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**Agrément Certificate**  
**No 95/3133**

## HYLOAD DAMP-PROOF COURSES

### PRODUCT SHEET 3 — HYLOAD HOUSEBUILDER DAMP-PROOF COURSE FOR WALLS

#### PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate replaces Certificate No 97/3403 and relates to the Hyload HouseBuilder Damp-proof Course for Walls.

#### AGRÉMENT 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 product will not extrude under load, up to the point of compressive failure of the wall (see section 4).

**Resistance to water and water vapour** — the product will provide an effective barrier against liquid water and water vapour (see section 5).

**Compatibility with other materials** — within normal construction, the product is compatible with all materials with which it will be in contact, with the exception of timber preservatives based on creosote or tar oils (see section 6).

**Durability** — when properly specified and installed, the product in normal circumstances, will remain effective during the lifetime of the building (see section 7).

The BBA has awarded this Agrément Certificate for Hyload HouseBuilder Damp-proof Course for Walls to IKO PLC as fit for its intended use provided it is installed, used and maintained as set out in this Agrément Certificate.

On behalf of the British Board of Agrément

Head of Approvals  
— Materials

Chief Executive

Date of First issue:

*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](http://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 Hyload HouseBuilder Damp-proof Course for Walls, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements of the following Building Regulations:



## The Building Regulations 2000 (as amended) (England and Wales)

Requirement:	A1	Loading
Comment:		The product 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. The presence of a dpc can reduce the shear and tensile strength of a wall at that point, and design may need to take account of this. See section 4.1 of this Certificate.
Requirement:	C2(a)(b)	Resistance to moisture
Comment:		Properly installed in a correctly designed structure, the product forms an effective barrier to the movement of water within the wall, enabling compliance with this Requirement. See section 5 of this Certificate.
Requirement:	Regulation 7	Materials and workmanship
Comment:		The product is an acceptable material. See section 7 of this Certificate.



## The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8	Fitness and durability of materials and workmanship
Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The product can contribute to a construction satisfying this Regulation. See section 7 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards – construction
Standard:	1.1(a)(b)	Structure
Comment:		The product 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 <sup>(1)(2)</sup> and 1.1.3 <sup>(1)(2)</sup> . See section 4.1 of this Certificate.
Standard:	3.4	Moisture from the ground
Standard:	3.10	Precipitation
Comment:		Properly installed in a correctly designed structure, the product forms an effective barrier to the movement of water within the wall, enabling compliance with these Standards, with reference to clauses 3.4.1 <sup>(1)(2)</sup> and 3.10.1 <sup>(1)(2)</sup> . See section 5 of this Certificate.
Regulation:	12	Building standards – conversions
Comment:		All comments given for the product under Regulation 9, also apply to this Regulation, with reference to clause 0.12.1 <sup>(1)(2)</sup> and Schedule 6 <sup>(1)(2)</sup> . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



## The Building Regulations (Northern Ireland) 2000 (as amended)

Regulation:	B2	Fitness of materials and workmanship
Comment:		The product is an acceptable material. See section 7 of this Certificate.
Regulation:	C4	Resistance to ground moisture and weather
Comment:		Properly installed in a correctly designed structure, the product forms an effective barrier to the movement of water within the wall, enabling compliance with this Regulation. See section 5 of this Certificate.
Regulation:	D1	Stability
Comment:		The product 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 4.1 of this Certificate.

### Construction (Design and Management) Regulations 2007

### Construction (Design and Management) Regulations (Northern Ireland) 2007

Information in this Certificate may assist the client, CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

See section: 1 *Description* (1.2).

# Non-regulatory Information

## NHBC Standards 2007

NHBC accepts the use of the Hyload HouseBuilder Damp-proof Course for Walls, when installed and used in accordance with this Certificate, in relation to *NHBC Standards*, Chapter 6.1 *External masonry walls*.

## Zurich Building Guarantee Technical Manual 2007

In the opinion of the BBA, the Hyload HouseBuilder Damp-proof Course for Walls, when installed and used in accordance with this Certificate, satisfies the requirements of the *Zurich Building Guarantee Technical Manual*, Section 3 *Substructure*, Sub-section *dpc and dpm* (page 107).

### General

This Certificate relates to Hyload HouseBuilder Damp-proof Course for Walls. The products provide horizontal, vertical, or stepped dpc's. The product has not been assessed for use as cavity trays.

The product may also be used in conjunction with beam and block flooring.

The product comprises sheet material for runs of dpc, prefabricated details for angles, steps and stop ends, and a jointing system for on-site formation of laps.

The components are suitable for use either separately or with each other to form an effective barrier to the movement of water.

The product must be installed in accordance with the manufacturer's instructions, relevant British Standards, Codes of Practice and this Certificate.

### Technical Specification

#### 1 Description

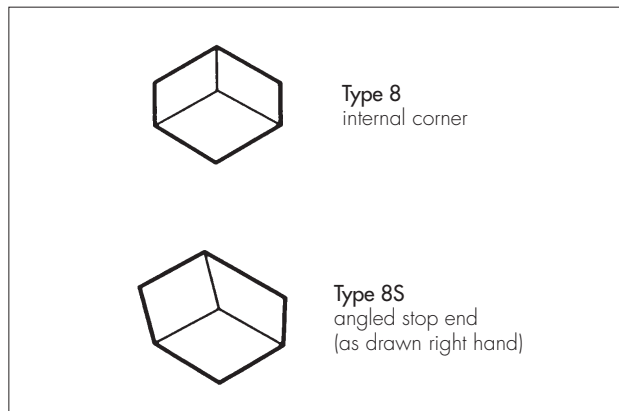
1.1 The Hyload HouseBuilder Damp-proof Course for Walls is a black sheet material with slightly grained surfaces. It is a mixture of pitch PVC, synthetic fibres and other additives.

1.2 The sheet is manufactured to dimensions of:

nominal thickness (mm)	0.9
nominal weight (kgm <sup>-2</sup> )	1.13
roll length (m)	20
roll widths (mm)	100, 112.5, 150, 225, 300, 375, 450

1.3 Preformed details 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.

Figure 1 Standard preformed details



1.4 Joints are made using 100 mm self-adhesive tape protected on both sides by silicone release paper or Hyload DPC Lap Adhesive or Hyload Mastic.

1.5 IKOpro SA Primer is used where required on concrete, brickwork, blockwork and steel.

1.6 Hyload DPC Lap Adhesive is a medium-viscosity synthetic rubber/resin adhesive of instant contact type. See section 11.1.

1.7 Hyload DPC Mastic is a thick synthetic rubber mastic with gap filling properties and is suitable for bonding Hyload to Hyload and to a range of common building materials. See section 11.1.

1.8 Hyload DPC fixing strip is a semi-rigid plastic strip, 25 mm by 3 mm by 2 m, pre-drilled at 150 mm centres.

1.9 Hyload DPC fixing pins are for use with Hyload DPC fixing strip for fixing to solid internal substrates such as blockwork, stone and concrete.

1.10 Quality control on Hyload HouseBuilder DPC includes checks on dimensions and by sampling, on tensile strength, elongation, tear resistance, low temperature flexibility and high-temperature stability.

## 2 Delivery and site handling

- 2.1 The product is delivered to site in rolls secured with a paper wrapper bearing the manufacturer's name and the BBA identification mark incorporating the number of this Certificate.
- 2.2 Rolls must be stored on end, under cover and in the dry. Contact with organic solvents must be avoided.
- 2.3 The preformed units are delivered to site in cardboard boxes. Each box carries a label bearing a description of the contents and the BBA identification mark incorporating the number of this Certificate.
- 2.4 IKOpro SA Primer is classified as 'flammable' and 'harmful' under *The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002* (CHIP3) and should be stored appropriately. The product container bears the appropriate hazard warning.

## Assessment and Technical Investigations


The following is a summary of the assessment and technical investigations carried out on the Hyload HouseBuilder Damp-proof Course for Walls.

## Design Considerations


### 3 Use

- 3.1 The Hyload HouseBuilder Damp-proof Course for Walls, when correctly specified and installed in accordance with this Certificate, provide satisfactory horizontal, vertical, or stepped damp-proof coursing in either solid or cavity walls of brick, block or stone and may also be used in conjunction with beam and block flooring. General standards of good design practice are given in BS 5628-3 : 2005.
- 3.2 Angles and stop ends are preformed in the factory (see Figure 1).
- 3.3 The Hyload DPC Joint Support System provides an effective method of joining Hyload DPC to itself.
- 3.4 The components may be used separately or with each other.

### 4 Behaviour under load

-  4.1 Hyload HouseBuilder DPC 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 Hyload 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 dpc are detailed in the product literature and further guidelines are available from the Certificate holder.
- 4.2 Hyload HouseBuilder DPC 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.


### 5 Resistance to water and water vapour

-  When correctly specified and installed the products 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.

### 6 Compatibility with other materials

The product is compatible with all materials with which it will be in contact within normal construction, with the exception of timber preservatives based on creosote or tar oils. It is 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.

### 7 Durability

-  Forecasts of the product's durability rest mainly on background knowledge of the constituent materials, and measurements of its physical properties when new and after artificial ageing. The conclusion from this evidence is that, when properly specified and installed, the system will in normal circumstances remain effective during the lifetime of the building.

## Installation

### 8 General

- 8.1 Installation of the Hyload HouseBuilder Damp-proof Course for Walls must follow normal good practice for the detailing of damp-proof courses, as set out in BS 5628-3 : 2005, and must be in accordance with the relevant clauses of BS 8000-3 : 2001, BS 8215 : 1991, BRE Digest 380 *Damp-proof courses*, and the manufacturer's instructions.
- 8.2 As with all flexible dpc's care should be taken to avoid impact damage from sharp objects (eg chisel) during installation.

## 9 Handling

9.1 Hyload HouseBuilder Damp-Proof Course is handled and cut as conventional flexible damp-proof courses. 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.

9.2 With Hyload HouseBuilder DPC it is difficult to form certain details, 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 preformed details should be used (for typical examples of use see Figures 2 and 3). Joints should be formed on site using Hyload DPC Jointing Tape, Hyload DPC Lap Adhesive or Hyload Mastic. Care should be taken at temperatures below 5°C to avoid the risk of condensation on jointed surfaces which may affect the efficiency of the self-adhesive tape.

Figure 2 Detail with concrete beam floor

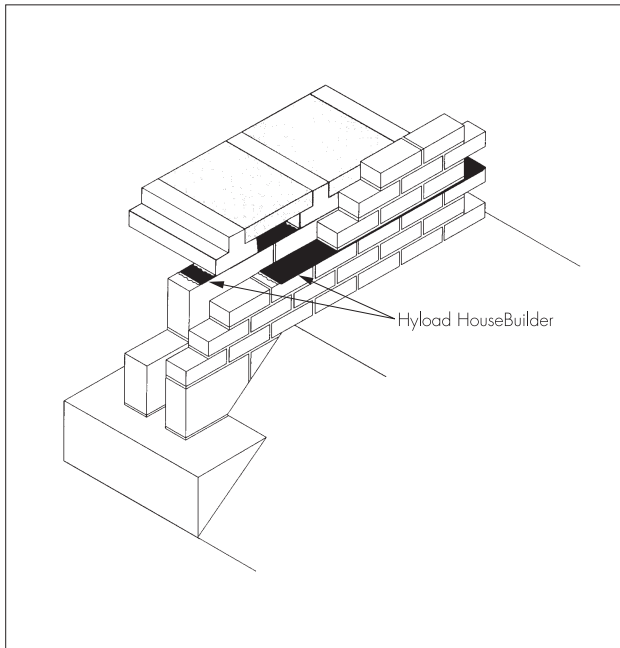
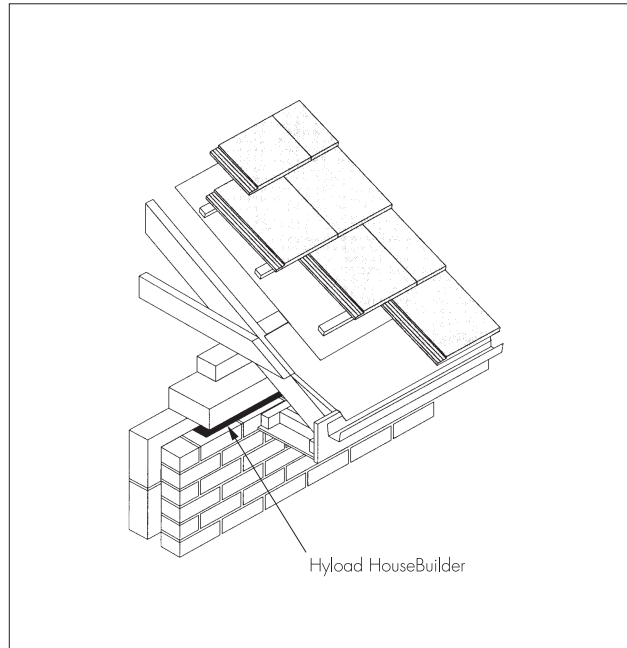


Figure 3 Eaves detail



## 10 Installation practice

10.1 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, and perforations in adjacent courses of brickwork must be closed with mortar, and project 5 mm beyond the finished face
- the dpc must always be sandwiched between wet mortar and not laid dry
- all lap joints in the dpc must have 100 mm overlap and be completely sealed (see appropriate clauses of section 11)
- preformed detail units must be used at stop ends, and at all corners.

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

### Beam and block flooring

10.3 When used with beam and block flooring the product may be laid dry on a brick or block wall provided the following conditions are met:

- the minimum bearing of the beams recommended by the flooring systems manufacturer is achieved
- the dead and applied loads upon the dpc via the beam does not exceed  $2.5 \text{ Nmm}^{-2}$
- the surface of the wall onto which the dpc and beam are to be installed is clean, smooth and free from all projections or perforations. Failure to comply with this requirement could lead to perforation of the dpc. If the requirement cannot be met then the dpc should be laid in an even bed of mortar
- any loose aggregate is swept from the wall prior to the installation of the dpc and from the dpc prior to the installation of the beam.

## 11 Jointing procedure

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

- Hyload DPC Lap Adhesive is applied to each surface to be bonded, and when dry the two surfaces should be pressed firmly together
- Hyload DPC Mastic is spread on one surface, brought into contact with the second surface and pressed firmly by hand. If a shearing force is expected within 72 hours of bonding, then support against slippage should be provided.

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

11.3 When forming a lap joint using the self-adhesive tape the manufacturer's instructions should be followed.

11.4 A strip of self-adhesive tape should then be applied to the upper surface of the dpc or preformed unit.

11.5 The layer of dpc to be lapped to the first should be placed in the usual way, the upper silicone release paper removed and the joint formed, ensuring that a full seal is achieved.

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

## 12 Cleaning cavities

As with most other damp-proof course materials, damage can occur during cleaning of mortar droppings from the damp-proof course 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 damp-proof course
- mortar droppings should be removed before they have had time to harden
- implements such as steel rods should never be used for cleaning
- damp-proof courses should be examined for damage as work proceeds.

## Technical Investigations

### 13 Tests

Samples of the Hyload HouseBuilder Damp-proof Course for Walls were obtained from the manufacturer and tests were carried out to determine:

#### Hyload HouseBuilder DPC

- thickness
- tensile strength and elongation at break
- flexibility at low temperatures
- resistance to water transmission under pressure
- water absorption
- resistance to compression at high temperatures
- weight per unit area
- handling characteristics
- water vapour permeability
- effect of ageing at high temperatures
- dimensional stability
- resistance to puncturing and point loading splitting under simulated service conditions.

#### Preformed details

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

### 14 Investigations

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

14.2 An examination was made of reports of shear and flexure tests carried out to DD 86-1 : 1983. The results were found to be satisfactory.

## Bibliography

BS 5628-3 : 2005 *Code of practice for the use of masonry — Materials and components, design and workmanship*

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*

DD 86-1 : 1983 *Damp-proof courses — Methods of test for flexural bond strength and short term shear strength*



## 15 Conditions

15.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is granted only to the company, firm or person named on the front page — no other company, firm or person may hold or claim any entitlement to this Certificate
- 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 References in this Certificate to any Act of Parliament, Statutory Instrument, Directive or Regulation of the European Union, British, European or International Standard, Code of Practice, manufacturers' instructions or similar publication, are references to such publication in the form in which it was current at the date of this Certificate.

15.3 This Certificate will remain valid for an unlimited period provided that the product/system and the manufacture and/or fabrication including all related and relevant 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 In granting this Certificate, the BBA is not responsible for:

- 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
- individual installations of the product/system, including the nature, design, methods and workmanship of or related to the installation
- the actual works in which the product/system is installed, used and maintained, including the nature, design, methods and workmanship of such works.

15.5 Any information relating to the manufacture, supply, installation, use and maintenance 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 and maintained. It does not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date 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. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the manufacture, supply, installation, use and maintenance of this product/system.

