



## BRANZ Appraised

Appraisal No. 852 [2019]

## SIKAPROOF® A+ 12 WATERPROOFING MEMBRANE

Appraisal No. 852 [2019]

Amended 22 October 2020



### BRANZ Appraisals

Technical Assessments of products for building and construction.



BUILDING TRUST

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### BRANZ

#### BRANZ

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## Product

- 1.1 SikaProof® A+ 12 Waterproofing Membrane is a flexible polyolefin (FPO) sheet for use as a pre-applied membrane for waterproofing and tanking structural concrete floors and walls.

## Scope

- 2.1 SikaProof® A+ 12 Waterproofing Membrane has been appraised for use as a waterproofing membrane within the following scope:
  - on buildings subject to specific design with in-situ structural concrete floors and walls complying with NZS 3101; and,
  - where the membrane may be subjected to hydrostatic pressure and that pressure does not exceed the equivalent of a 15 m [1.5 bar] head of water.
- 2.2 The product must be installed by Sika [NZ] Ltd approved applicators.

## Building Regulations

### New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, SikaProof® A+ 12 Waterproofing Membrane if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet the following provisions of the NZBC:

**Clause B2 DURABILITY:** Performance B2.3.1 [a] not less than 50 years. SikaProof® A+ 12 Waterproofing Membrane meets this requirement. See Paragraph 11.1.

**Clause E2 EXTERNAL MOISTURE:** Performance E2.3.3. SikaProof® A+ 12 Waterproofing Membrane meets this requirement. See Paragraphs 13.1 and 13.2.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1. SikaProof® A+ 12 Waterproofing Membrane meets this requirement.

## Technical Specification

- 4.1 Materials supplied by Sika [NZ] Ltd are as follows:
- **SikaProof® A+ 12 Waterproofing Membrane** - a pre-applied, flexible polyolefin (FPO) membrane with a cementitious hybrid backing layer on the upper face. It is supplied in a roll 1.75 mm thick, 2 m wide x 20 m long.
  - **SikaProof® Tape A+-** a self-adhesive tape 150 mm wide for internal sealing and jointing of all detailing and transverse/cross joints.
  - **SikaProof® Patch-200 B** - an externally applied self-adhesive membrane in 200 mm widths for additional post-construction sealing of joints, penetrations or damage to the membrane.
  - **SikaProof® Sandwich Tape** - a double-sided adhesive tape 50 mm wide for sealing and bonding of overlap joints and details.
  - **SikaProof® P-12** - a self-adhesive, flexible polyolefin (FPO) membrane sheet used for detailing where the pre-applied SikaProof®A+ 12 cannot be used. It is supplied as a yellow membrane in 1 m wide x 20 m long rolls.

## Handling and Storage

- 5.1 Handling and storage of all materials whether on-site or off-site is under the control of the installer. Dry storage must be provided for all products and the membranes must be protected from sunlight and ultraviolet (UV) radiation. Rolls of membrane must be stored horizontally.

## Technical Literature

- 6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for SikaProof® A+ 12 Waterproofing Membrane. The Technical Literature must be read in conjunction with this Appraisal. 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 SikaProof® A+ 12 Waterproofing Membrane is for use as a waterproofing membrane for structural concrete floors and walls. It is pre-applied to surfaces before the fixing of reinforcing steel and before concreting. For floors, the membrane is applied to site concrete. For walls, the membrane is applied to either permanent formwork or removable double faced formwork.
- 7.2 SikaProof® A+ 12 Waterproofing Membrane is installed so that cast in-situ concrete or shotcrete is applied directly to the membrane.

### Structural Concrete Floors

- 8.1 The membrane must be laid on a minimum of 50 mm thickness of site concrete. The structural concrete slab placed over the membrane must be a minimum of 100 mm thick.

### Structural Concrete Walls

- 9.1 The surface to which the membrane is applied must be sound and solid to eliminate movement during the pouring of concrete. Following the removal of double faced formwork after concreting special protection sheets must be used over the membrane to provide protection before backfilling takes place. In the case of permanent formwork, the formwork must protect the membrane throughout its serviceable life. Where this is not concrete, the advice of Sika [NZ] Ltd should be sought.

### Control Joints

- 10.1 Where control or construction joints are formed in the substrate, Sika [NZ] Ltd must be consulted for use of the membrane at these joints.

## Durability

### Serviceable Life

- 11.1 SikaProof® A+ 12 Waterproofing Membrane is expected to have a serviceable life of at least 50 years provided it is installed and maintained in accordance with this Appraisal and is continually protected from sunlight and UV radiation.

## Maintenance

- 12.1 Annual inspections must be made of the membrane's top edge seal and protection.

## External Moisture

- 13.1 SikaProof® A+ 12 Waterproofing Membrane, when installed in accordance with this Appraisal and the Technical Literature, will prevent water vapour from penetrating to the interior face of basement retaining walls and floors in spaces where moisture may cause damage. The membrane has a vapour flow resistance of not less than 90 MN s/g.
- 13.2 The membrane has tapes that can be used to form sealed joints and to seal penetrations. Hot air welding may also be used to thermally join field area sheet laps only. The connection of these sheets to the perimeter sheet must be made using an approved tape only. The top edge of the membrane must be sealed to the wall as set out in the Technical Literature and protected.

## Installation Information

### Installation Skill Level Requirement

- 14.1 Installation of the membranes must be completed by Sika [NZ] Ltd approved applicators in accordance with the Technical Literature and this Appraisal.

## Installation

### General

- 15.1 Concrete and other surfaces to which the membrane is to be applied must have a smooth and uniform finish, be dry and be free from loosely adhering material, sharp protrusions, dust, oil and grease. The advice of Sika [NZ] Ltd should be sought regarding suitable substrates and installation temperatures.

### Procedure

- 15.2 SikaProof® A+ 12 is installed to all perimeters, edges, terminations and connections. The corners are formed with pre-formed SikaProof® A+ 12 and adhered together with SikaProof® Sandwich Tape or internally with SikaProof® Tape A+.
- 15.3 The membrane is laid on the horizontal and vertical surfaces with the joints overlapped a minimum overlap of 50 mm. SikaProof® Tape A+ and SikaProof® Sandwich Tape are used to connect these laps. When heat-welding the horizontal field area laps, the overlap is 80 mm.
- 15.4 The reinforcement is fixed after the membrane has been applied, followed by applying shotcrete or concrete.
- 15.5 Special protection sheets must be used where backfilling follows to prevent damage to the membrane.

### Repair

- 15.6 Any exposed fixings must be patched with tape.
- 15.7 Damage to the membrane must be repaired with tape prior to the pouring of concrete, and in the case of removable formwork, prior to backfilling.

### Inspections

- 15.8 The Technical Literature and Sika [NZ] Ltd approved applicators Quality Control sheets must be referred to during the inspection of the membrane installation.



## Health and Safety

16.1 Safe use and handling procedures for the membrane are provided in the Technical Literature.

## Basis of Appraisal

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

### Tests

17.1 The following testing of SikaProof® A+ 12 Waterproofing Membrane has been undertaken by various organisations for watertightness, tear resistance, joint strength, impact resistance, tensile strength, resistance to static load, watertightness after artificial ageing, watertightness against chemicals, coating continuity, dimensions, thickness, straightness, mass per unit area, tensile strength, strain resistance, nail tear resistance and seam shear resistance. Test methods and results have been reviewed by BRANZ and found to be satisfactory.

### Other Investigations

- 18.1 A durability opinion has been given by BRANZ technical experts.
- 18.2 Practicability of installation has been assessed by BRANZ and found to be satisfactory.
- 18.3 The Technical Literature has been examined by BRANZ and found to be satisfactory.

### Quality

- 19.1 The manufacture of SikaProof® A+ 12 Waterproofing Membrane 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. BRANZ has taken note of the product certifications covering quality aspects associated with this product.
- 19.2 The quality of materials supplied to the market is the responsibility of Sika [NZ] Ltd.
- 19.3 Quality of installation on site is the responsibility of the Sika [NZ] Ltd approved applicator.
- 19.4 Designers are responsible for the building design, and building contractors are responsible for the quality of construction of substrate systems in accordance with the instructions of Sika [NZ] Ltd.
- 19.5 Building owners are responsible for the maintenance of the membrane system in accordance with the instructions of Sika [NZ] Ltd.

## Sources of Information

- NZS 3101: 2006 Concrete structures standard.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

## Amendments

### Amendment No 1, dated 22 October 2020

This Appraisal has been amended to change the product name and amend the technical specifications.



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09 May 2019

SIKAPROOF® A+ 12  
WATERPROOFING MEMBRANE



In the opinion of BRANZ, **SikaProof® A+ 12 Waterproofing Membrane** 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 **Sika [NZ] Ltd**, 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. **Sika [NZ] Ltd:**
  - 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 **Sika [NZ] Ltd**.
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 **Sika [NZ] Ltd** or any third party.

For BRANZ

**Chelydra Percy**

Chief Executive

Date of Issue:

09 May 2019