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Agrément Certificate  
**01/3823**  
Product Sheet 2

## SYSTEM PLATON

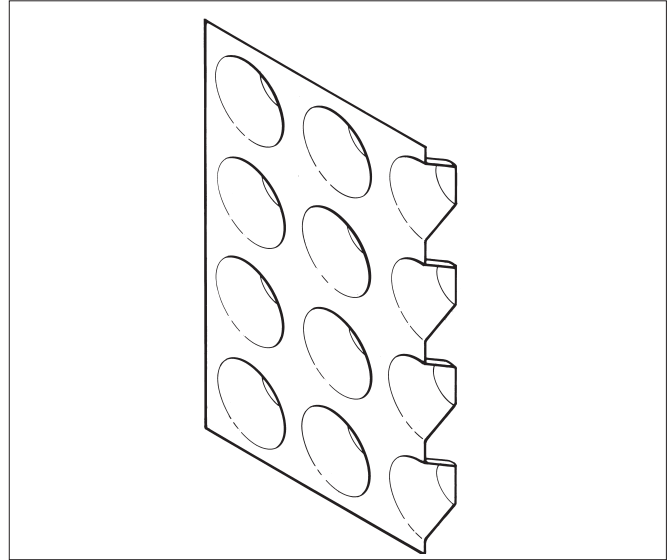
## PLATON P20

### PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate relates to Platon P20 a high-density polyethylene (HDPE) membrane, for damp-proofing walls and floors that require a large air gap for a high drainage volume, in new constructions or in existing buildings. It can be used above and below ground, over a contaminated or damp background, to support dry lining or flooring.

#### 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

**Resistance to water and water vapour** — the membrane is water resistant and has a high resistance to water vapour transmission (see section 5).

**Resistance to salt transfer** — the membrane provides an effective barrier to the transmission of salts or other contaminants from the substrate (see section 7).

**Resistance to puncture, impact and loading** — the membrane has a high resistance to puncture and will not be damaged by normal foot traffic during installation, or while laying concrete, or screeding. It can support the long-term loadings likely to be experienced in service without undue deformation (see section 8).

**Durability** — under normal conditions of use the system will provide an effective barrier to the transmission of salts, liquid water and water vapour for the life of the structure in which it is incorporated (see section 11).

The BBA has awarded this Agrément Certificate to the company named above for the product described herein. The 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



Simon Wroe  
Head of Approvals — Materials



Greg Cooper  
Chief Executive

Date of First issue: 22 September 2010

Originally certificated on 9 October 2001

*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.*

# Regulations

In the opinion of the BBA, Platon P20, 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)

For new construction and a 'Material Change of Use' of an existing buildings, as defined in Regulation 5a

Requirement:	C2(a)(b)	Resistance to moisture
Comment:		The system adequately resists the passage of moisture. See section 5.1 of this Certificate.
Requirement:	Regulation 7	Materials and workmanship
Comment:		The system is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.



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

For new construction and a 'Conversion' of an existing building, as defined in Regulation 4

Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The system is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards – construction
Standard:	3.3	Flooding and ground water
Comment:		The system can contribute to minimising or eliminating the effects of flooding on the building fabric and/or the building element, with reference to clause 3.3.1 <sup>(1)(2)</sup> . See section 5.1 of this Certificate.
Standard:	3.4	Moisture from the ground
Comment:		The system adequately resists the passage of moisture with reference to clauses 3.4.1 <sup>(1)(2)</sup> , 3.4.2 <sup>(1)(2)</sup> , 3.4.5 <sup>(1)(2)</sup> , 3.4.6 <sup>(1)(2)</sup> and 3.4.7 <sup>(1)(2)</sup> . See section 5.1 of this Certificate.
Standard:	3.6(a)	Surface water drainage
Comment:		The system can contribute to satisfying this Standard, with reference to clause 3.6.3 <sup>(1)(2)</sup> . See section 5.1 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The system adequately resists the passage of moisture, with reference to clause 3.10.1 <sup>(1)(2)</sup> . See section 5.1 of this Certificate.
Regulation:	12	Building standards – conversions
Comment:		All comments given for this system 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)

For new construction and a 'Material Change of Use' of an existing building, as defined in Regulation A9

Regulation:	B2	Fitness of materials and workmanship
Comment:		The system is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	C4(a)(b)	Resistance to ground moisture and weather
Comment:		The system adequately resists the passage of moisture. See section 5.1 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) of this Certificate.

# Non-regulatory Information

## NHBC Standards 2010

NHBC accepts the use of Platon P20, when installed and used in accordance with this Certificate, in relation to *NHBC Standards*, Chapter 5.1 *Substructure and ground bearing floors* and 5.2 *Suspended ground floors*.

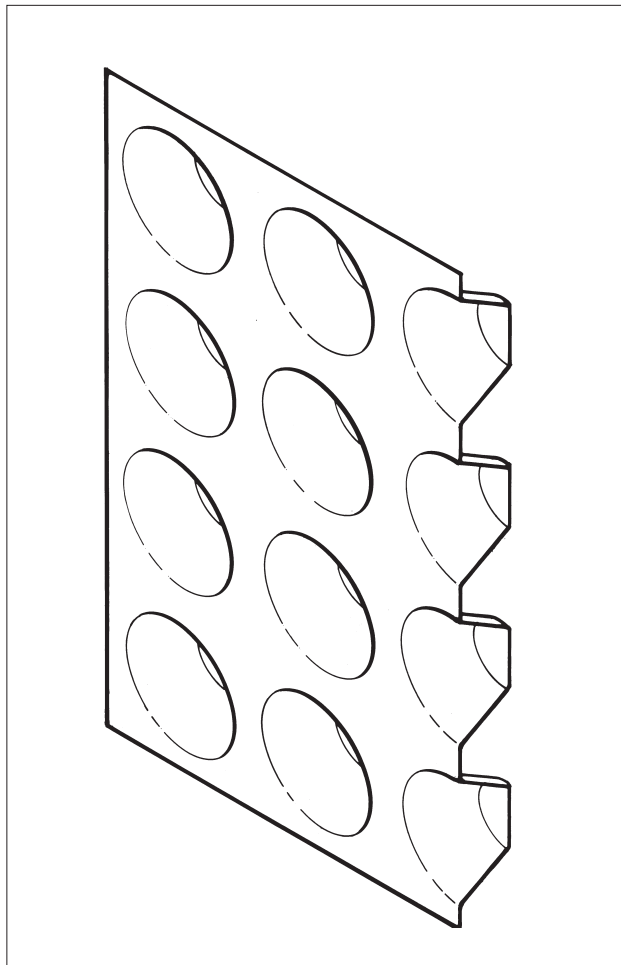
# General

Platon P20 is marketed in the UK by Triton Chemical Manufacturing Co Ltd, Triton House, Lydean Industrial Estate, 129 Felixstowe Road, Abbeywood, London SE2 9SG Tel: 020 8310 3929, Fax: 020 8312 0349, e-mail: info@triton-chemicals.com, website: www.triton-chemicals.com

## 1 Description

1.1 Platon P20 is a black, high-density polyethylene (HDPE) membrane, moulded to form raised studs at 50 mm centres (see Figure 1).

Figure 1 Platon P20



1.2 Platon P20 is available in roll form, and has characteristics of:

thickness (mm)	0.9
dome height (mm)	20.0
weight per unit area ( $\text{kg}\cdot\text{m}^{-2}$ )	0.95
roll size (m)	2.0 x 20
weight of roll (kg)	38 approx
air gap volume ( $\text{l}\cdot\text{m}^{-2}$ )	14

1.3 The membranes are formed in a continuous process in which high-density polyethylene (HDPE) is extruded into sheets and the stud impression formed.

1.4 Quality control is exercised over raw materials, during the production process and on the final product.

1.5 Ancillary items used with the membranes include:

Platon Brick Plug — a plastic plug for fixing membrane to brick and stone. The plug has a pre-formed hole permitting timber fixings to be inserted without breaching the membrane (see Figure 2)

Platon Sealing Tape — butyl rubber tape for sealing the Platon Wall/Floor Junction to the membrane

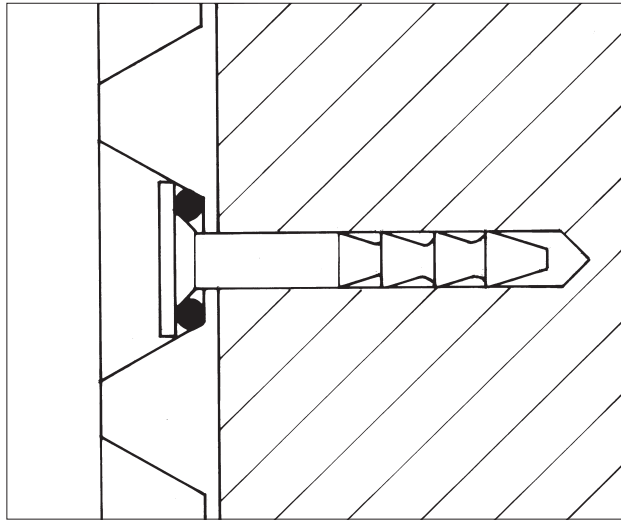
Platon Sealing Rope — butyl rubber beading for sealing joints in the membrane, sealing the membrane around pipes and openings and to form a gasket between the brick plug and membrane

Platon Sealer — butyl rubber sealant for sealing the membrane around pipes and openings

Platon Wall/Floor Junction — right-angled membrane strip, used in conjunction with Platon Sealing Tape, for sealing junctions between walls and floors, and for sealing joints at corners

Platon Overtape — butyl rubber tape, at least 100 mm wide, backed with non-woven polypropylene for sealing joints in the membrane.

Figure 2 Platon Brick Plug



## 2 Delivery and site handling

2.1 The membranes are delivered to site in wrapped rolls bearing the product and manufacturer's name and the BBA logo bearing the number of this Certificate.

2.2 Rolls should be stored on end, under cover and protected from sharp objects, sunlight and high temperatures.

## Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Platon P20.

## Design Considerations

### 3 General

3.1 Platon P20 is used as a damp-proof membrane on internal faces of walls and floors of all types of existing construction that require a large air gap for a high drainage volume. It can support a dry lining, screed or flooring, in the following situations:

- damp walls and floors in underground situations subject to high groundwater levels, and perennial moisture
- in conjunction with a remedial dpc system where the walls and floors have a high salt content, and/or it is necessary to complete the installation immediately without allowing a period for initial drying
- over walls and floors which have a friable or painted surface, are contaminated with oil or mould, or have a high salt content
- as a waterproofing membrane in areas subject to vibration.

3.2 Depending on the application required and the site conditions, the membrane may be used as:

- an underfloor damp-proof membrane
- a dry-lining for walls, vented into the room via aeration slots at the top and bottom of the wall
- a sealed system covering floor and/or wall used in conjunction with Platon Multi on the ceiling and/or wall, with provision made for disposing of water build-up behind the membrane via a sump and pump.

3.3 The membrane has not been assessed for use in chemically contaminated areas, such as brownfield sites

3.4 The membrane consists of 0.9 mm thick HDPE and, in the opinion of the BBA, meets the requirement for a radon barrier according to BRE Report (BR 211 : 1999) *Radon : guidance on protective measures for new dwellings*. However, the effectiveness of the joint sealing system used with Platon P20 has not been assessed against radon by the BBA and is outside the scope of this Certificate.

3.5 The system is satisfactory for use in Type C (drained protection) structural concrete constructions in accordance with BS 8102 : 1990, Clause 3.2.4.

3.6 Under normal operating conditions the membrane is not affected by underfloor heating.

### 4 Practicability of installation

The system should be installed by competent specialist contractors experienced with damp-proofing work.

## 5 Resistance to water and water vapour



5.1 The membrane is water resistant and has a high resistance to water vapour transmission. However, the product as installed is not resistant to hydrostatic pressure and consequently, the measures described in the Installation part of this Certificate must be followed to ensure that the membrane acts as a drainage layer with no excessive build-up of water behind the system.

5.2 All joints and fixings must be sealed with Platon sealing products, and drainage channels and gullies, or sumps and pumps should be installed as necessary to disperse excess or standing water.

## 6 Risk of condensation

6.1 As with any room, there is a need to control the generation and dispersal of moisture in the internal environment and to select appropriate and robust designs to minimise the risk of both surface and interstitial condensation, especially where insulation is used over the membrane.

6.2 In common with most waterproofing membranes, the product has a very high resistance to vapour diffusion, and when placed on the cold side of a construction may increase the risk of interstitial condensation. A calculation should be carried out to BS 5250 : 2002 and designers should consider appropriate techniques for managing the safe egress of moisture vapour with care (such as control of the internal room environment or use of a vapour control layer on the warm side of the insulation), and in particular the effect of moisture on any materials at or in contact with materials below the local dew-point.

## 7 Resistance to salt transfer

The system provides an effective barrier to the transmission of salts or other contaminants from the substrate.

## 8 Resistance to puncture, impact and loading

8.1 The membrane has a high resistance to puncture and will not be damaged by normal foot traffic during installation or while laying concrete or screeding to BS 8204-1 : 2003.

8.2 The membrane can support the long-term imposed loadings defined in National Annex to BS EN 1991-1-1 : 2002, Table NA.2, categories A to D, without undue deformation.

## 9 Wall-mounted fittings

Wall-mounted fittings (apart from lightweight items such as framed pictures) should be fixed where possible into battens, whose position and number of support fixings into the loadbearing structure are predetermined. Only in exceptional circumstances should fittings be fixed through the membrane and lining board to the loadbearing structure behind, using proprietary fixings. Holes made in the membrane must be filled with a flexible sealant, such as Platon Sealer or Platon Sealing Rope or Tape.

## 10 Maintenance

10.1 As the membrane is confined within a wall or floor space and has suitable durability (see section 11), maintenance is not required.

10.2 Regular maintenance of all gullies, sumps and pumps must be conducted to ensure that a build-up of water does not occur behind the membrane.

## 11 Durability



11.1 Under normal conditions of use, the system will provide an effective barrier to the transmission of salts, liquid water and water vapour for the life of the structure in which it is incorporated.

11.2 Regular maintenance of all gullies, sumps and pumps must be conducted to ensure that a build-up of water does not occur behind the membrane.

## Installation

## 12 Survey

12.1 Where the area to be treated is below ground, or where conditions are damp, a full survey is necessary by a specialist waterproofing surveyor to diagnose the cause and to establish if treatment is required.

12.2 If rising damp to above-ground elevations is found, a remedial treatment is conducted in accordance with the relevant Agrément Certificate, BS 6576 : 2005 and the Property Care Association *Code of Practice for Installation of Remedial Damp-proof Courses in Masonry Walls*.

12.3 Appropriate remedial measures are taken to rectify major causes of damp conditions or water ingress, and to repair structural defects.

## 13 Surface preparation

13.1 When used in new constructions the concrete base must be laid in accordance with BS 8204-1 : 2003.

13.2 If a board covering is to be laid directly on the membrane, the concrete base must have a surface regularity with a maximum permissible departure of 5 mm from the underside of a 2 m straight edge, resting in contact with the floor in accordance in BS 8204-1 : 2003.

13.3 Any unsound plaster, render or screed should be removed to expose the substrate which is then cleaned with a stiff brush to remove loose material, laitance, salt residue, mould or adhesive. If mould is present the substrate should be treated with a fungicidal wash.

13.4 Uneven substrates should be dubbed out with a cement-sand (1:4) render or screed, to the tolerance described in section 13.2. They should be allowed to set before the membrane is fixed.

## 14 Procedure

### General

14.1 Platon P20 may be used in combination with any of the appropriate Platon membranes which are the subject of other Product Sheets of this Certificate.

### Walls

14.2 Installation of the membrane is commenced at the top of the construction. Sheets are overlapped by 100 mm, ie two studs. For horizontal joints, the lower sheet is always positioned in front of the upper sheet. Overlaps should be sealed using a run of Platon Sealing Rope placed along the flat area of the P20 membrane between the two rows of studs.

14.3 Alternatively, for vertical joints only, the sheets can be fixed flush and the joints overlapped with Platon Wall/Floor Junction, and Platon Sealing Tape or Platon Overtape.

14.4 Fixings are made through the membrane into 10 mm holes drilled through the studs. Platon Brick Plugs, to which Platon Sealing Rope has been applied around the rim, are inserted into the holes and tapped flush with the membrane. The Platon Sealing Rope forms a sealing gasket between the plug and membrane.

14.5 Preservative-treated timber battens of minimum dimensions 25 mm by 38 mm are fixed into the plug's fixing hole using suitable screws with a maximum screwing-in depth of 25 mm plus the batten depth. If required, Platon Sealer is injected into the fixing holes to reduce the risk of water penetration. The membrane can also be dry-lined, using free-standing framework, blockwork or similar.

14.6 Spacings between fixings will depend on the method of dry lining to be applied. When using preservative-treated timber battens the fixings should be kept to a minimum of 600 mm. Proprietary metal fast track systems and independent frame systems will require less fixings, but sufficient should be used to ensure that the membrane is reasonably tight to the wall, especially at corners.

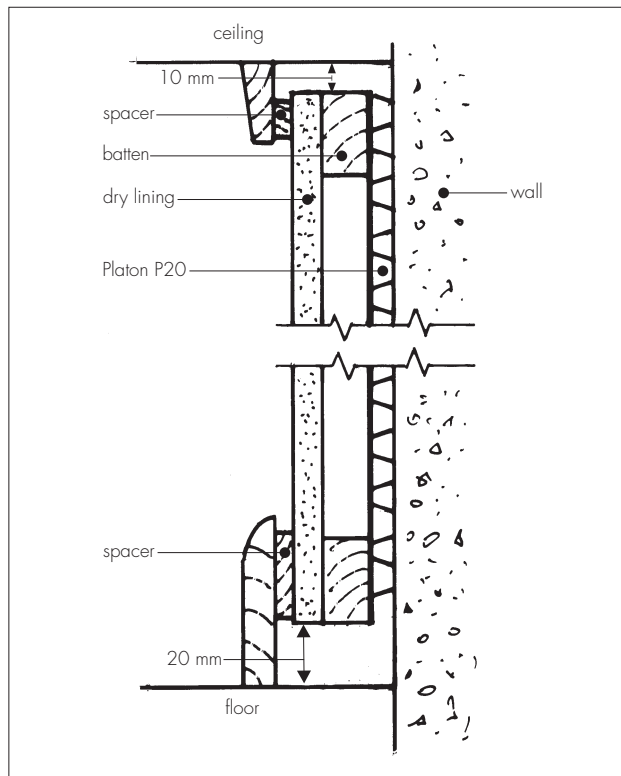
14.7 The membrane is installed over windows and then cut away to expose them. For doors and other obstructions, the membrane is installed up to the perimeter. In both cases, the gaps are sealed with Platon Wall/Floor Junction and Platon Sealing Tape.

14.8 Power cables, points and light switches should preferably be remounted in front of the membrane.

14.9 In below-ground installations, the practice of leaving the top of the wall membrane unsealed where there is no requirement for a ceiling membrane to be installed may need to be reconsidered in cases where ingress of gases, odours, or vermin is a consideration (such as in proximity to food preparation areas). The advice of the Certificate holder should be sought in these situations.

14.10 In above-ground installations, the build-up of water vapour behind the membrane is controlled by venting into the room. To facilitate this, the membrane is installed with a 10 mm gap at the top, and a 20 mm gap at the bottom of the wall. Spacers measuring 3 mm by 200 mm are then fixed at 600 mm centres behind the skirting board and ceiling coving to ensure a ventilation gap (see Figure 3). Alternatively, a proprietary ventilated skirting board or ceiling coving may be used.

Figure 3 Wall detail with dry lining



## Floors

14.11 Floors should have a drainage outlet point. There should be a fall towards the outlet point or a drainage channel made around the perimeter of the floor, to ensure water can flow to the outlet.

14.12 The membrane is rolled out 'studs down' over the floor, and consecutive membrane widths are laid so an overlap of two interlocking studs is achieved. The overlapped joints should be sealed using Platon Sealing Rope in the flat section between studs, or where necessary, sheets are laid flush and overlapped with Platon Wall/Floor Junction and sealed with Platon Sealing Tape, or overlapped and sealed with Platon Overtape

14.13 The membrane is cut within 5 mm to 10 mm of any pipes and services in the floor, and the gap filled with Platon Sealing Rope. A patch of membrane or Platon Wall/ Floor Junction is overlaid and sealed to the service with Platon Sealing Rope, and its circumference sealed with Platon Sealing Tape or Platon Overtape.

14.14 Fixings must not be applied through the floor membrane.

14.15 Where appropriate at wall/floor junctions and corners of the installation, the membrane should be cut flush and the gap between the wall and floor membranes overlaid with Platon Wall/Floor Junction and sealed with Platon Sealing Tape. Alternatively, where a wall membrane is not being installed the floor membrane may be turned up by 100 mm at the walls.

14.16 At corners, a cut is made and the membrane folded to form an edge-to-edge joint, then overlaid with Platon Wall/Floor Junction and sealed with Platon Sealing Tape.

## 15 Dry lining of walls

15.1 Gypsum plasterboard to BS EN 520 : 2004, or similar dry lining boards covered by a current Agrément Certificate, are fixed to the battens with galvanized screws or nails, positioned a minimum of 12 mm from the edge of the board. Care should be taken to ensure that penetration of the plasterboard screws or nails is less than batten depth to avoid puncturing the membrane.

15.2 Alternatively, linings can be free-standing framework, blockwork or similar. Where necessary these should be tied back by fixing into the Platon Brick Plug's fixing hole. Platon Sealer may be injected into the fixing hole to reduce the risk of water penetration.

## 16 Floor membrane coverings

16.1 The membrane is covered by reinforced concrete or screed at least 65 mm thick, in accordance with BS 8204-1 : 2003. Care should be taken to ensure the membrane is not displaced when placing the concrete or screed over the membrane.

16.2 Alternatively, the studs should be filled with dried sand, and then suitable tongue-and-groove panels should be selected in accordance with BS EN 12871 : 2001 and loose-laid over the membrane to within 10 mm of the walls. The panels are staggered and the joints sealed with a thermoplastic wood adhesive to BS EN 204 : 2001.

## 17 Tests

Tests were carried out to determine:

- thickness
- short-term compression resistance
- resistance to long-term loading
- nail tear resistance
- puncture resistance.

## 18 Investigations

18.1 A reassessment was made of the data on which previous Certificate No 92/2835 was based.

18.2 Regular routine surveillance visits have been made to the manufacturing site under Certificate No 92/2835 and the current Certificate.

18.3 An assessment was made of the scope of use and durability of the system in relation to the generic properties of the membrane.

## Bibliography

- BS 5250 : 2002 *Code of practice for control of condensation in buildings*
- BS 6576 : 2005 *Code of practice for diagnosis of rising damp in walls of buildings and installation of chemical damp-proof courses*
- BS 8102 : 2009 *Code of practice for protection of below ground structures against water from the ground*
- BS 8204-1 : 2003 *Screeds, bases and in-situ floorings — Concrete bases and cement sand levelling screeds to receive floorings — Code of practice*
- BS EN 204 : 2001 *Classification of thermoplastic wood adhesives for non-structural applications*
- BS EN 520 : 2004 *Gypsum plasterboards — Definitions, requirements and test methods*
- BS EN 12871 : 2010 *Wood-based panels — Performance specifications and requirements for load bearing boards for use in floors, walls and roofs*
- NA to BS EN 1991-1-1 : 2002 *UK National Annex to Eurocode 1 : Actions on structures — General actions— Densities, self-weight, imposed loads for buildings*
- Property Care Association COP09 *Code of Practice for Installation of Remedial Damp-proof Courses in Masonry Walls*

## 19 Conditions

19.1 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.

19.2 Publications and documents referred to in this Certificate are those that the BBA deems to be relevant at the date of issue or re-issue of this Certificate and include any: Act of Parliament; Statutory Instrument; Directive; Regulation; British, European or International Standard; Code of Practice; manufacturers' instructions; or any other publication or document similar or related to the aforementioned.

19.3 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.

19.4 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.

19.5 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.

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