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Agrément Certificate

88/1966

Product Sheet 1

IKO DAMP PROOF COURSES

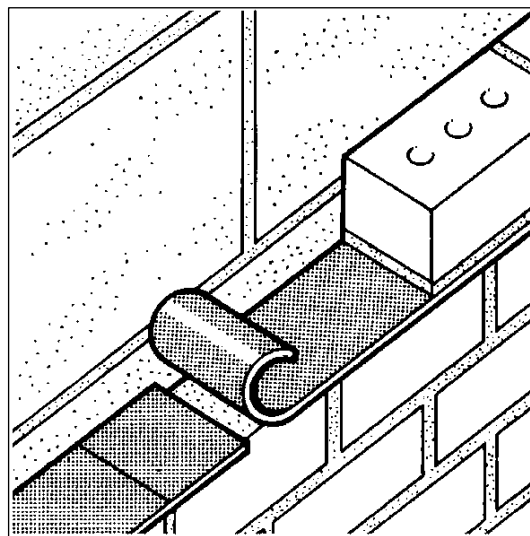
IKO HYLOAD PERMABIT DAMP-PROOF COURSE SYSTEM

This Agrément Certificate Product Sheet⁽¹⁾ relates to the IKO Hyload Permabit Damp-proof Course System, comprising IKO Hyload Permabit Damp-proof Course and Hyload Preformed Cavity Tray Units and the IKO Hyload DPC Jointing System for Walls.

(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

Behaviour under load — the system will not extrude under load up to the point of compressive failure of the wall (see section 6).

Resistance to water and water vapour — the system will provide an effective barrier against liquid water and water vapour (see section 7).

Compatibility with other materials — within normal construction, the system components are compatible with all materials with which they will be in contact, with the exception of timber preservatives based on creosote or tar oils (see section 8).

Durability — when properly specified and installed, the system, in normal circumstances, will remain effective during the lifetime of the building (see section 10).



The BBA has awarded this Certificate to the company named above for the system described herein. This system 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 Seventh issue: 23 April 2018

John Albon – Head of Approvals
Construction Products

Originally certificated on 5 January 1988

Claire Curtis-Thomas
Chief Executive

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 are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.

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Regulations

In the opinion of the BBA, the IKO Hyload Permabit Damp-proof Course System, 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: A1 Comment:	Loading The system will not extrude under load up to the point of failure of the wall, and will not adversely affect the ability of a properly designed and built wall to sustain and transmit compression loads. See section 6.1 of this Certificate.
Requirement: C2(a)(b) Comment:	Resistance to weather and ground moisture When properly installed in a correctly designed structure, the system forms an effective barrier to the movement of water within the wall, enabling compliance with this Requirement. See section 7 of this Certificate.
Regulation: 7 Comment:	Materials and workmanship The system components are acceptable materials. See section 10 and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation: 8(1) Comment:	Durability, workmanship and fitness of materials The system can contribute to a construction satisfying this Regulation. See section 10 and the <i>Installation</i> part of this Certificate.
Regulation: 9 Standard: 1.1(a)(b) Comment:	Building standards applicable to construction Structure The system will not extrude up to the point of failure of the wall, and will not adversely affect the ability of the properly designed and built wall to sustain and transmit compression loads, with reference to clauses 1.1.1 ⁽¹⁾⁽²⁾ and 1.1.3 ⁽¹⁾⁽²⁾ of this Standard. See section 6.1 of this Certificate.
Standard: 3.4 Standard: 3.10 Comment:	Moisture from the ground Precipitation When properly installed in a correctly designed structure, the system forms an effective barrier to the movement of water within the wall, enabling compliance with these Standards, with reference to clauses 3.4.1 ⁽¹⁾⁽²⁾ and 3.10.1 ⁽¹⁾⁽²⁾ . See section 7 of this Certificate.
Standard: 7.1(a)(b) Comment:	Statement of sustainability The system 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 Comment:	Building standards applicable to conversions All comments given for the system under Regulation 9 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)(i)(iii)(b)(i)	Fitness of materials and workmanship
Comment:		The system components are acceptable. See section 10 and the <i>Installation</i> part of this Certificate.
Regulation:	28(a)	Resistance to moisture and weather
Comment:		When properly installed in a correctly designed structure, the system forms an effective barrier to the movement of water within the wall, enabling compliance with this Regulation. See section 7 of this Certificate.
Regulation:	30	Stability
Comment:		The system will not extrude up to the point of failure of the wall, and will not adversely affect the ability of a properly designed and built wall to sustain and transmit compression loads. See section 6.1 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: 1 *Description* (1.2) and 3 *Delivery and site handling* (3.5) of this Certificate.

Additional Information

NHBC Standards 2018

In the opinion of the BBA, the IKO Hyload Permabit Damp-proof Course System, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapter 6.1 *External masonry walls*.

CE marking

The Certificate holder has taken the responsibility of CE marking the system components in accordance with harmonised European Standard BS EN 14967 : 2006. An asterisk (*) appearing in this Certificate indicates that data shown are given in the manufacturer's Declaration of Performance.

Technical Specification

1 Description

1.1 IKO Hyload Permabit Damp-proof Course is a black sheet material with grained surfaces. It consists of a mixture of bitumen, ethylene and propylene-based polymers, synthetic fibres and other additives.

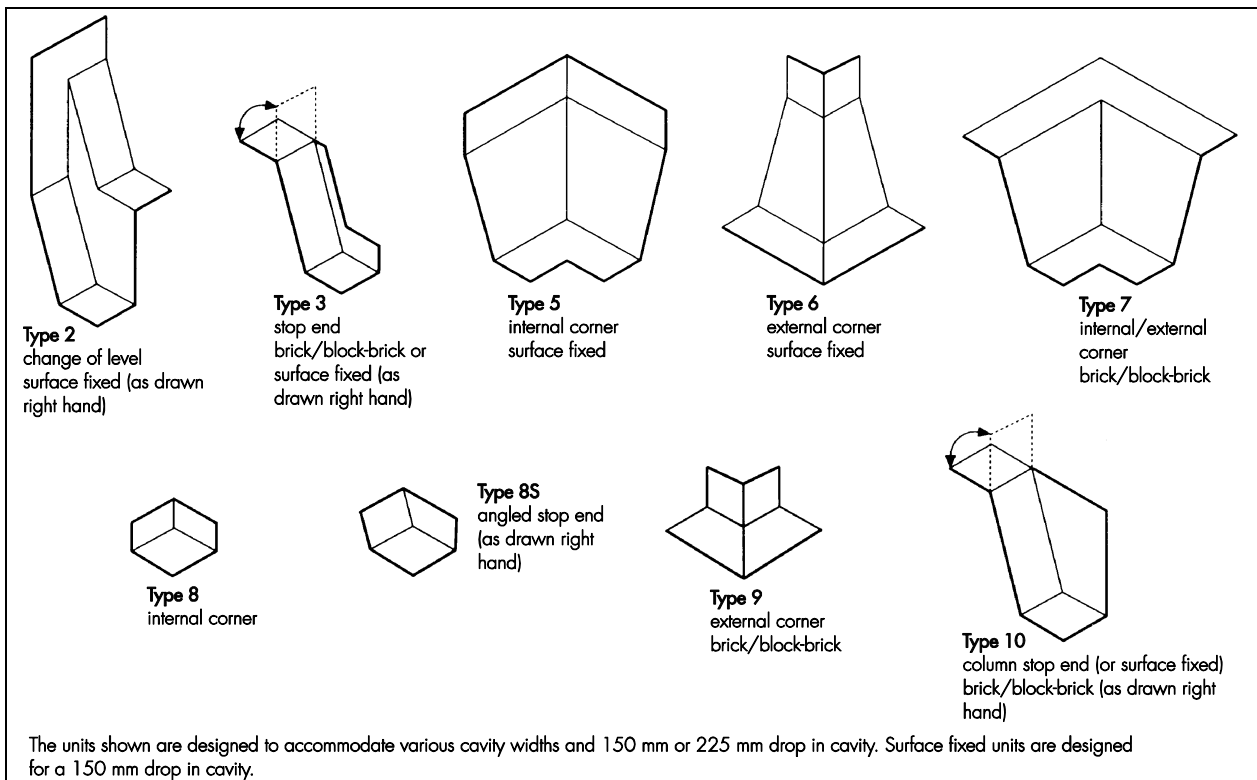
1.2 The sheet is manufactured to the nominal characteristics of:

Thickness* (mm)	1.25
Mass (k·gm ⁻²)	1.6
Roll length (m)	20.0
Roll widths (mm)	standard wall widths or up to 1 m
Watertightness* (2 kPa)	Pass
Durability(artificial ageing)*	Pass
Durability(alkali)*	Pass

Resistance to low temperature*(°C)	-15
Resistance to impact*(mm)	500
Resistance to static loading*(kg)	20.

1.3 IKO Hyload Preformed Cavity Tray Units for Walls are made from 1.5 mm thick polymer sheet and are preformed, flexible units for angles in stepped or horizontal damp-proof coursing. Typical examples are shown in Figure 1. Cloaks to other designs can be fabricated to order.

Figure 1 Standard IKO Hyload Preformed Cavity Tray Units (special sizes and shapes to order)



1.4 For use with the system is the IKO Hyload DPC Joint Support System, consisting of 350 by 200 mm reinforced supports of twin walled polypropylene with a 120 mm self-adhesive strip protected by silicone release paper bonded to its upper surface. Joints are formed by means of a 100 mm wide self-adhesive tape protected on both sides by silicone release paper.

1.5 Other ancillary items for use with the system are:

- IKO Hyload DPC Jointing Tape — a 100 mm wide self-adhesive tape, protected on both sides by silicone release paper
- IKO IKOpro SA Primer — used where required on concrete, brickwork, blockwork and steel
- IKO Hyload DPC Fixing Strip — a semi-rigid plastic strip, 25 mm by 3 mm by 2 m, pre-drilled at 150 mm centres
- IKO Hyload DPC Lap Adhesive — a medium viscosity, instant contact synthetic rubber/resin adhesive
- IKO Hyload DPC Mastic — a thick, synthetic rubber mastic with gap-filling properties, suitable for bonding IKO Hyload Permabit Damp-proof Course to itself and a range of common building products.

2 Manufacture

2.1 The sheets are manufactured by compounding and calendering processes.

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 operated by the manufacturer are being maintained.

2.3 The management system of IKO PLC has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2008 and BS EN ISO 14001 : 2015 by BSI (Certificates FM 45901 and FM 24709 respectively).

3 Delivery and site handling

3.1 IKO Hyload Permabit Damp-proof Course is delivered to site in rolls secured with a paper wrapper bearing the Certificate holder's name and the BBA logo incorporating the number of this Certificate.

3.2 Rolls must be stored on end and under cover. Contact with organic solvents must be avoided.

3.3 IKO Hyload Preformed Cavity Tray Units are delivered to site in cardboard boxes. To each box is affixed a label bearing a description of the contents and the BBA logo incorporating the number of this Certificate.

3.4 The IKO Hyload DPC Joint Support System is supplied in cardboard cartons, each containing 10 units.

3.5 The Certificate holder has taken the responsibility of classifying and labelling the system components 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 the IKO Hyload Permabit Damp-proof Course System.

Design Considerations

4 Use

4.1 The IKO Hyload Permabit Damp-proof Course System, when correctly specified and installed in accordance with this Certificate, provide satisfactory horizontal, vertical, or stepped damp-proof coursing (including cavity trays) in either solid or cavity walls of brick, block, stone or concrete. General standards of good design practice are given in BS EN 1996-1-1 : 2005, BS EN 1996-1-2 : 2005, BS EN 1996-2 : 2006, BS EN 1996-3 : 2006 and their UK National Annexes, and PD 6697 : 2010.

4.2 IKO Hyload Preformed Cavity Tray Units are preformed in the factory (see Figure 1).

4.3 IKO Hyload DPC Jointing Tape provides an effective method of joining IKO Hyload Permabit Damp-proof Course to itself or to IKO Hyload Preformed Cavity Tray Units.

4.4 The system components may be used separately or with each other.

5 Practicability of installation

The system can be installed by experienced bricklayers following the instructions given in the *Installation* part of this Certificate.

6 Behaviour under load



6.1 IKO Hyload Permabit Damp-proof Course will not extrude under load up to the point of compressive failure of the wall, and will not adversely affect the ability of a properly designed and built wall to sustain and transmit compression. The presence of the system can, however, reduce the shear and tensile (and, therefore, bending) strengths of a wall at that point, and designs may need to take account of this. Allowable stresses on the damp-proof course (dpc) are detailed in the product literature and further guidelines are available from the Certificate holder.

6.2 IKO Hyload Permabit Damp-proof Course will withstand considerable movement of the wall, and is unlikely to be impaired by normally occurring movements up to the point where the wall itself is deemed to have failed.

7 Resistance to water and water vapour



When correctly specified and installed, the system will provide an effective barrier against liquid water and water vapour, either from a source external to the structure, or from one part of the structure to another.

8 Compatibility with other materials

The system components are compatible with all materials with which they will be in contact within normal construction. They are unaffected by timber preservatives which are water based solutions of salts. Where there is doubt about the compatibility with materials in contact, the advice of the Certificate holder's Technical Department should be sought.

9 Maintenance

As the system is confined within the structure and has satisfactory durability (see section 10), maintenance is not required. However, any damage occurring before enclosure must be repaired (see section 16).

10 Durability



When properly specified and installed, the system will, in normal circumstances, remain effective during the lifetime of the building.

Installation

11 General

11.1 Installation must follow normal good practice for the detailing of dpc's, as set out in PD 6697 : 2010, and must be in accordance with the relevant clauses of BS 8000-3 : 2001, BS 8215 : 1991, BRE Digest 380 and the Certificate holder's instructions.

11.2 As with all flexible dpc's, care must be taken to avoid impact damage from sharp objects (eg chisel) during installation.

12 Handling

12.1 IKO Hyload Permabit Damp-proof Course is handled and cut as conventional flexible dpc's. It retains sufficient flexibility to be used at the lowest temperature at which walls are normally built and does not become tacky in warm, ambient weather conditions.

12.2 Certain details are difficult to form with the dpc, particularly when bending the material through two angles at the same time. In such cases, care must be taken to achieve a satisfactory seal and, where necessary, IKO Hyload

Preformed Cavity Tray Units for Walls are used. Joints should be formed on site using IKO Hyload DPC Lap Adhesive or IKO Hyload DPC Jointing Tape.

13 Installation practice

13.1 The following installation practices are essential:

- the dpc must extend through the full thickness of the wall or wall-leaf, including pointing, applied rendering or other facing material
- the dpc must be laid on a wet, even bed of mortar (perforations in adjacent courses of brickwork must be closed with mortar) and be laid flush or project beyond the finished face of the external leaf
- the dpc must always be sandwiched between wet mortar and not laid dry
- all lap joints in the dpc must have at least a 100 mm overlap and be completely sealed (see section 14) and supported by a suitable joint system in accordance with the Certificate holder's instructions
- IKO Hyload Preformed Cavity Tray Units must be used at stop ends and at all corners or changes in levels of cavity trays
- where used as a cavity tray, the dpc laps must be sealed.

13.2 When using the system with boot lintels or similar constructions, it is recommended that the material is installed to follow the lintel profile, where appropriate.

14 Jointing procedure

14.1 Lap joints must be bonded using one of the following methods:

- by applying IKO Hyload DPC Jointing Tape to one surface (having removed the silicone tapes immediately beforehand) and applying even pressure to the joint
- by applying IKO Hyload DPC Lap Adhesive to each surface to be bonded and, when dry, pressing the two surfaces firmly together.

14.2 All surfaces to be jointed must be clean and dry. Release paper protecting the self-adhesive strips should not be removed until the joint is ready to be formed. The tape should not be left exposed overnight or during periods of low temperature.

14.3 Where the dpc or cavity tray unit is required to be bonded to a brick, block or concrete substrate, it can be held in place temporarily by self-adhesive tape bonded to the substrate, which must be primed with IKOpro SA Primer. A permanent mechanical fixing should be installed using IKO Hyload DPC Fixing Strip.

14.4 IKO Hyload DPC Mastic can be used to bond IKO Hyload Permabit Damp-proof Course or Hyload Preformed Cavity Tray Units to brick, block or concrete substrates. If shearing force is expected within 72 hours of bonding, precautions against slippage must be taken.

15 Cleaning cavities

As with most other dpc materials, damage can occur during cleaning of mortar droppings from the dpc unless care is taken. The following recommendations should prevent damage occurring:

- cavity battens should be used to prevent excessive amounts of mortar droppings reaching the dpc
- mortar droppings should be removed before they have had time to harden
- implements such as steel rods should never be used for cleaning
- dpc's should be examined for damage as work proceeds.

16 Repair

Damaged areas of the system can be repaired prior to installation by cutting and/or replacing the damaged section, ensuring joints are made in accordance with section 14. Once covered, the system cannot be repaired.

17 Tests

17.1 Tests were conducted on the dpc and the results assessed to determine:

- thickness
- handling characteristics
- resistance to water
- transmission under pressure
- weight per unit area
- flexibility at low temperatures
- effect of ageing at high temperatures
- tensile strength and elongation at break
- water vapour permeability
- impact resistance at normal and low temperatures.

17.2 Tests were conducted on the preformed cavity tray units and the results assessed to determine:

- tensile strength/elongation of sheet and welds
- low temperature flexibility of sheet and welds.
- joint strength
- tear strength of sheet and welds

17.3 Tests were conducted on the dpc jointing system and the results assessed to determine:

- width/thickness
- tensile shear strength of joints
- ease of joint formation.
- weight per unit area
- effect of heat ageing
- peel strength of adhesive tape
- effect of water

18 Investigations

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

18.2 A user survey was conducted to assess performance in use.

Bibliography

BRE Digest 380 *Damp-proof Courses*

BS 8000-3 : 2001 *Workmanship on building sites — Code of practice for masonry*

BS 8215 : 1991 *Code of practice for design and installation of damp-proof courses in masonry construction*

BS EN 1996-1-1 : 2005 + A1 : 2012 *Eurocode 6 — Design of masonry structures – General rules for reinforced and unreinforced masonry structures*

NA to BS EN 1996-1-1 : 2005 + A1 : 2012 *UK National Annex to Eurocode 6 – Design of masonry structures – General rules for reinforced and unreinforced masonry structures*

BS EN 1996-1-2 : 2005 *Eurocode 6 – Design of masonry structures – General rules – Structural fire design*

NA to BS EN 1996-1-2 : 2005 *UK National Annex to Eurocode 6 – Design of masonry structures – General rules – Structural fire design*

BS EN 1996-2 : 2006 *Eurocode 6 – Design of masonry structures – Design considerations, selection of materials and execution of masonry*

NA to BS EN 1996-2 : 2006 *UK National Annex to Eurocode 6 – Design of masonry structures – Design considerations, selection of materials and execution of masonry*

BS EN 1996-3 : 2006 *Eurocode 6 – Design of masonry structures – Simplified calculation methods for unreinforced masonry structures*

NA to BS EN 1996-3 : 2006 *UK National Annex to Eurocode 6 – Design of masonry structures – Simplified calculation methods for unreinforced masonry structures*

BS EN 14967 : 2006 *Flexible sheets for waterproofing — Bitumen damp proof course — Definitions and characteristics*

BS EN ISO 9001 : 2008 *Quality management systems — Requirements*

BS EN ISO 14001 : 2015 *Environmental management systems — Requirements with guidance for use*

PD 6697 : 2010 *Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2*

19 Conditions

19.1 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 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.

19.2 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.

19.3 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.

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

19.5 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.

19.6 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.