraisal. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

The above products are intended to be installed in accordance with the Thermakraft installation instructions (see appendix 2).

## SECTION 3

**Scope** (see product Technical data sheets for individual suitability refer [www.thermakraft.co.nz](http://www.thermakraft.co.nz))

**2.1** The Thermakraft One Wrap System has been developed for use as a flexible wall underlay system on timber and steel framed buildings within the following scope:

- » the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and floor plan area; and,
- » with direct fixed absorbent wall claddings; or,
- » with direct fixed non-absorbent wall claddings (for Watergate Plus, Steelwrap 290 and Covertek 403 Plus wall underlays), or direct fixed non-metallic, non-absorbent wall claddings (Thermakraft 220), or,
- » with absorbent and non-absorbent wall cladding 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 specific design for steel framed building; and,
- » situated in NZS 3604 Wind Zones up to and including Very High.

**2.2** The Thermakraft One Wrap System has been appraised for use as a flexible wall underlay system over rigid wall underlays on timber and steel framed buildings within the following scope:

- » the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards building height and floor plan area; and,
- » 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 specific design for steel framed buildings; and,
- » situated in NZS 3604 Wind Zones up to and including Extra High.

**2.3** The Thermakraft One Wrap System is also suitable for use on buildings subject to specific weather tightness design. Building designers are responsible for the building design and for the incorporation of the Thermakraft One Wrap system into their design in accordance with the declared properties and the instructions of Thermakraft Limited.

## SECTION 4

### Building regulations

**3.1** The Thermakraft One Wrap System, if used, designed, installed and maintained in accordance with the statements and conditions of this system, 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. the Thermakraft One Wrap System meets these requirements.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. When used as part of the cladding system, Thermakraft One Wrap System will contribute to meeting this requirement.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. The Thermakraft One Warp System meets this requirement and will not present a health hazard to people.

### Technical

The Thermakraft One Wrap System is a selection of Thermakraft products that when used in accordance with good design, correct product selection and installation will contribute to meeting the requirements of the NZ Building Code. The products included in the system are as noted above in section 1.

### Limitations and conditions

1. Installation must always be carried out in accordance with the Thermakraft Technical literature and the BRANZ Appraisals by or under the supervision of a Licensed Building Practitioner with the relevant License Class.
2. The products must be handled and stored, whether on or off site, under the control of the installer. The products must be protected from damage and weather. They must be stored on end, under cover, in clean, dry conditions and must not be crushed.

## APPENDIX 1: PRODUCT SUITABILITY TABLE - TABLE 1

Application	Watergate Plus 295	Steelwrap 290	Thermakraft 220	Covertex 403Plus
Timber Framing	Y	Y	Y	Y
Steel framing	Y	Y	<b>X</b>	Y
NZBC 3604 Wind zone (up to and including)	1. Very High, when used as a standalone flexible underlay 2. Extra High, when used in conjunction with a Rigid wall underlay.			
Suitable with a Drained cavity	Y	Y	Y	Y
Suitable to Direct fix behind				
Timber	Y	Y	Y	Y
PVC	Y	Y	Y	Y
Profiled metal	Y	Y	<b>X</b>	Y
Suitable as an Air Barrier	Y	Y	<b>X</b>	Y
Fire retardant	Y	Y	Y	Y
Suitable with				
Aluband (bituminous)	Y	Y	Y	Y
Aluband Acrylic	Y	Y	Y	Y
Aluband Xtreme	Y	Y	Y	Y
Penetration seals	Y	Y	Y	Y
Y= Suitable X= Not suitable The above is a reference guide See product data sheets for individual details approvals and compliances.				

### Maximum exposure time prior to cladding

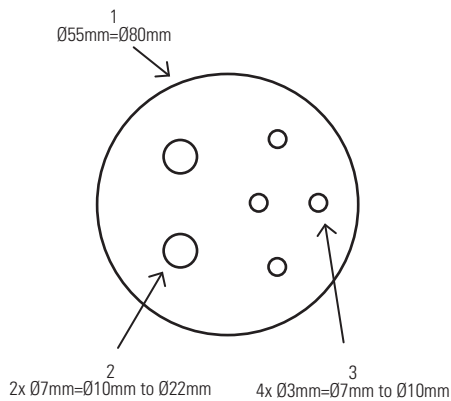
Product	Watergate Plus 295	Steelwrap 290	Thermakraft 220	Covertex 403 Plus	Aluband (Bituminous)	Aluband Acrylic/ Xtreme
Max days exposure	60 days	42 days	42 days	42 days	42 days	90 days

## APPENDIX 2: INSTALLATION AND APPLICATION INSTRUCTIONS

### MULTI-FIT PIPE AND CABLE SEALS

#### Installation

- » Thermakraft seals are installed directly on the building underlay and do not require any special tools.
- » Thermakraft seals are self-adhesive and installed without any need for sealing, glue, jointing or tape.
- » Rectangular penetrations must be sealed using tape between the pipe and seal.
- » Surfaces to be clean, dust free and dry prior adhesion.
- » Ensure the correct size opening is selected see size table.
- » Install in a diamond pattern to ensure ease of water run off.
- » Due to the high strength adhesive ensure correct positioning prior to adhering to the surface.

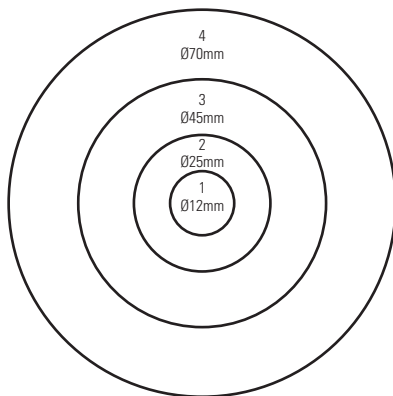


Markings for Thermakraft Multi-fit Cable Seal

1	Ø55 mm fits a Ø80 mm electrical box.
2	2 pcs Ø7 mm fits Ø10 mm to Ø22 mm cables.
3	4 pcs Ø3 mm fits Ø7 mm to Ø10 mm cables.

#### NOTE

- a. The pipe or cable must be a tight fit in the pre-punched hole.
- b. Care to be taken when removing the required section to prevent damage to the seal.



Markings for Thermakraft Multi-fit Pipe Seal

1	Ø12 mm fits round pipes from Ø15 to Ø25 mm
2	Ø25 mm fits round pipes from Ø40 to Ø60 mm
3	Ø45 mm fits round pipes from Ø60 to Ø90 mm
4	Ø70 mm fits round pipes from Ø90 to Ø110 mm

Remove the required section, ensure the section is as per the sizing chart.

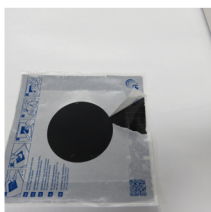
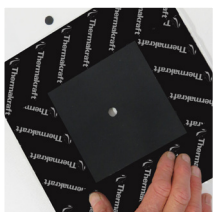
Tear once across the backing paper, place over the pipe or cable, and push to the underlay.

Position seals in a diamond shape. Care to be taken to position the seal correctly.

From the pre torn section carefully peel back the backing and work onto the underlay.

Smooth all sides to ensure a strong adhesion.

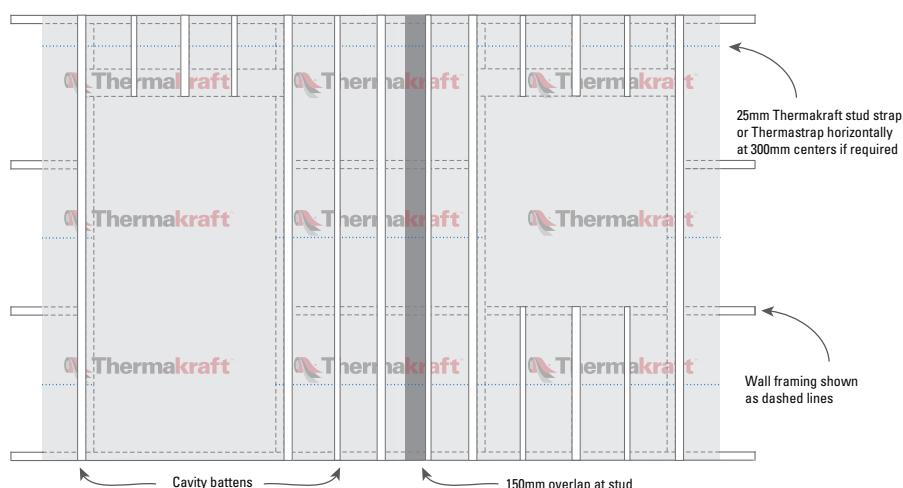
Installation is complete.



# THERMAKRAFT WALL UNDERLAY

## Installation

1. Fix underlay with printed side facing the exterior.
2. Fix to all exterior walls from below bearers to the top plate. Pull the underlay tight and fix securely to the frame with fasteners such as galvanized Little Grippers, 6mm-8mm staples or 20mm large head galvanized clouts at 300mm centres horizontally and vertically. Additional fasteners should be used around each opening to be cut out.
3. Thermakraft underlays are available in two widths 2740mm and 1370mm. The 2740mm is generally wide enough to come from below the bottom plate to the top plate.
4. When fixing underlay to steel framing the same procedures applies, use adhesive spray, tape or flat head screws to fasten to the framing or thermal break, the exterior cladding fastenings will act as the permanent fixings.
5. Cover all windows and door openings with underlay.
6. It is recommended that the wall underlay is not cut and prepared for window installation until the arrival of the windows.
7. A minimum of 150mm lap is required at joins, all vertical laps must be made over studs. Horizontal laps to be laid ship lap style allowing water to be shed to the outer face of the membrane.
8. When windows and doors are ready for installation, the underlay covering the openings should be cut at 45 degrees and folded into the opening and securely fastened.
9. NB. In accordance with NZBC Acceptable Solution E2/AS1 Paragraph 9.1.8.5, wall wrap must be prevented from bulging into the drained cavity. Where stud spacing is greater than 450mm Thermakraft stud strap run horizontal at 300 centres is an acceptable means of prevention.
10. Once installed Thermakraft underlays may be left exposed to the weather (refer table below for Maximum time). Thermakraft underlays will provide temporary weather protection during construction allowing work to continue. Internal linings and insulation must not be installed until the exterior cladding is completed.
11. Fastenings behind Brick Veneer Cladding must have an equivalent service life to that of Brick Veneer (50 years). Refer to NZBC 3604 Table 4.1, and 4.3.
12. Make good any forced tears with Thermakraft White GP tape. Any large areas which require repair may be covered with a second layer of underlay, a lap of 150mm is required.



## Exposure time

Product	Watergate Plus 295	SteelWrap 290	Thermakraft 220	Covertex 403Plus
Max Days exposure	60	42	42	42

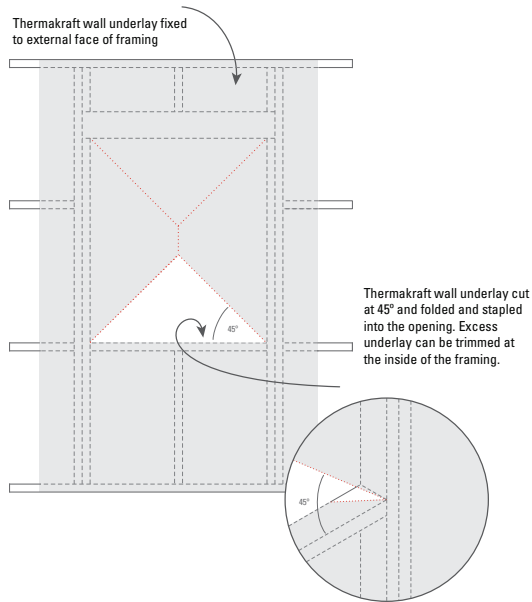
## Handling and Storage

- » Due to the width of the sheets care should be taken when installing in windy conditions due to the large sail effect.
- » Store in clean dry conditions, not in direct sunlight.
- » Ensure rolls are not damaged.
- » There are no environmental issues associated with the use of Thermakraft underlays.

# WINDOW FLASHING TAPE

## Installation

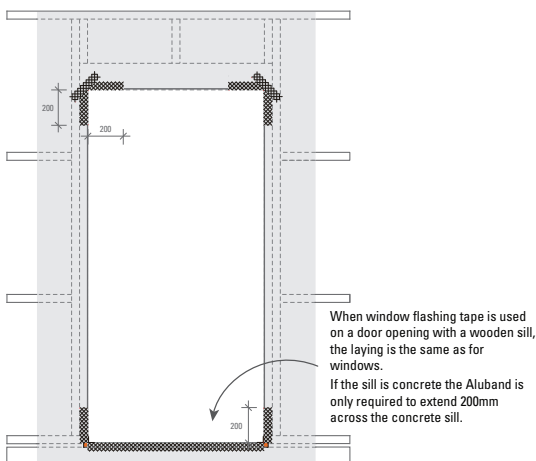
1. Cut the wall underlay/air barrier at a 45° angle away from each corner. Fold flaps tightly into the window or door opening and fix with staples on the back faces of the framing.



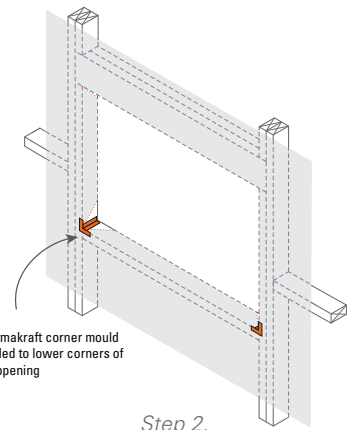
Step 1.

3. Cut a length of Thermakraft window flashing tape the length of the sill plus 400mm.
4. The tape is installed flush with the interior face of the opening and applied to the full length of the opening and 200mm up the jamb.
5. Using the Thermakraft Tool, firmly press the tape onto the wall underlay to ensure good adhesion and ensure the tape is fitted tightly into the jamb to sill corners.
6. At the sill/jamb corners cut the tape from the external edge of the frame outwards. Fold flaps back onto the wall underlay/air barrier and press tape firmly for good adhesion.
7. Proceed to fit the Window Flashing Tape to the top corners of the frame (200mm across lintel x 200mm down jamb).
8. For window or door lintel to jamb junction, apply a butterfly using the 75mm wide x 100mm long Aluband. Fix at a 45° angle to the jamb with an overlap at the corner of 3mm.

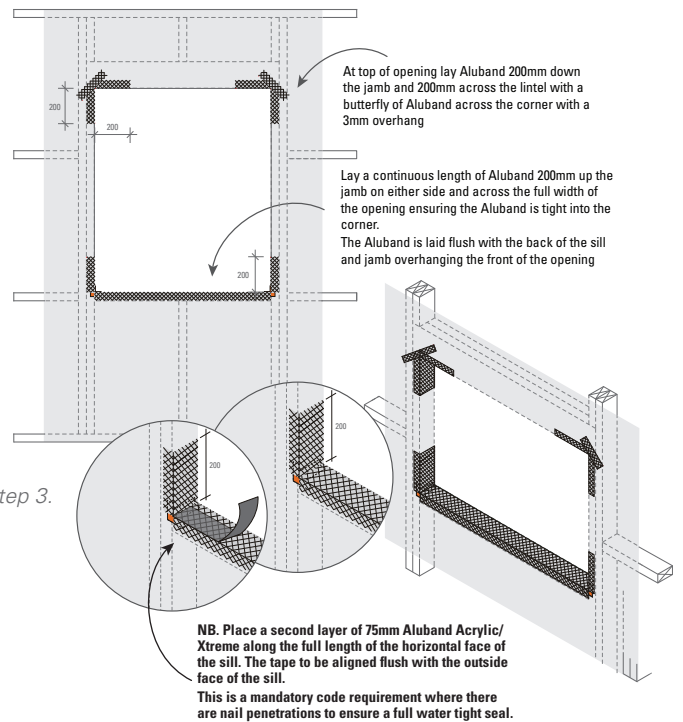
Step 9.



2. Fix the Thermakraft Corner Moulded Piece to the bottom corners by way of staples or clouts to the two jambs. Always ensure that Aluband is applied to surfaces that are clean and free of dust, contaminants, solvents, oils or waxes. Note the following: 150mm wide tape is used for 100mm wide window or door framing, and the 200mm wide tape is used for 140mm to 150mm wide framing. (With steel framed houses use Double Sided Tape to attach the Thermakraft Aluband Corner Moulded Piece to metal framing).



Step 2.



Step 3.

9. When a Thermakraft Corner Moulded Piece is not being used a 75mm x 100mm long sealing tape "butterfly" must be installed at 45° across the corner of the sill/jamb junction overlapping the corner by 3mm to create a seal at the corner junction.
10. Door frames are to be treated similarly to window openings. The sill may be either a timber or a concrete floor.  
Window and door frames
  - a) Staple orange corner piece to the bottom corner sill. Place tape 200mm up the jambs and across the full width of the sill opening. Align tape with the back of the frame opening.
  - b) At the top corner place tape 200mm down the jamb and 200mm across the lintel. Place a strip of 75mm tape across the top corner.
11. Meter boxes with built-in flanges to be taped with Window Flashing Tape along each flange to the building underlay.
12. Window Flashing Tape is used to seal the up stand of the window head flashing to the building underlay. (Refer to the cladding manufacturer's details).



For additional details and latest specifications [www.thermakraft.co.nz](http://www.thermakraft.co.nz)



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## INTELLIGENT MEMBRANES FOR THE BUILDING INDUSTRY

The recommendations contained in Thermakraft's literature are based on good building practice, but are not an exhaustive statement of all relevant information and are subject to any conditions contained in the Warranty. All product dimensions and performance claims are subject to any variation caused by normal manufacturing process and tolerances. Furthermore, as the successful performance of the relevant system depends on numerous factors outside the control of Thermakraft (for example quality of workmanship and design), Thermakraft shall not be liable for the recommendations in that literature and the performance of the Product, including its suitability for any purpose or ability to satisfy the relevant provisions of the Building Code, regulations and standards. Literature subject to change without notification. Latest documentation can be found on the website.