

Certificate no: CMNZ10002

Version: 03

Original issue date: 11 January 2019

Version date: 07 March 2025

1. Certificate Holder Details



Thermakraft

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2. Product Certification Body

BRANZ Limited
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Complaints: The complaints process for this certificate can be found here:

<https://www.branz.co.nz/codemark-info/complaints-and-appeals/>

Product Certificate

Watergate Plus Wall Underlay

3. Description of Building Method or Product

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 with the Watergate Plus logo repeated along the length of the roll.

4. Intended use of Building Method or Product

Watergate Plus is a wall underlay for use behind exterior wall claddings. Made from synthetic materials, Watergate Plus is fire-retardant, water-resistant and vapour permeable.

5. New Zealand Building Code Provisions

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.

6. Conditions and Limitations of Use

FLEXIBLE WALL UNDERLAY

Watergate Plus is suitable 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 absorbent and non-absorbent wall claddings; or,
- with absorbent and non-absorbent wall claddings installed over an 18 mm minimum drained cavity; or,



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- with masonry veneer in accordance with NZBC Acceptable Solution E2/AS1 for timber-framed buildings or to NASH Building Envelope Solutions for steel-framed buildings; and,
- situated in NZS 3604 Wind Zones up to, and including, Very High.

USE OVER RIGID WALL UNDERLAY

Watergate Plus is suitable for use as a flexible wall underlay over rigid wall underlays on 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 absorbent and non-absorbent wall claddings installed over an 18 mm minimum drained cavity; and,
- 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, Extra High.

HANDLING AND STORAGE

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.

INSTALLATION SKILL LEVEL REQUIREMENT

All design and building work must be carried out in accordance with the Watergate Plus Wall Underlay Reference Documents and this Product Certificate by competent and experienced tradespersons conversant with wall underlays. 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.

REFERENCE DOCUMENTS

This Product Certificate must be read in conjunction with:

- Thermakraft™ Watergate Plus Datasheet, Issue 11.0, dated April 2024.
- Thermakraft™ Watergate Plus Installation Guide, Issue 6.0, dated April 2024.

7. 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.



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8. Basis for Certification

TESTING

- The following tests have been carried out on Watergate Plus 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.
- Ultraviolet (UV) light ageing of wall underlays is a critical evaluation requirement to verify the wall underlay's continued performance after site construction exposure. UV ageing of Watergate Plus equivalent to 90 days construction site exposure was completed and a range of tests detailed above were repeated after ageing.
- The flammability index of Watergate Plus has been tested in accordance with AS 1530.2:1993.
- An evaluation of the expected performance of Watergate Plus in direct contact with metal wall cladding has been completed by BRANZ.

EXPERT JUDGEMENT

- Opinion on the durability of Watergate Plus has been given by BRANZ technical experts.

QUALITY

- The Reference Documents have been examined by BRANZ and found to be satisfactory.
- The quality of supply to the market is the responsibility of Kingspan Insulation NZ 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 Kingspan Insulation NZ Limited.
- Quality of installation is the responsibility of the installer in accordance with the instructions of Kingspan Insulation NZ Limited.

9. Supporting Documentation for Certification

- Acceptable Solutions and Verification Methods for New Zealand Building Code Clause B2 Durability, 2nd Edition, Amendment 12, 28 November 2019.



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- Acceptable Solutions and Verification Methods for New Zealand Building Code Clause F2 Hazardous Building Materials, 1st Edition, Amendment 3, 1 January 2017.
- BRANZ Appraisal No. 695 Watergate Plus Wall Underlay.
- C1-C6 Protection from Fire Acceptable Solution C/AS1 Protection from fire for buildings with sleeping (residential) and outbuildings (risk group SH), 2nd Edition, 2 November 2023.
- 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.
- AWTa Test Number 16-005542, Sample reference 16/141 Watergate Plus fire retardant wall underlay, issue date 20 October 2016.
- AWTa Test Number 18-000747, Ref: 18/101 Watergate – Plus fire retardant wall underlay, issue date 21 February 2018.
- BRANZ Durability Opinion DC2048, Extended durability opinion on Thermakraft Watergate Plus wall underlay, dated 15 March 2011.
- BRANZ Test Report DC2968-001-1, Report on testing Thermakraft Watergate Plus reference 18/101, dated 13 June 2018.
- BRANZ Test Report DC12849-014, Report on testing of Watergate Plus, dated 12 February 2021.
- BS 6538.3:1987 Method for determination of air permeance using the Garley apparatus.
- ICC-ES Evaluation Report ESR-2958, Water resistance and surface burning characteristics, dated 1 October 2009.
- Intertek Report Number 3193389MID-003, Evaluation property: Air permeance, dated 19 November 2009.
- 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.
- NZWTA Report No. 1438555.3 Watergate Plus 20/113 - Polypropylene and polyethylene underlay, dated 2 November 2022.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.



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- Scion Contract Report Output No. 45908, Wall underlay sample 09/104 - E2/AS1 Table 23 properties, dated February 2010.
- Scion Contract Report Output No. 46047, Evaluation of laminate sample 09/104 - 90 days Allunga sample, dated March 2010.
- Scion Contract Report Output No. 46330, Wall underlay sample 09/104 - E2/AS1 Table 23 properties 75 days UV exposure, dated June 2010.
- Scion Test Certificate, Sample 09/104 air resistance test, received 25 March 2010.
- Verification Methods E2/VM1 and Acceptable Solution E2/AS1, E2/AS2 and E2/AS3 for New Zealand Building Code Clause E2 External Moisture, 3rd Edition, Amendment 10, 5 November 2020.
- The Building Regulations 1992.

10. Supporting Information About Description

PRODUCT SPECIFICATION

Watergate Plus is a white, 105 g/m² non-woven, microporous polyolefin fabric underlay.

The product is supplied in rolls 1.37 m wide by 18.5, 37 and 73 m long or 2.74 m wide by 18.5 and 36.5 m long. The product is printed with the Watergate Plus logo repeated along the length of the roll and can also be co-branded with custom printing. The rolls are wrapped in clear polythene film.

11. Supporting Information About Intended Use

GENERAL

Watergate Plus is intended for use as an alternative to conventional building papers which are fixed over timber or steel-framed walls in order to limit the entry of wind into building cavities, and to act as a secondary barrier to wind-driven rain. Refer to Table 1 for material properties.

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

Watergate Plus must not be exposed to the weather or ultraviolet (UV) light for a total of more than 90 days before being covered by the wall cladding.

Watergate Plus 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).

In cavity installations where the cavity battens are installed at greater than 450 mm centres, the 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 framing only).



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Table 1: NZBC Acceptable Solution 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 |
|--|----------------------------------|---|
| Absorbency | $\geq 100 \text{ g/m}^2$ | Pass |
| Vapour Resistance | $\leq 7 \text{ MN s/g}$ | Pass |
| Water Resistance | $\geq 20 \text{ mm}$ | Pass |
| pH of Extract | ≥ 6.0 and ≤ 9.0 | Pass |
| Shrinkage | $\leq 0.5\%$ | 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) |
| Air Resistance | $\geq 0.1 \text{ MN s/m}^3$ | Pass |
| Flammability Index | ≤ 5 | Fire retardant |

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

CLADDINGS

Watergate Plus 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.

STUCCO PLASTER

Watergate Plus is suitable for use as a non-rigid backing material for stucco plaster in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.3.5.1 for timber framing or NASH Building Envelope Solutions, Paragraph 9.3.5.1 for steel framing. The underlay must be supported with 75 mm galvanised mesh or plastic tape or wire at 150 mm centres run across the cavity battens to limit deflection to a maximum of 5 mm.

Watergate Plus may also be used as a slip layer over rigid backings for stucco plaster in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.3.3.1 b) for timber framing or NASH Building Envelope Solutions, Paragraph 9.3.3.1 b) for steel framing.



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BUILDING CODE

B1 STRUCTURE

Watergate Plus 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.

B2 DURABILITY

Watergate Plus meets code compliance with NZBC Clause B2.3.1 (a) not less than 50 years for wall 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 wall underlays used where the cladding durability requirement is 15 years.

Serviceable Life

Provided it is not exposed to the weather or UV light for a total of more than 90 days, and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather-resistant, Watergate Plus is expected to have a serviceable life equal to that of the cladding.

C2 PREVENTION OF FIRE OCCURRING

Separation or protection must be provided to Watergate Plus 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.

C3 CONTROL OF INTERNAL FIRE AND SMOKE SPREAD

Watergate Plus has an AS 1530 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 the surface finish requirements of suspended flexible fabric used as an underlay to exterior cladding that is exposed to view in occupied spaces.

E2 EXTERNAL MOISTURE

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, or claddings covered by a valid BRANZ Appraisal.

Watergate Plus, when installed in accordance with the Reference Documents and this Product Certificate, will assist in the total cladding systems compliance with NZBC Clause E2.

UNDERLAY INSTALLATION

Watergate Plus must be fixed to all framing members at maximum 300 mm centres with clouts, staples, self-drilling screws or proprietary underlay fixings. For steel framing, double-sided tape may be used which is applied to each stud in continuous strips. The underlay must be pulled taut over the framing before fixing.



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Watergate Plus must be run horizontally and must extend from the upper-side of the top plate to the under-side of the bearers or wall plates supporting ground floor joists, or below bottom plates on concrete slabs. Horizontal laps must be no less than 150 mm wide, 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.

The wall underlay should be run over openings and these left covered until windows and doors are ready to be installed. Openings are formed in the underlay by cutting on a 45 degree diagonal from each corner of the penetration. The flaps of the cut underlay must be folded inside the opening and stapled to the penetration framing. Excess underlay may be cut off flush with the internal face of the wall frame.

Watergate Plus can be added as a second layer over head flashings in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.10.3 for timber framing or NASH Building Envelope Solutions Paragraph 9.1.11.3 for steel framing.

When fixing the product in windy conditions, care must be taken due to the large sail area created by wide roll widths.

Any damaged areas of Watergate Plus, 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.

MAINTENANCE REQUIREMENTS

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

12. Supporting Information About Conditions and Limitations of Use

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

Signatures

A handwritten signature in black ink that reads "Falck".

Claire Falck
CEO, BRANZ Limited.

All CodeMark certificates that are current much be registered with MBIE. MBIE maintains a register of valid product certificates. [Please find the register here.](#)

If the certificate is not listed on this register or it appears as (SUSPENDED), it is not a valid CodeMark certificate and does not have to be accepted by a building consent authority as establishing compliance with the New Zealand Building Code.



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