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Agrément Certificate

98/3454

Product Sheet 1

IKOPRO SYNTHAPRUFE DAMP-PROOFING

IKOPRO SYNTHAPRUFE ORIGINAL

This Agrément Certificate Product Sheet⁽¹⁾ relates to IKOpro Synthaprufe Original, a sandwich membrane for use as waterproofing above and below ground structures of concrete, brickwork, blockwork or masonry, or to form a damp-proof membrane for solid floors.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.



KEY FACTORS ASSESSED

Resistance to water and water vapour — the product will resist the passage of moisture into a structure (see section 6).

Resistance to mechanical damage — the product will accept, without damage, the limited foot traffic and loads associated with installation and the effects of thermal and other movements likely to occur in practice (see section 7).

Durability — under normal service conditions, the product will provide an effective barrier to the transmission of moisture for the life of the structure in which it is incorporated (see section 9).

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Fourth issue: 21 January 2022

Originally certificated on 19 February 1998.

Hardy Giesler
Chief Executive Officer

The BBA is a UKAS accredited certification body – Number 113.

*The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk
Readers MUST check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.*

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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Regulations

In the opinion of the BBA, IKOpro Synthaprufe Original, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	C2(a)	Resistance to moisture
Comment:		The product will enable a structure to satisfy this Requirement. See section 6 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The product is acceptable. See section 9.1 and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Durability, workmanship and fitness of materials
Comment:		The product satisfies the requirements of this Regulation. See section 9.1 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	3.4	Moisture from the ground
Comment:		The product will enable a structure to satisfy the requirements of this Standard, with reference to clauses 3.4.1 ⁽¹⁾⁽²⁾ , 3.4.2 ⁽¹⁾⁽²⁾ , 3.4.6 ⁽¹⁾⁽²⁾ and 3.4.7 ⁽¹⁾⁽²⁾ . See section 6 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The product can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	12	Building standards applicable to conversions
Comment:		Comments in relation to the product under Regulation 9, Standards 1 to 6 also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ .
		(1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation:	23(a)(b)(i)	Fitness of materials and workmanship
Comment:		The product is acceptable. See section 9.1 and the <i>Installation</i> part of this Certificate.
Regulation:	28(a)	Resistance to moisture and weather
Comment:		The product will enable a structure to satisfy the requirements of this Regulation. See section 6 of this Certificate.

Construction (Design and Management) Regulations 2015

Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

See sections: 3 Delivery and site handling (3.1 and 3.3) of this Certificate.

Additional Information

NHBC Standards 2022

In the opinion of the BBA, IKOpro Synthaprufe Original, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapters 5.1 *Substructure and ground bearing floors*, Clause 5.1.20 *Damp-proofing concrete floors* and 5.4 *Waterproofing of basements and other below ground structures*, and Technical Requirement R3.

Where Grade 3 waterproofing protection is required and the below ground wall retains more than 600 mm (measured from the top of the retained ground to the lowest finished floor level), the product should be used in combination with either a Type B or C waterproofing protection.

In the opinion of the BBA, the use of the product on existing structures when installed and used in accordance with this Certificate and *NHBC Standards for Conversions and Renovations*, taking account of other relevant guidance within the chapter and the suitability of the substrate to receive the product.

Technical Specification

1 Description

1.1 IKOpro Synthaprufe Original is a blend of bitumen emulsion and synthetic rubber latex.

1.2 Ancillary products for use with IKOpro Synthaprufe Original are:

- Hyload Protection Board — a flexible polymeric board for protecting against mechanical damage, pedestrian or vehicular traffic, and damage caused by backfilling
- reinforcing fabric — a lightweight polyester fleece for reinforcing at points of weakness such as details at angles.

2 Manufacture

2.1 The product is manufactured in a batch-blending process.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control being operated by the manufacturer are being maintained.

2.3 The management system of the manufacturer has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by Bureau Veritas (Certificate BE011164).

3 Delivery and site handling

3.1 The product is delivered to site in 5 litre cans or 25 litre drums. Each container bears the product name, the Certificate holder's name and the BBA logo incorporating the number of this Certificate.

3.2 The product must be stored in sealed containers at temperatures of between 5 to 25°C. Unopened containers have an expected shelf-life of 12 months.

3.3 The Certificate holder has taken the responsibility of classifying and labelling the product under the *CLP Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures*. Users must refer to the relevant Safety Data Sheet(s).

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on IKOpro Synthaprufe Original.

Design Considerations

4 Use

4.1 IKOpro Synthaprufe Original is satisfactory for use as a waterproofing for structures of concrete, brick, blockwork or masonry, above or below ground, or as a damp-proof membrane for solid floors, in accordance with the relevant clauses of CP 102 : 1973.

4.2 The product is a Type A tanking membrane as defined in BS 8102 : 2009, Clause 8.2.3, and is used in accordance with that Standard.

4.3 The product is compatible with the substrates listed in section 4.1 and is resistant to those chemicals likely to occur in normal service conditions.

5 Practicability of installation

The product is designed to be installed by a competent contractor experienced with this type of product.

6 Resistance to water and water vapour



The product adequately resists the penetration of moisture from the ground into the structure.

7 Resistance to mechanical damage

7.1 The bond between the product and substrate is satisfactory.

7.2 When installed, the product is capable of accommodating the minor movements likely to occur under normal service conditions.

7.3 The product can be damaged by sharp objects and therefore care should be taken, particularly when the membrane is exposed during construction and during backfilling or screeding operations.

7.4 Provided there are no sharp objects present on the surface of the product prior to and during installation of the protective layer, the product will not be damaged by normal foot traffic.

8 Maintenance

As the product is confined and has suitable durability (see section 9), maintenance is not required. However, any damage occurring during installation must be repaired prior to installation of any protection, in accordance with section 12.

9 Durability



9.1 IKOpro Synthaprufe Original, when used within an appropriate waterproofing design in accordance with the relevant codes of practice, fully protected and subjected to normal service conditions, will provide an effective barrier to the transmission of moisture for the design life of the structure in which it is incorporated.

9.2 The product is not affected by contact with an alkaline substrate.

10 General

10.1 Installation of IKOpro Synthaprufe Original must generally be in accordance with the relevant requirements of CP 102 : 1973 and BS 8102 : 2009, the Certificate holder's application instructions and this Certificate. Additional guidance on the use of damp-proof membrane material is available in BS 8000-0 : 2014 and BS 8000-4 : 1989.

10.2 New concrete, screeds or renderings should have a trowelled, lightly tamped or brushed finish, and be free from defects. Brickwork, blockwork or masonry should be flush pointed or finished with a sand/cement render. Defects in existing surfaces should be made good. All surfaces must be clean, sound and slightly dampened before installation.

10.3 The product must not be applied to exposed surfaces in wet conditions (ie rain or standing water) or at temperatures below 5°C, nor if these conditions are likely to occur before the membrane has dried.

11 Procedure

11.1 The product is applied by brush in a single stroke to concrete floors and walls at, above or below ground level. Horizontal applications must be carried a minimum of 150 mm up all walls and joined to the existing damp-proof course (dpc). Where no dpc is present, the treatment should be extended above the finished floor level.

Concrete floors

11.2 The basecoat is applied at a rate of 1 litre per 1 m². When the basecoat is dry, a second coat is applied at a rate of 1 litre per 1.5 m². At temperatures in excess of 10°C with a relative humidity of less than 80%, the drying time will be approximately six hours; however, prevailing conditions may reduce or extend the drying period.

11.3 The second coat is blinded with clean, sharp sand while still tacky, followed (when dry) by a finishing screed not less than 50 mm thick.

Internal walls

11.4 The membrane is applied as described in section 11.2, except that three equal coats at a rate of 1 litre per 2 m² are used.

11.5 The final coat is blinded with clean, sharp sand while still tacky, followed (when dry) by a minimum of two coats of a gypsum plaster specification, to a total thickness of 12 mm.

Retaining walls

11.6 The membrane is applied as described in section 11.2, except that three coats at a rate of 1 litre per 2 m² are used. While the third coat is still tacky, it should be faced with Hyload Protection Board, to provide protection against backfilling.

Details

11.7 Where the structure is penetrated by features such as pipes or conduits, the technical advice of the Certificate holder must be sought.

11.8 Angles should be pre-treated with a coat of IKOpro Synthaprufe Original extending 150 mm either side, applied at a rate of 1 litre per m². A strip of reinforcing fabric, 300 mm wide, is embedded into the product while still wet, using a brush lightly charged with IKOpro Synthaprufe Original.

11.9 The advice of the Certificate holder should be sought on detailing at expansion and construction joints.

12 Repair

The product is repaired by recoating the damaged area at the appropriate rate for the application prior to the installation of any protection.

Technical Investigations

13 Tests

Tests were carried out on IKOpro Synthaprufe Original and the results assessed to determine:

- water vapour resistance
- tensile strength
- elongation at maximum load
- elongation at break
- low temperature flexibility
- resistance to static indentation
- tensile bond strength
- chisel impact.

14 Investigations

14.1 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

14.2 A demonstration of the application of the material by the Certificate holder was witnessed to assess the practicability of installation.

Bibliography

BS 8000-0 : 2014 *Workmanship on construction sites – Introduction and general principles*

BS 8000-4 : 1989 *Workmanship on building sites – Code of practice for waterproofing*

BS 8102 : 2009 *Code of practice for protection of below ground structures against water from the ground*

BS EN ISO 9001 : 2015 *Quality management systems - Requirements*

CP 102 :1973 *Code of practice for protection of buildings against water from the ground*

15 Conditions

15.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document – it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

15.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

15.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

15.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

15.5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

15.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.