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Agrément Certificate
01/3823
Product Sheet 1

SYSTEM PLATON

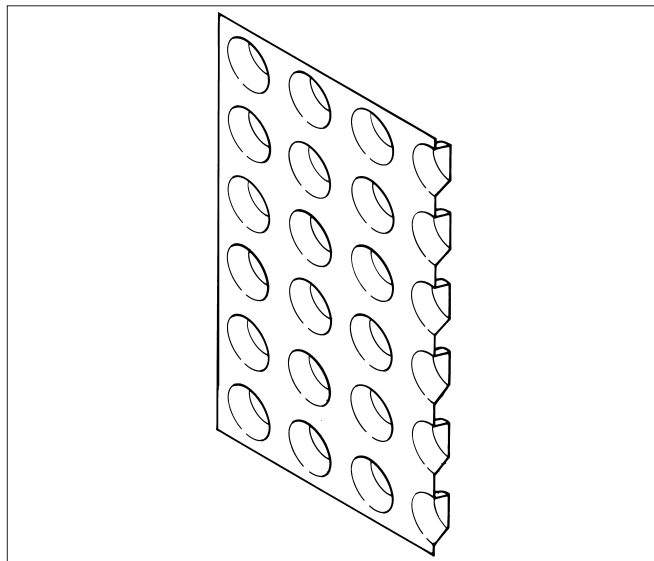
PLATON MULTI

PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate relates to Platon Multi, a blue or translucent polypropylene (PP) membrane for damp-proofing walls, floors and vaulted ceilings, in new construction or in existing buildings. It can be used above or below ground, over a contaminated or damp background, to support a 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

Date of First issue: 22 September 2010

Originally certificated on 9 October 2001

Simon Wroe
Head of Approvals — Materials

Greg Cooper
Chief Executive

The BBA is a UKAS accredited certification body — Number 1113. 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, Platon Multi, 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 ⁽¹⁾⁽²⁾ . 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 ⁽¹⁾⁽²⁾ , 3.4.2 ⁽¹⁾⁽²⁾ , 3.4.5 ⁽¹⁾⁽²⁾ , 3.4.6 ⁽¹⁾⁽²⁾ and 3.4.7 ⁽¹⁾⁽²⁾ . 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 ⁽¹⁾⁽²⁾ . 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 ⁽¹⁾⁽²⁾ . 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 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ . (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 Multi, 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*.

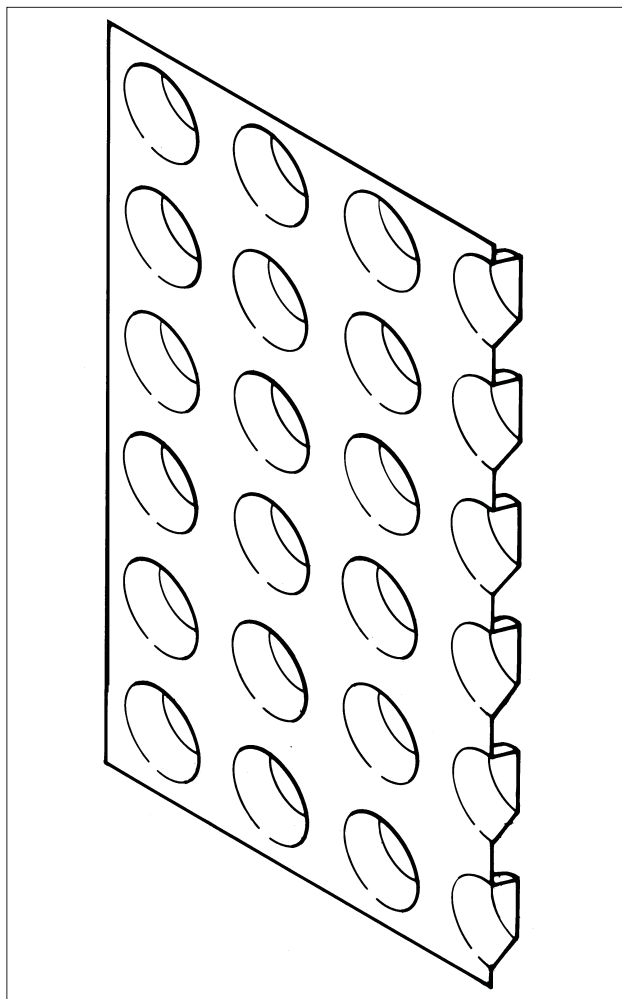
General

Platon Multi is marketed in the UK by Triton Chemical Manufacturing Co Ltd, Triton House, Lyndeian 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 Multi is a blue or translucent polypropylene (PP) membrane, moulded to form raised studs at 20 mm centres (see Figure 1).

Figure 1 Platon Multi



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

thickness (mm)	0.5
stud height (mm)	5
weight per unit area ($\text{kg}\cdot\text{m}^{-2}$)	0.45
roll size (m) ⁽¹⁾	2.05 x 20
weight of roll (kg)	18.5
air gap volume ($\text{l}\cdot\text{m}^{-2}$)	3.8

(1) Includes a 50 mm flanged dome-free area for overlapping sheets.

1.3 The membranes are formed in a continuous process in which polypropylene (PP) is extruded into sheets and the studs 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 backgrounds. 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 joints in the membrane and for use with Platon Wall/Floor Junction

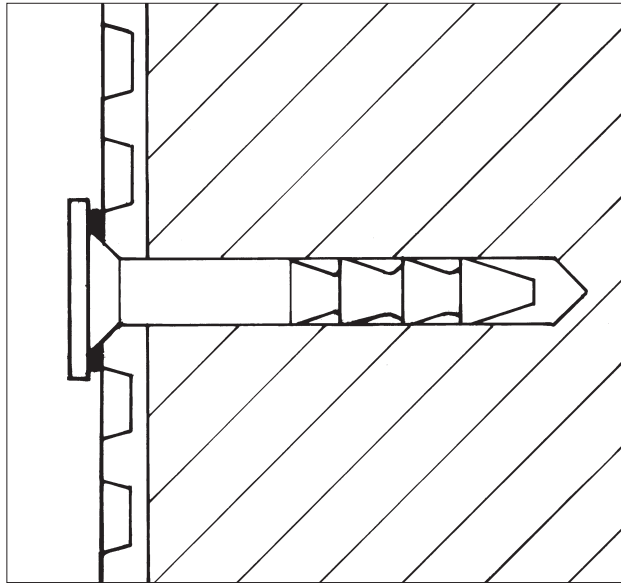
Platon Sealing Rope — butyl rubber beading for sealing joints in the membrane, sealing the membrane around pipes and openings, and to form a gasket between the brick plug and membrane

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 Multi.

Design Considerations

3 General

3.1 Platon Multi is used as a damp-proof membrane on walls, floors and vaulted ceilings, above and below ground, in new construction or in existing buildings over a contaminated or damp background. It can support a dry lining, screed or flooring, in the following situations:

- on damp walls and floors in underground situations subject to high groundwater levels, and perennial moisture
- on vaulted ceilings of archways or cellars subject to water ingress
- 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 (eg 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, wall and ceiling 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 0.5 mm thick polypropylene 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 Multi 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, ceiling 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



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.

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 with BS 8204-1 : 2003.

13.3 Any unsound plaster, render or screed is removed to expose the substrate and 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. The Certificate holder can advise on suitable materials and procedures to be used.

13.4 Uneven floor 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 Multi may be used in combination with any of the appropriate Platon membranes which are the subject of other Product Sheets of this Certificate.

14.2 The membrane should always be used with the flanged edge positioned in front of, and overlapping the previously installed membrane width. Joints with the flanged edge are sealed using Platon Sealing Tape, while stud-to-stud joints (without the flanged edge) are sealed by overlapping the membrane by a minimum of 200 mm and using Platon Overtape.

14.3 At corners where membranes are not installed continuously from one surface to the next, they should be finished at the corner on each surface, and sealed together using Platon Wall/Floor Junction and Platon Sealing Tape.

14.4 Fixings are made through the membrane into 10 mm holes drilled centrally 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 On difficult substrates, the use of the translucent membrane allows the contractor to view the substrate through the membrane and choose the optimum site for each fixing.

14.6 On walls and ceilings, 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 drylined, using free-standing framework, blockwork or similar.

Walls

14.7 Installation of the membrane is commenced at the top of the construction. The membrane may require initial fixing on a ceiling or along the upper edge of a wall, prior to final fixings along batten runs. For joints where the flanged edge is not used, the two membrane sheets are overlapped by a minimum of 200 mm, and for horizontal joints the lower sheet is always positioned in front of the upper sheet.

14.8 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 maximum 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.

14.9 The installation is conducted over windows and the membrane is cut away to expose them. The gaps are then sealed with Platon Sealing Tape or Rope.

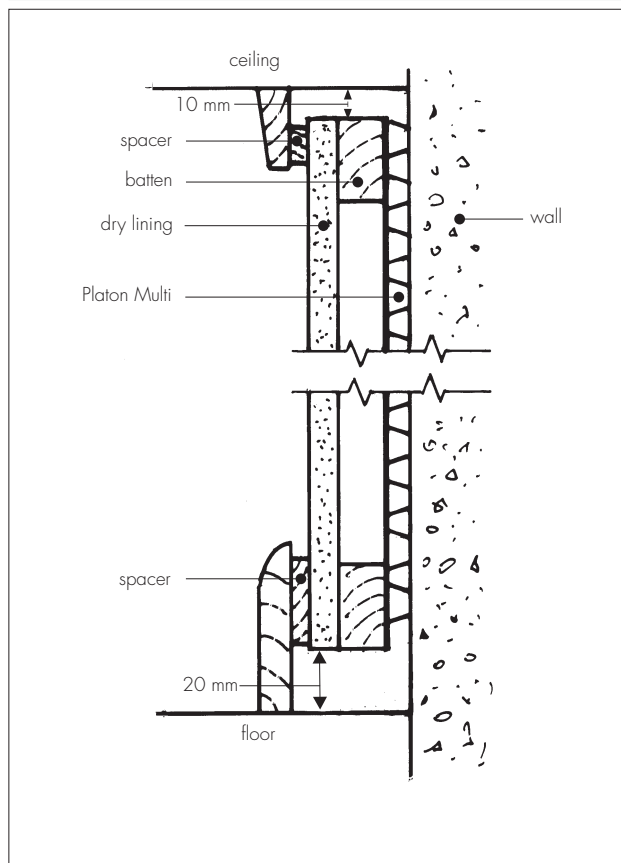
14.10 For doors and some obstructions, the technique covered in section 14.9 cannot be used. Instead, the membrane is installed up to the perimeter and the gap sealed in the same manner.

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

14.12 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.

14.13 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



Ceilings

14.14 Ceilings to be covered must always have a fall, as per vaulted cellar constructions, to ensure water does not build up against the membrane or a joint. The vertical drop between the ends of two membrane sheets for horizontal overlaps should be a minimum of 100 mm.

14.15 Any sagging of the membrane between fixing points should not be great enough for ponding to occur.

14.16 At the end walls of vaulted constructions the membrane must be turned down onto the end wall by a minimum 300 mm (ie 15 studs). The membrane is mitred as necessary to fit the curve of the ceiling, and the joint sealed with Platon Sealing Tape or Rope. The wall membrane should be cut to fit the curve of the ceiling, fixed in front of the ceiling membrane, and the gap sealed with Platon Sealing Tape, Rope or Platon Sealer.

Floors

14.17 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.

14.18 The membrane is rolled out 'studs down' over the floor, and consecutive membrane widths are laid so the flanged edge overlaps the first sheet by two studs. Joints are sealed using Platon Sealing Tape. Joints without the flanged edge are oversealed using Platon Overtape.

14.19 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 is overlaid and sealed to the service with Platon Sealing Rope, and its circumference sealed with Platon Sealing Tape.

14.20 Fixings must not be applied through the floor membrane.

14.21 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 sealed with Platon Wall/Floor Junction and Platon Sealing Tape. Alternatively, where a wall membrane is not being installed the floor membrane may be turned up by 100 mm at the wall and cut flush with the top of the finished floor.

15 Dry lining of walls

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.

16 Floor membrane coverings

16.1 If required, extruded, closed-cell polystyrene insulation boards, minimum density $30 \text{ kg}\cdot\text{m}^{-3}$, are laid over the membrane.

16.2 Suitable tongue-and-groove flooring board panels should be selected in accordance with BS EN 12871 : 2010, 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.

16.3 Alternatively, the membrane is covered by concrete or screed of minimum thickness 50 mm (or of minimum thickness 65 mm if laid over insulation boards) in accordance with BS 8204-1 : 2003. Care should be taken to ensure the membrane is not displaced when placing the concrete or screed. The concrete screed should be reinforced to inhibit shrinkage cracks.

16.4 Proprietary screeds, which can generally be laid at thicknesses less than 50 mm, may also be considered but use of these products with the membrane has not been assessed by the BBA, and is outside the scope of this Certificate

17 Finishing works

After the system has been installed and the walls dry-lined, permanent decorations such as vinyl papers or oil paints may be applied. Temporary permeable decorations (necessary with traditional, cement-based waterproofers) are not necessary.

Technical Investigations

18 Tests

18.1 Tests were carried out to determine:

- thickness
- resistance to long-term loading
- nail-tear resistance
- effectiveness of sealing rope/membrane bond.

18.2 Independent test reports were examined relating to:

- melt flow index
- tensile strength and elongation at break.

19 Investigations

19.1 The manufacturing process and quality control procedures were examined and details were obtained of the quality and composition of the materials used.

19.2 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*

20 Conditions

20.1 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.

20.2 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.

20.3 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.

20.4 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.

20.5 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.

