Twistfix Ltd
KKM Buildings
Old Reservoir Road
Farlington
Portsmouth PO6 1SU

Tel: 0845 123 6006
e-mail: sales@twistfix.co.uk
website: www.twistfix.co.uk

Agrément Certificate
19/5686
Product Sheet 3

TWISTFIX TANKING MEMBRANE

TWISTFIX BASELINE 8 CAVITY DRAIN MEMBRANE

This Agrément Certificate Product Sheet(1) relates to Twistfix Baseline 8 Cavity Drain Membrane, a translucent high-density polyethylene (HDPE) membrane for damp-proofing walls, floors and 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.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

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

KEY FACTORS ASSESSED

Resistance to water and water vapour — the product is water resistant and has a high resistance to water vapour transmission (see section 6).

Resistance to salt transfer — the product provides an effective barrier to the transmission of salts or other contaminants from the substrate (see section 8).

Resistance to puncture, impact and loading — the product 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 9).

Durability — under normal conditions of use the product 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 12).

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

On behalf of the British Board of Agrement

Date of First issue: 15 August 2019

John Albon
Chief Scientific Officer

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

British Board of Agrément
Bucknalls Lane
Watford
Herts WD25 9BA

tel: 01923 665300
clientservices@bbacerts.co.uk
www.bbacerts.co.uk

Regulations

In the opinion of the BBA, Twistfix Baseline 8 Cavity Drain Membrane, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):

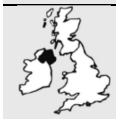
The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	**C2(a)(b)**	**Resistance to moisture**
Comment:		The product adequately resists the passage of moisture. See section 6.1 of this Certificate.
Regulation:	**7**	**Materials and workmanship (applicable to Wales only)**
Regulation:	**7(1)**	**Materials and workmanship (applicable to England only)**
Comment:		The product is acceptable. See section 12 and the *Installation* part of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)**	**Durability, workmanship and fitness of materials**
Comment:		The product is acceptable. See section 12 and the *Installation* part of this Certificate.
Regulation:	**9**	**Building standards applicable to construction**
Standard:	3.3	Flooding and ground water
Comment:		The product 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) of this Standard. See section 6.1 of this Certificate.
Standard:	3.4	Moisture from the ground
Comment:		The product 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) of this Standard. See section 6.1 of this Certificate.
Standard:	3.6(a)	Surface water drainage
Comment:		The product can contribute to satisfying this Standard, with reference to clause 3.6.3(1)(2). See section 6.1 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The product adequately resists the passage of moisture, with reference to clause 3.10.1(1)(2) of this Standard. See section 6.1 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The product can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	**12**	**Building standards applicable to conversions**
Comment:		Comments in relation to the product under Regulation 9, Standards 1 to 6 also apply to this Regulation, with reference to clause 0.12.1(1)(2) and Schedule 6(1)(2).

(1) Technical Handbook (Domestic).
(2) Technical Handbook (Non-Domestic).



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

Regulation:	**23(a)(i)**	**Fitness of materials and workmanship**
Comment:	**(iii)(b)(i)**	The product is acceptable. See section 12 and the *Installation* part of this Certificate.

Regulation:	**28(a)(b)**	**Resistance to moisture and weather**
Comment:		The product adequately resists the passage of moisture. 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 section: 1 *Description* (1.2) of this Certificate.

Additional Information

NHBC Standards 2019

In the opinion of the BBA, Twistfix Baseline 8 Cavity Drain Membrane, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapters 5.1 *Substructure and ground bearing floors,* 5.2 *Suspended ground floors* and 5.4 *Waterproofing of basements and other below ground structures*.

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

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

CE marking

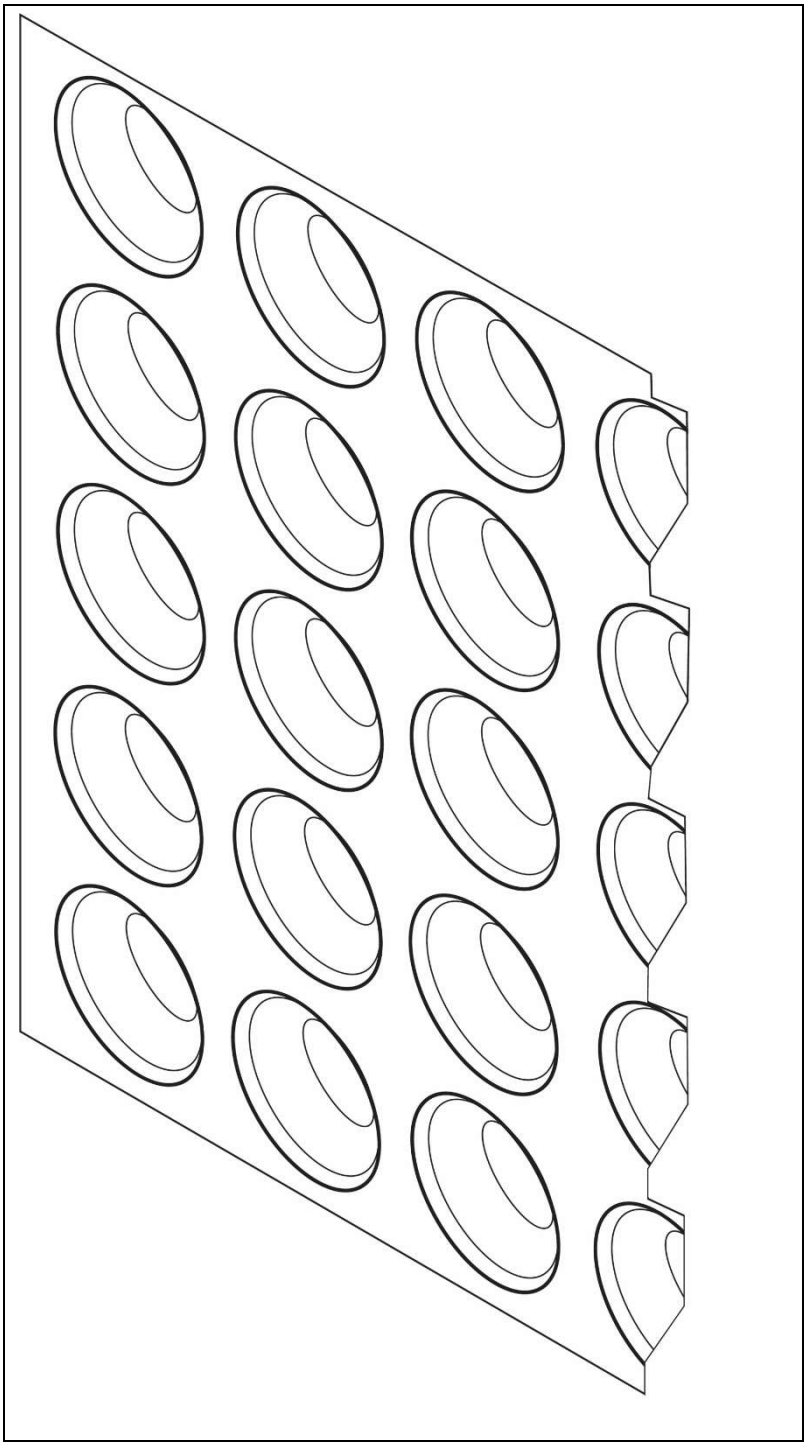
The Certificate holder has taken the responsibility of CE marking the product, in accordance with harmonised European Standard BS EN 13967 : 2012. An asterisk (*) appearing in this Certificate indicates that data shown are given in the manufacturer's Declaration of Performance.

Technical Specification

1 Description

1.1 Twistfix Baseline 8 Cavity Drain Membrane is a translucent, HDPE membrane, moulded to form raised studs at 25 mm centres and incorporates a flanged edge.

Figure 1 Twistfix Baseline 8 Cavity Drain Membrane



1.2 The product is supplied in roll form, and has the following nominal characteristics:

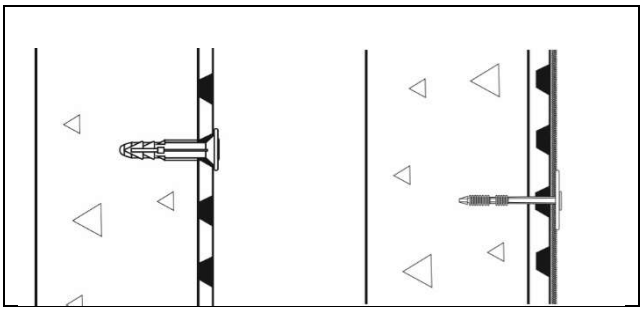
thickness (mm)	0.8
stud height (mm)	7
weight per unit area ($g \cdot m^{-2}$)	500, 700
roll size (m)(1)	2.0 x 20, 2.4 x 20
weight of roll (kg)	20, 24, 33.6, 56
air gap volume ($\ell \cdot m^{-2}$)	4.95.

(1) Includes an 85 mm stud-free area for overlapping sheets.

1.3 Ancillary items for use with the product include:

- Membrane Plug — a 60 by 35 mm plastic plug with or without thermoplastic elastomer seal or Waterproofing Rope for fixing membrane to brick, stone, and concrete into a 10 mm diameter hole on above and below ground structures
- Mesh Membrane Plug — a 60 by 50 mm plastic plug with or without thermoplastic elastomer seal or Waterproofing Rope for fixing membrane to brick, stone, and concrete into an 8 mm diameter hole on above and below ground structures, where a plaster, render, or dot and dap plaster board is necessary
- Waterproofing Tape — butyl rubber tape for sealing joints in the membrane
- Waterproofing Rope — butyl rubber beading for sealing joints in the membrane and sealing around plugs
- Waterproof Corner Tape — butyl rubber tape for sealing between vertical and horizontal membranes
- Overseal Tape — butyl 75 mm rubber tape for sealing butt joints between membranes, and detailing
- Waterproof Plug Seals — to fit around the plugs as an alternative to Waterproofing Rope
- Fibre Tape — butyl rubber tape with a fleece for sealing between vertical and horizontal membrane.

Figure 2 Membrane Plug and Mesh Membrane Plug



2 Manufacture

2.1 The product is formed in a continuous process in which HDPE is extruded into sheets into which the stud impressions are formed.

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

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

3 Delivery and site handling

3.1 The product is delivered to site in wrapped rolls bearing the product and manufacturer's name and the BBA logo incorporating the number of this Certificate.

3.2 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 Twistfix Baseline 8 Cavity Drain Membrane.

Design Considerations

4 Use

4.1 Twistfix Baseline 8 Cavity Drain Membrane is satisfactory for use 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.

4.2 Depending on the application required and the site conditions, the product 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.

4.3 The product has not been assessed for use in chemically contaminated areas, such as brownfield sites.

4.4 The product is satisfactory for use in Type C (drained protection) constructions in accordance with BS 8102 : 2009.

4.5 Under normal operating conditions, the product is not affected by underfloor heating.

5 Practicability of installation

The product is designed to be installed by competent specialist contractors experienced with damp-proofing work.

6 Resistance to water and water vapour

6.1 The product is water resistant and has a high resistance to water vapour transmission. However, as installed it 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 product acts as a drainage layer with no excessive build-up of water behind it.

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

7 Risk of condensation

7.1 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.

7.2 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 : 2011 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).

8 Resistance to salt transfer

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

9 Resistance to puncture, impact and loading

9.1 The product 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.

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

10 Wall-mounted fittings

Wall-mounted fittings (apart from lightweight items such as framed pictures) should be fixed where possible into battens, the position and number of support fixings into the loadbearing structure of which 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 Waterproofing Rope or Waterproofing Tape.

11 Maintenance

11.1 As the membrane is confined within a wall, ceiling or floor space and has suitable durability (see section 12), maintenance is not required.

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

12 Durability

Under normal conditions of use, the product 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.

13 Reuse and recyclability

The product comprises polyethylene, which can be recycled.

Installation

14 Survey

14.1 Where the area to be installed with Twistfix Baseline 8 Cavity Drain Membrane is below ground, or where conditions are damp, a full survey by a specialist waterproofing surveyor is necessary, to diagnose the cause and to establish if treatment is required.

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

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

15 Surface preparation

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

15.2 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.

15.3 Any unsound plaster, render or screed is 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 HSE-approved fungicidal wash. The Certificate holder can advise on suitable materials and procedures to be used.

15.4 Uneven substrates should be made level with a suitable levelling material to the tolerance described in section 15.2 which should be allowed to set before the membrane is fixed. The Certificate holder can advise on suitable materials.

16 Procedure

General

16.1 Twistfix Baseline 8 Cavity Drain Membrane may be used in combination with any of the appropriate Twistfix Tanking Membrane which are the subjects of other Product Sheets of this Certificate.

16.2 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 Waterproofing Tape, while stud-to-stud joints (without the flanged edge) are sealed by overlapping the membrane by a minimum of four studs and sealing with Waterproofing Rope placed between the last four rows or oversealing the joint with Waterproof Corner Tape, Fibre Tape or Overseal Tape.

16.3 At corners where membrane is not installed continuously from one surface to the next, they should be finished at the corner on each surface and sealed together using Waterproof Corner Tape, Fibre Tape or Overseal Tape.

16.4 The membrane should always be used with the lower sheet placed in front of the higher sheet. Fixings are made through the membrane into 10 mm diameter holes drilled centrally through the studs, Membrane Plugs with Waterproof Plug Seals or Membrane Plugs to which Waterproofing Rope has been applied around the rim, are inserted into the holes and tapped flush with the membrane. Waterproof Plug Seals or Waterproofing Rope forms a sealing gasket between the plug and membrane. Alternatively, if used above ground, Mesh Membrane Plugs can be used with an 8 mm diameter drill hole. The seal must be compressed to function as a barrier against water ingress, and this should be visually checked as each plug is fixed.

16.5 The translucence of the membrane allows the contractor to view through to the substrate and choose the optimum site for each fixing.

16.6 On walls and ceilings, preservative-treated timber battens of minimum dimensions 25 by 38 mm are fixed into the plug's fixing hole using suitable screws with a maximum screwing-in depth of 30 mm plus the batten depth. The membrane can also be dry-lined, using free-standing framework, blockwork or similar.

Walls

16.7 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 sheets are overlapped by a minimum of four rows of studs, and for horizontal joints the lower sheet is always positioned in front of the upper sheet.

16.8 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 400 mm centres vertically and 600 mm horizontally. Proprietary metal fast track systems and independent frame systems will require fewer fixings, but sufficient number should be used to ensure that the membrane is reasonably tight to the wall, especially at corners.

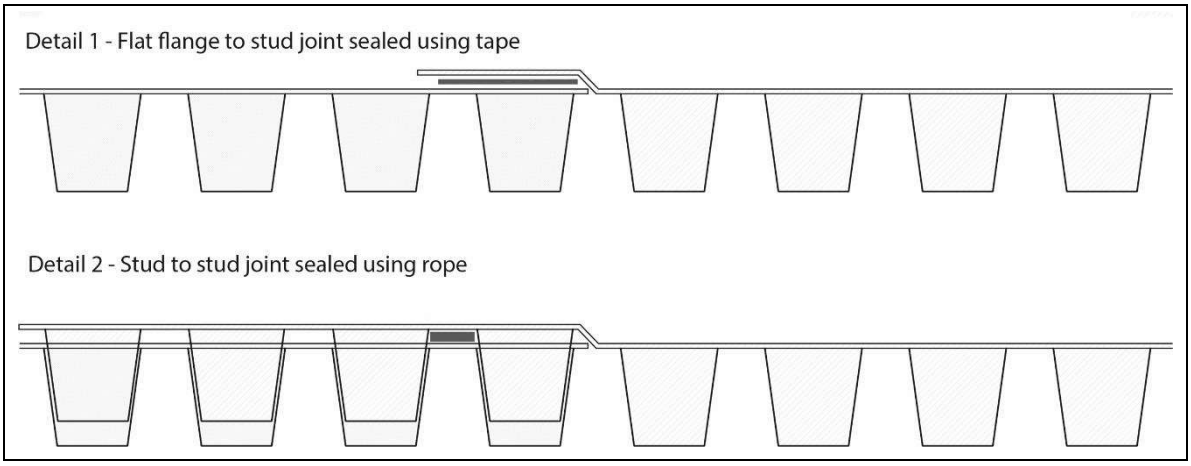
16.9 Power cables, points and light switches should preferably be remounted in front of the membrane.

16.10 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, 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.

16.11 The installation is conducted over windows and the membrane is cut away to expose them. The gaps are then sealed with Waterproofing Tape or Waterproofing Rope, Waterproof Corner Tape, Fibre Tape or Overseal Tape.

16.12 For doors and some obstructions, the technique covered in section 16.11 cannot be used. Instead, the membrane is installed up to the perimeter and the gap sealed in the same manner.

Figure 3 Tape and Rope sealing



Ceilings

16.13 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 four rows of studs.

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

16.15 At the end walls of vaulted constructions, the membrane must be turned down onto the end wall by a minimum of 200 mm. The membrane is mitred as necessary to fit the curve of the ceiling, and the joint sealed with Waterproofing Tape, Waterproofing Rope, Waterproof Corner Tape, Fibre Tape or Overseal Tape. The adjoining wall membrane should be cut to fit the curve of the ceiling, fixed in front of the ceiling membrane, and the gap sealed with Waterproofing Tape, Waterproofing Rope, Waterproof Corner Tape, Fibre Tape or Overseal Tape.

Floors

16.16 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 that water can flow to the outlet.

16.17 The membrane is rolled out ‘studs down’ over the floor, and consecutive sheet widths are laid so the flanged edge overlaps the first sheet by four studs. Joints are sealed using Waterproofing Tape applied over the second row of studs. Joints without the flanged edge are overlapped by four rows of studs and sealed with Waterproofing Rope applied between the last two rows and over sealed using Waterproof Corner Tape, Fibre Tape or Overseal Tape.

16.18 The membrane is cut within 5 to 10 mm of any pipes and services in the floor, and the gap filled with Waterproofing Rope or Waterproof Corner Tape. If necessary, a patch of membrane is overlaid and sealed to the service with Waterproofing Rope, and its circumference sealed with Waterproofing Tape. If necessary, a patch of the membrane is overlaid and sealed to the service with Waterproofing Rope, and its circumference sealed with Waterproofing Tape, Waterproof Corner Tape, Fibre Tape or Overseal Tape.

16.19 Fixings must not be applied through the floor sheets.

16.20 At wall/floor junctions the membrane is turned up at the wall and sealed using Waterproof Corner Tape. The floor membrane can also be sealed to the upstand of the perimeter channel using Waterproof Corner Tape.

17 Dry lining of walls

Gypsum plasterboard to BS EN 520 : 2004, or similar dry lining boards covered by a current BBA 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 by screws or nails is less than batten depth to avoid puncturing the membrane.

18 Floor membrane coverings

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

18.2 Suitable tongue-and-groove flooring board panels should be selected in accordance with BS EN 12871 : 2013, 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.

18.3 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 that the membrane is not displaced when placing the concrete or screed. The concrete screed should be reinforced to inhibit shrinkage cracks.

18.4 Proprietary screeds, which can generally be laid at thicknesses less than 50 mm, may also be considered but use of these products have not been assessed by the BBA, and are outside the scope of this Certificate.

19 Finishing works

After the membrane 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 waterproofing) are not necessary for use with the product.

Technical Investigations

20 Tests

Tests were carried out on Twistfix Baseline 8 Cavity Drain Membrane and the results assessed to determine:

- thickness and weight per unit area
- resistance to short-term compression
- resistance to long-term compression
- strength of joint
- nail-tear resistance only
- water tightness of joints
- effectiveness of sealing plugs.

21 Investigations

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

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

Bibliography

BS 5250 : 2011 + A1 : 2016 *Code of practice for control of condensation in buildings*

BS 6576 : 2005 + A1 : 2012 *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 + A1 : 2009 *Screeds, bases and in-situ floorings — Concrete bases and cementitious levelling screeds to receive floorings — Code of practice*

BS EN 204 : 2016 *Classification of thermoplastic wood adhesives for non-structural applications*

BS EN 520 : 2004 + A1 : 2009 *Gypsum plasterboards — Definitions, requirements and test methods*

BS EN 1991-1-1 : 2002 *Eurocode 1 : Actions on structures — General actions — Densities, self-weight, imposed loads for buildings*
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*

BS EN 12871 : 2013 *Wood-based panels — Determination of performance characteristics for load bearing boards for use in floors, walls and roofs*

BS EN 13967 : 2012 *Flexible sheets for waterproofing — Plastic and rubber damp proof sheets including plastic and rubber basement tanking sheet — Definitions and characteristics*
Property Care Association COP09 *Code of Practice for Installation of Remedial Damp-proof Courses in Masonry Walls*

22 Conditions

22.1 This Certificate:

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

22.2 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.

22.3 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.

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

22.5 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.

22.6 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.

British Board of Agrément
Bucknalls Lane
Watford
Herts WD25 9BA

tel: 01923 665300
clientservices@bbacerts.co.uk
www.bbacerts.co.uk