

Date of Issue: 17 February 2022 Expiry Date: 17 February 2025

## CERTIFICATE HOLDER

## Thermakraft<sup>\*</sup>

#### Thermakraft Limited

11 Turin Place East Tamaki Auckland, 2013 New 7ealand

0800 806 595

Email: info@thermakraft.co.nz www.thermakraft.co.nz

## Client signature

William Lin

Customer Name William Lin Customer Position Head of Engineering and Inventory Thermakraft Limited

### CERTIFICATION BODY



#### **BRANZ Limited**

1222 Moonshine Rd. RD1. Porirua 5381 Private Bag 50 908 Porirua 5240, New Zealand

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Chelydra Percy

Chief Executive Officer **BRANZ Limited** 

# PRODUCT CERTIFICATE

## THIS IS TO CERTIFY WATERGATE PLUS WALL UNDERLAY

## **KEY INFORMATION**

## 1. DESCRIPTION OF BUILDING METHOD OR PRODUCT

Watergate Plus is a white coloured flexible synthetic wall underlay. The product is printed with the Watergate Plus logo repeated along the length of the roll.

## 2. USE OF BUILDING METHOD OR PRODUCT

- 2.1 Watergate Plus is for use as a flexible wall underlay for 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 wall claddings, or with wall claddings installed over a drained cavity; or,
  - with masonry veneer in accordance with NZBC Acceptable Solution E2/AS1 for timber framed buildings or in accordance with NASH Building Envelope Solutions for steel framed buildings; and,
  - situated in NZS 3604: 2011 Wind Zones up to and including Very High when fixed directly to framing, and Extra High when fixed over a rigid air barrier.
- 2.2 Watergate Plus is also for use:
  - as an air barrier in accordance with NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions Paragraph 9.1.4 [c]; or,
  - as a non-rigid backing material for stucco plaster in accordance with the requirements of NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions, Paragraph 9.3.5.1, or;
  - · as a slip layer over a rigid backing for stucco cladding in accordance with NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions, Paragraph 9.3.3.1 (b).

## 3. COMPLIES WITH THE FOLLOWING PROVISIONS OF THE NEW ZEALAND BUILDING CODE (NZBC)

Clause B2 DURABILITY: Performance B2.3.1 [a], not less than 50 years (for when the cladding durability requirement is not less than 50 years), B2.3.1 [b], 15 years (for when the cladding durability requirement is 15 years) and B2.3.2 (a).

Clause C3 FIRE AFFECTING AREAS BEYOND THE FIRE SOURCE: Performance C3.4 [c].

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2 [contributes to], E2.3.5 [contributes to] and E2.3.7.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1.



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The Certificate Holder must maintain compliance with the conditions set out in Regulation 15 of the Building (Product Certification) Regulations 2008

This Certificate is issued by BRANZ Limited, an independent certification body accredited by the product certification body appointed by the Chief Executive of the Ministry of Business, Innovation and Employment (MBIE) under the Building Act 2004. MBIE does not in any way warrant, quarantee or represent that the building method or product the subject of this certificate conforms with the New Zealand Building Code, nor accept any liability arising out of the use of the building method or product. MBIE disclaims, to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the building method(s) or products(s) referred

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Information regarding BRANZ's complaints process can be found at the following link: Complaints Process

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## 4. CONDITIONS AND LIMITATIONS OF USE

- Watergate Plus Wall Underlay must not be exposed to the weather or ultra violet light for more than 90 days before being covered by the wall cladding.
- Framing studs must be at a maximum of 600 mm centres. Timber framing must be in accordance with NZS 3604: 2011 or to a specific design. Steel framing must be in accordance with NASH Standard Part Two: May 2019.

## 5. HEALTH AND SAFETY INFORMATION

Watergate Plus is a synthetic wall underlay. The supplier's instructions and typical practices for working with and handling synthetic wall underlays should be observed.

## 6. REFERENCE DOCUMENTS

- 6.1 This Product Certificate must be read in conjunction with:
  - BRANZ Appraisal No. 695 Watergate Plus Wall Underlay.
  - Technical Literature: Product Data Sheet Watergate Plus, Issue 9, dated September 2021; and,
  - Technical Literature: Installation Guide Watergate Plus, Issue 4, dated September 2021.

## SCHEDULE: INFORMATION THAT SUPPORTS KEY INFORMATION

## 7. SUPPORTING INFORMATION ABOUT DESCRIPTION OF THE BUILDING METHOD

### PRODUCT SPECIFICATION

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- Watergate Plus is for use as a flexible wall underlay fixed over timber or steel framed walls to limit the entry of wind into building cavities, and to act as a secondary barrier to wind-driven rain.
- 7.2 Watergate Plus is suitable for use under wall claddings as a wall underlay as called up in NZBC Acceptable Solution E2/AS1 Table 23 for timber framed buildings and NASH Building Envelope Solutions Table 23 for steel framed buildings. This includes non-absorbent wall claddings such as vinyl and metal-based weatherboards in direct fixed situations.
- Watergate Plus is a synthetic building underlay manufactured from a film coated, non-woven, laminated flexible synthetic fabric. Watergate Plus is coloured white on the top and bottom faces and is printed with the Watergate Plus logo, and can also be co-branded with custom printing.
- The product is supplied in rolls 1.370 m wide x 18.5 m, 37.0 m and 73.0 m long; 2.740 m wide x 18.5 m and 36.5 m long. The rolls are wrapped in clear polythene film.

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## Chief Executive Officer **BRANZ Limited**

## TABLE 1: NZBC E2/AS1 TABLE 23 (NZS 2295:2006) REQUIREMENTS

NZBC E2/AS1 Table 23 (NZS 2295: 2006) Wall Underlay Properties	Property Performance Requirement	Actual Property Performance
Vapour Resistance	≤ 7 MN s/g	Pass
Absorbency	≥ 100 g/m²	Pass
Water Resistance	≥ 20 mm	Pass
pH of Extract	≥ 6.0 and ≤ 9.0	Pass
Shrinkage	≤ 0.5%	Pass
Mechanical	Edge tear and tensile strength	Edge tear (Average):  Machine direction = 77 N (Note 1)  Cross direction = 56 N (Pass)  Tensile strength (Average):  Machine direction = 2.5 kN/m (Pass)  Cross direction = 1.8 kN/m (Pass)
Flammability Index	≤ 5	Fire retardant
Air Resistance	≥ 0.1 MN s/m³	Pass

Note 1: Pass of BRANZ criteria for edge tear resistance.

## 8. SUPPORTING INFORMATION ABOUT INTENDED USE OF THE PRODUCT

## **DESIGN REQUIREMENTS**

Separation or protection must be provided to Watergate Plus Wall Underlay from heat sources such as fire places, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1, C/AS2 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

## INSTALLATION REQUIREMENTS

- Installation must be carried out in accordance with the following:
  - Technical Literature: Product Data Sheet Watergate Plus, Issue 9, dated September 2021; and,
  - Technical Literature: Installation Guide Watergate Plus, Issue 4, dated September 2021.
  - NZBC Acceptable Solution E2/AS1; or

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## MAINTENANCE REQUIREMENTS

8.3 No maintenance can be performed on Watergate Plus once the cladding is installed.

#### **BUILDING CODE**

**B1 STRUCTURE** 

8.4 Watergate Plus is suitable for use in all Wind Zones of NZS 3604: 2011 up to, and including, Very High when used as a stand-alone flexible wall underlay and all Wind Zones of NZS 3604: 2011 up to, and including, Extra High when used as an overlay for rigid building underlays.

**B2 DURABILITY** 

8.5 Watergate Plus meets code compliance with NZBC Clause B2.3.1 (a), not less than 50 years for building underlays used where the cladding durability requirement or expected serviceable life is not less than 50 years, e.g. behind masonry veneer, and code compliance with NZBC Clause B2.3.1 (b), 15 years for building underlays used where the cladding durability requirement is 15 years. Watergate Plus is expected to have a serviceable life equal to that of the cladding.

C3 FIRE AFFECTING AREAS BEYOND THE FIRE SOURCE

8.6 Watergate Plus has an AS 1530 - 1993 Part 2 flammability index of not greater than 5 and therefore meets the requirements of NZBC Acceptable Solution C/AS2, Paragraph 4.17.8 b) for suspended flexible fabric used as an underlay to exterior cladding that is exposed to view in occupied spaces.

E2 EXTERNAL MOISTURE

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8.7 Watergate Plus must be used behind claddings that meet the requirements of the NZBC, such as those covered by NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions.

## 9. SUPPORTING INFORMATION ABOUT CONDITIONS AND LIMITATIONS OF USE

9.1 All conditions and limitations provided as stated in this Product Certificate.

## 10. BASIS FOR CODEMARK CERTIFICATION

- 10.1 The following tests have been carried out on Thermakraft Watergate Plus Wall Underlay in accordance with NZBC Acceptable Solution E2/AS1, Table 23:
  - tensile strength, edge-tear resistance and resistance to water vapour transmission in accordance with AS/NZS 4200.1: 1994
  - shrinkage in accordance with AS/NZS 4201.3:1994
  - resistance to water penetration in accordance with AS/NZS 4201.4: 1994
  - surface water absorbency in accordance with AS/NZS 4201.6: 1994
  - pH of extract in accordance with AS/NZS 1301.421s: 1998
  - air resistance to BS 6538.3:1987.
- 10.2 Ultraviolet (UV) light ageing of wall underlays is a critical evaluation requirement to verify a products continued performance after site construction exposure. UV aging of Watergate Plus equivalent to 90 days construction site exposure was completed and the range of tests detailed above were repeated after aging.
- 10.3 The Flammability Index of Thermakraft Watergate Plus Wall Underlay has been tested in accordance with AS 1530.2 1993.
- 10.4 BRANZ Expert Judgement (Materials Scientist) confirmation of compliance to the NZBC Clause B2 Durability Performance Requirements.
- 10.5 The practicability of installation of Thermakraft Watergate Plus Wall Underlay has been assessed by BRANZ and found to be satisfactory.

The Certificate Holder must maintain compliance with the conditions set out in Regulation 15 of the Building (Product Certification) Regulations 2008

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Chelydra Percy Chief Executive Officer BRANZ Limited 10.6 The referenced Technical Literature has been examined by BRANZ and found to be satisfactory.

## 11. RESPONSIBILITIES FOR USE OF CERTIFIED PRODUCT

- The quality of supply to the market is the responsibility of Thermakraft Limited.
- Building designers are responsible for the design of the building, and for the incorporation of the wall underlay into their design in accordance with the instructions of Thermakraft Limited.
- · Quality of installation is the responsibility of the installer in accordance with the instructions of Thermakraft Limited.

## 12. DOCUMENTATION SUPPORTING CERTIFICATION

- AS 1530.2 1993 Test for flammability of materials.
- · AS/NZS 1301.421s: 1998 Determination of the pH value of aqueous extracts of paper, board and pulp cold extraction method.
- AS/NZS 4200.1: 1994 Pliable building membranes and underlays materials.
- AS/NZS 4201.1: 1994 Pliable building membranes and underlays Methods of test Resistance to dry delamination.
- · AS/NZS 4201.2: 1994 Pliable building membranes and underlays Methods of test Resistance to wet delamination.
- AS/NZS 4201.3: 1994 Pliable building membranes and underlays Methods of test Shrinkage.
- AS/NZS 4201.4: 1994 Pliable building membranes and underlays Methods of test Resistance to water penetration.
- AS/NZS 4201.6: 1994 Pliable building membranes and underlays Methods of test Surface water absorbency.
- ASTM E96: 2005 Standard test methods for water vapor transmission of materials.
- ASTM G155:2013 Standard practice for operating xenon arc light apparatus for exposure of non-metallic underlays.
- BS 6538.3: 1987 Method for determination of air permeance using the Garley apparatus.
- 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.
- TAPPI T470:1986 Edge tearing resistance of paper [Edge-tear stirrup method]
- · Ministry of Business, Innovation and Employment Record of amendments Acceptable Solutions, Verification Methods and handbooks.
- · The Building Regulations 1992.

## 13. CONDITIONS RELATING TO NOTIFICATION

- 13.1 The certificate holder Thermakraft Ltd must notify the product certification body [BRANZ] in writing, of any intended change to any of the following particulars:
  - The name, address, or contact details of the certificate holder;
  - Any address of a location where a certified product is produced or manufactured.
- 13.2 The certificate holder shall notify the Product Certification body in writing of any intended change, modification, or alteration to any of the following:
  - The certified building method or product;
  - The method of its production or manufacture;
  - The Product Quality Plan prepared in respect of the certified building method or product;

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- The application or installation instructions for the certified building method or product;
- · Any documentation relating to the use and maintenance of the certified building method or product.
- 13.3 If the certificate holder has any reason to suspect that the certified building method or product does not comply with the Building Code, the certificate holder shall notify the product certification body in writing of the reason for that suspicion.
- 13.4 If the certificate holder or the product certification body finds that a certified building method or product that has been released on the market does not comply with the Building Code, the certificate holder shall disclose that fact in a published disclosure statement in a form that is acceptable to the product certification body and to MBIE.
- 13.5 If the certificate is suspended or revoked, the certificate holder—
  - · Shall notify all customers to whom the building method or product is regularly supplied; and
  - · Immediately cease using the certificate, the mark of conformity, and any reference to the number of this certificate.

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