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Agrément Certificate
24/7176
Product Sheet 2 Issue 1

VISQUEEN WATERPROOFING SYSTEMS

VISQUEEN CM20 MEMBRANE

This Agrément Certificate Product Sheet(1) relates to Visqueen CM20 Membrane, a high-density polyethylene (HDPE) membrane for damp-proofing walls, floors and ceilings in new construction or in existing buildings. It can be used above ground, over a contaminated or damp background, to support a dry lining or flooring. It may also be used as part of a gas protection system to restrict the ingress of radon.

(1) Hereinafter referred to as 'Certificate'.

The assessment includes

Product factors:

- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review

KEY FACTORS ASSESSED

Section 1. Mechanical resistance and stability
Section 2. Safety in case of fire
Section 3. Hygiene, health and the environment
Section 4. Safety and accessibility in use
Section 5. Protection against noise
Section 6. Energy economy and heat retention
Section 7. Sustainable use of natural resources
Section 8. Durability

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

On behalf of the British Board of Agrément

Date of issue: 12 July 2024

Hardy Giesler
Chief Executive Officer

This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.

The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357).

Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation.

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

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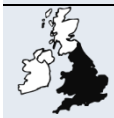
SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that Visqueen CM20 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 Building Regulations 2010 (England and Wales) (as amended)

Requirement:	**B3(4)**	**Internal fire spread - structure**
Comment:		The system can contribute to satisfying this Requirement. See section 2of this Certificate.
Requirement:	**B4(1)**	**External fire spread**
Comment:		The system is restricted by this Requirement. See section 2 of this Certificate.
Requirement:	**C1(2)**	**Site preparation and resistance to contaminants**
Comment:		The system forms an effective barrier to radon, and so can contribute to satisfying this Requirement. See section 3 of this Certificate.
Requirement:	**C2(a)(b)**	**Resistance to moisture**
Comment:		The system can contribute to satisfying this Requirement. See section 3 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship**
Comment:		The system is acceptable. See sections 8 and 9 of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)**	**Fitness and durability of materials and workmanship**
Comment:		The system is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	**9**	**Building standards - construction**
Standard:	2.4	Cavities
Comment:		The system can contribute to satisfying this Standard, with reference to clause 2.4.2$^{(1)(2)}$. See section 2 of this Certificate.
Standard:	2.6	Spread to neighbouring buildings
Comment:		The system is restricted by this Standard, with reference to clauses 2.6.5$^{(1)}$ and 2.6.6$^{(2)}$. See section 2 of this Certificate.
Standard:	3.2	Site preparation – protection from radon gas
Comment:		The system can contribute to satisfying this Standard, with reference to clauses 3.1.2$^{(1)(2)}$, 3.1.6$^{(1)(2)}$, 3.1.7$^{(1)(2)}$, 3.1.8$^{(1)(2)}$, 3.2.1$^{(2)}$ and 3.2.2$^{(1)(2)}$. See section 3 of this Certificate.
Standard:	3.3	Flooding and ground water
Comment:		The system can contribute to satisfying clause 3.3.1$^{(1)(2)}$ of this Standard. See section 3 of this Certificate.
Standard:	3.4	Moisture from the ground
Comment:		The system can contribute to satisfying 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 3.1 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 3 of this Certificate.

Standard:	3.10	Precipitation
Comment:		The system can contribute to satisfying this Standard, with reference to clause 3.10.1[(1)(2)]. See section 3 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The system can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	**12**	**Building standards - conversion**
Comment:		Comments in relation to the system 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 system is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	**26**	**Site preparation and resistance to contaminants**
Comment:		When properly installed in a correctly designed structure, the system can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation:	**28(a)(b)**	**Resistance to moisture and weather**
Comment:		The system can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation:	**35(4)**	**Internal fire spread – Structure**
Comment:		The system can contribute to satisfying this Regulation. See section 2 of this Certificate.
Regulation:	**36(a)**	**External fire spread**
Comment:		The system is restricted by this Requirement. See section 2 of this Certificate.

Additional Information

NHBC Standards 2024

In the opinion of the BBA, Visqueen CM20 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 4.1 Land quality – managing ground conditions, 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 system should be used in combination with either a Type A or B waterproofing protection.

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

Fulfilment of Requirements

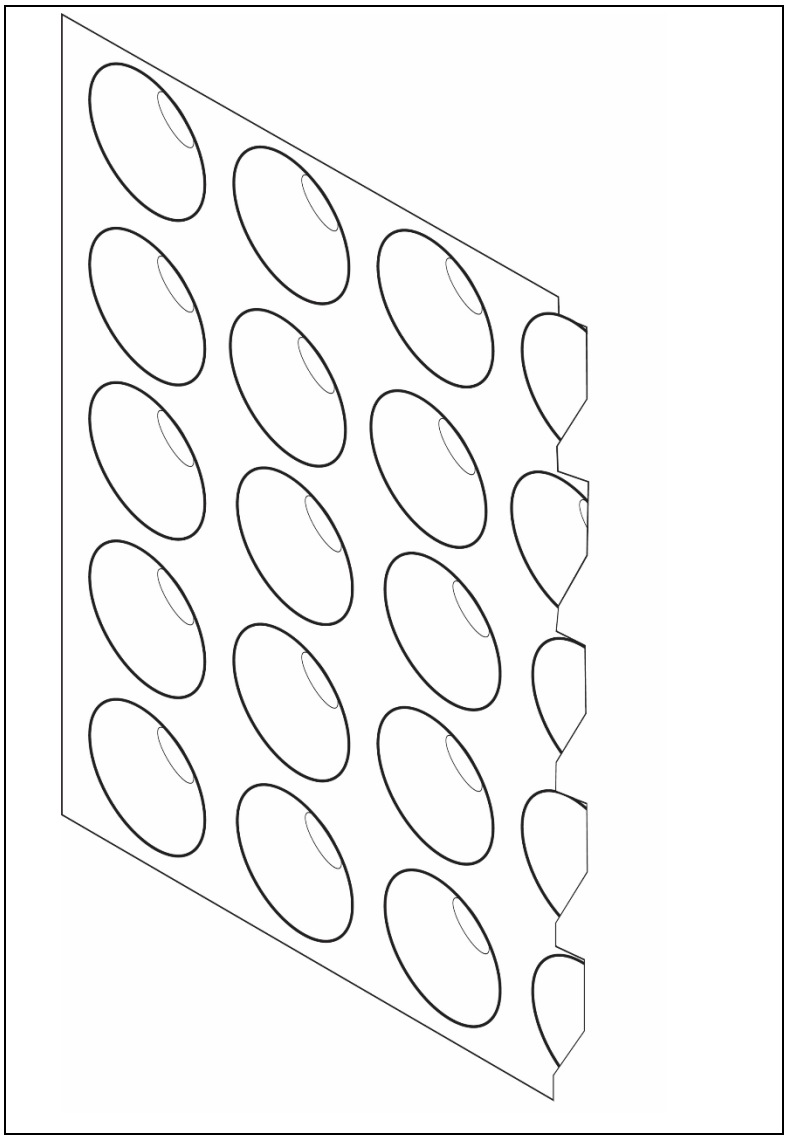
The BBA has judged Visqueen CM20 Membrane to be satisfactory for use as described in this Certificate. The system has been assessed for use as waterproofing and damp-proofing walls, floors and ceilings over a contaminated or damp background to support a dry lining or flooring, and as part of a gas protection system to restrict the ingress of radon.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the system under assessment. Visqueen CM20 Membrane is a black HDPE membrane, moulded to form raised studs at 50 mm centres and incorporating a flanged edge.

Figure 1 Visqueen CM20 Membrane



The system has the nominal characteristics given in Table 1.

Table 1 Nominal characteristics

Characteristic (unit)	Visqueen CM20 Membrane
Thickness (mm)	1.0
Stud height (mm)	20
Weight per unit area ($g \cdot m^{-2}$)	1000
Roll size (m)(1)	2.0 x 10, 2.0 x 20
Weight of roll (kg)	20, 40
Air gap volume ($\ell \cdot m^{-2}$)	14.61

(1) Includes a 100 mm stud-free area for overlapping sheets.

Ancillary Items

The following ancillary items are essential to use with the system and have been assessed with the system:

- Visqueen CM Brick Plug with seal washer — a 60 by 35 mm plastic plug, with thermoplastic elastomer seal washer, for fixing the membrane to brick, stone, and concrete into a 10 mm diameter hole on above- and below-ground structures
- Visqueen CM Brick Plug without seal washer — a 60 by 35 mm plastic plug, without thermoplastic elastomer seal washer, for fixing membrane to brick, stone, and concrete into a 10 mm diameter hole on above- and below-ground structures
- Visqueen CM Butyl Tape — a double sided butyl rubber tape for sealing joints in the membrane
- Visqueen CM Butyl Rope — a double sided butyl rubber beading for sealing joints in the membrane and sealing around plugs
- Visqueen CM Butyl Corner Detail Tape —a single sided butyl rubber tape for sealing between vertical and horizontal membranes
- Visqueen CM Butyl Overseal Tape — a single sided 75mm butyl rubber tape for sealing butt joints between membranes, and detailing.

Applications

The system is satisfactory for use in waterproofing and damp-proofing walls, floors and vaulted ceilings, above and below ground, as part of the Visqueen Waterproofing System, 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 damp proof course (DPC) system where the walls have a high salt content and/or when 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
- as part of a gas protection system(1), alongside alarm and extraction systems in accordance with BS 8485 : 2015.

(1) Other components of the gas protection system are outside the scope of this Certificate.

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

The system is satisfactory for use in Type C (drained protection) constructions in accordance with BS 8102 : 2022.

Product assessment – key factors

The system was assessed for the following key factors, and the outcome of the assessments is shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Data were assessed for the following characteristics.

1.1 Mechanical properties

1.1.1 The results of tests for mechanical properties are given in Table 2.

Table 2 Mechanical properties

Product assessed	Assessment method	Requirement	Result
Visqueen CM20 Membrane	Resistance to nail tear to BS EN 12310-1 : 2000	Value achieved	
	Longitudinal direction		466N
	Transverse direction		334N
A representative related product	Strength of joints to BS EN 12137-2 : 2010	Value achieved	74 $N \cdot (50\ mm)^{-1}$

1.1.2 On the basis of data assessed, the system will not be damaged by normal foot traffic during installation or while laying concrete or screeding to BS 8204-1 : 2003.

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

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 Reaction to fire

2.1.1 The Certificate holder has not declared a reaction to fire classification for the system in accordance with BS EN 13501-1 : 2018.

2.1.2 On the basis of data assessed, the system will be restricted in use under the documents supporting the national Building Regulations in some cases.

2.1.3 In England, the system must not be used on buildings that have a storey at least 18m above ground level and which contain: one or more dwellings, an institution, a room for residential purposes, student accommodation, care homes, sheltered housing, hospitals or dormitories in boarding schools.

2.1.4 In Wales, and Northern Ireland the system must not be used on buildings that have a storey at least 18 m above ground level and which contain: one or more dwellings, an institution, a room for residential purposes (excluding any room in a hostel, hotel or boarding house) student accommodation, care homes, sheltered housing, hospitals or dormitories in boarding schools, and additionally in Northern Ireland, nursing homes and places of lawful detention.

2.1.5 In Scotland, when used as part of the external wall above ground level, the system does not achieve the minimum Class E reaction to fire classification to BS EN 13501-1 : 2018 required by relevant Technical Handbooks, and so designers must seek guidance on the proposed use of the system from the relevant building control body.

2.1.6 Where the system forms the face of a cavity, the permissible areas of use and the spacing of cavity barriers are restricted by the documents supporting the national Building Regulations

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Properties in relation to water

3.1.1 Results of watertightness tests are given in Table 3.

Table 3 Watertightness

Product assessed	Assessment method	Requirement	Result
A representative related product	Water tightness of joints to BS EN 1928 : 2000 at 2kPa	No leakage	Pass
A representative related product	Water vapour permeability to BS EN 1931 : 2000	> 200 $MNs \cdot g^{-1}$	Pass
A representative related product	Efficiency of seal to a BBA Method	No leakage	Pass

3.1.2 On the basis of data assessed, the system 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 system acts as a drainage layer with no excessive build-up of water behind it.

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

3.1.4 Condensation

In common with most waterproofing membranes, the system 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 : 2021 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).

3.2 Properties in relation to external factors

3.2.1 Resistance to underground gases

3.2.2 Measured gas permeability/diffusion values on jointed and unjointed Visqueen CM20 Membrane are given in Table 4.

Table 4 Radon Diffusion Coefficients

Product assessed	Assessment Method	Requirement	Result
Visqueen CM20 Membrane Unjointed	ISO/TS 11665-13, method C Radon Diffusion Coefficient D	Value achieved	$6.5x10^{-12}$ $m2 \cdot s^{-1}$
Visqueen CM20 Membrane Jointed with 10 mm wide butyl rope and 150 mm overseal tape	ISO/TS 11665-13, method C Radon Diffusion Coefficient D	Value achieved	$1.8x10^{-12}$ $m2 \cdot s^{-1}$

3.2.3 On the basis of data assessed, the system, as part of a full radon protection and extraction system, will restrict the ingress of radon into buildings from naturally occurring sources.

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

Not applicable.

6 Energy economy and heat retention

Not applicable.

7 Sustainable use of natural resources

The system comprises HDPE, which can be recycled.

8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in this system were assessed.

8.2 Specific test data were assessed as given in Table 5.

Table 5 Durability

Product assessed	Assessment method	Requirement	Result
Visqueen CM20 Membrane	Long term compression to BS EN 13967 : 2012	Value achieved	0.33 mm / 30 years

8.3 Service life

Under normal service conditions, the system will have a life of at least as long as the building in which it is incorporated, provided it is designed and installed in accordance with this Certificate and the Certificate holder's instructions.

PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors:

9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed by the BBA, against the requirements of BS 8000-4 : 1989, BS 8485 : 2015, CP 102 : 1973 Section 3, this Certificate and the Certificate holder's instructions and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 Where the conditions of the area to be installed with Visqueen CM20 Membrane are damp, a full survey by a specialist waterproofing surveyor must be carried out, to diagnose the cause and to establish if treatment is required.

9.1.3 If rising damp is found, a remedial treatment must be 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*.

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

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

9.1.6 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.

9.1.7 Uneven substrates should be made level with a suitable levelling material which must be allowed to set before the membrane is fixed. The Certificate holder can advise on suitable materials, but such advice and materials are outside the scope of this Certificate.

9.1.8 The design of a gas protection system must be carried out by a suitably experienced and competent individual with sufficient knowledge of ground gas risk and the construction methods and materials.

9.1.9 The continuity of the gas protection must extend over the footprint of the building, and the system must be sealed to a gas-resistant DPC where applicable.

9.1.10 The advice of the Certificate holder must be sought where the system is to be used as part of a gas protection system with regard to the other components of the system, but such advice and materials are outside the scope of this Certificate.

9.1.8 Where the construction is subject to NHBC requirements, reference must be made to *NHBC NF94 Hazardous Ground gas – an essential guide for housebuilders.*

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions following the relevant guidance given in BRE Report BR 211 : 2023, BS 8485 : 2015 and NHBC NF 94. A summary of instructions and guidance are provided in Annex A of this Certificate.

General

9.2.3 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.

9.2.4 If mould is present, the substrate must be treated with an HSE-approved fungicidal wash. The Certificate holder can advise on suitable materials and procedures to be used. but such advice and materials are outside the scope of this Certificate.

9.2.5 The membrane must 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 Visqueen CM Butyl 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 Visqueen CM Butyl Rope placed between the last four rows or oversealing the joint with Visqueen CM Butyl Corner Detail Tape or Visqueen CM Butyl Overseal Tape.

9.2.6 At corners where the membrane is not installed continuously from one surface to the next, it must be finished at the corner on each surface and sealed together using Visqueen CM Butyl Corner Detail Tape.

9.2.7 The membrane must 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, CM plugs with a pre-formed seal, are inserted into the holes, and tapped flush with the membrane. The pre-formed seal forms a sealing gasket between the plug and membrane. The seal must be compressed to function as a barrier against water ingress, and this must be visually checked as each plug is fixed.

9.2.8 All gas membrane installation must be subject to third-party independent validation, in accordance with BS 8485 : 2015.

9.2.9 For gas resistance applications, the membrane must be installed with sealed joints in accordance with the Certificate holder's instructions

Walls

9.2.10 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 three rows of studs, and for horizontal joints the lower sheet is always positioned in front of the upper sheet.

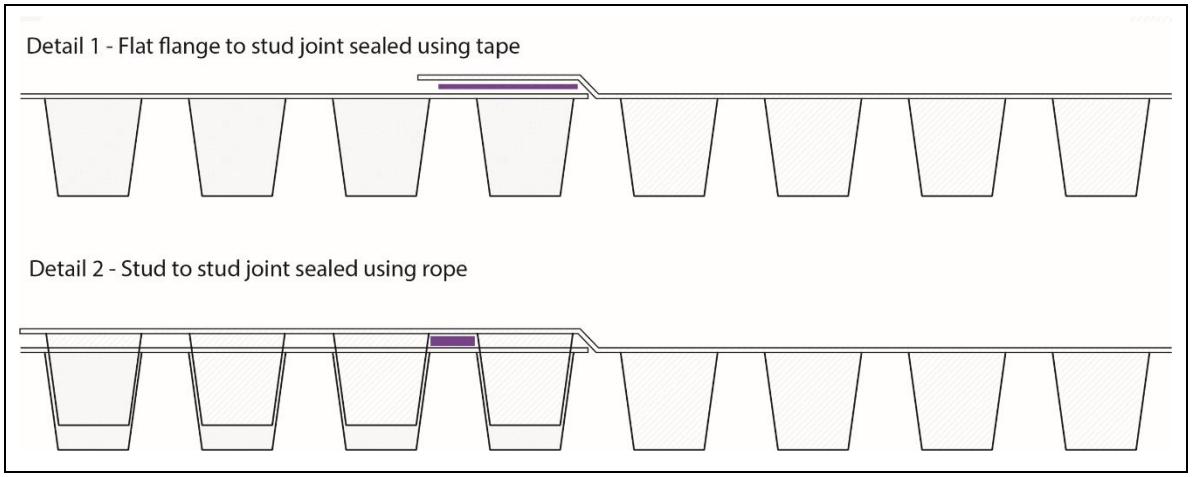
9.2.11 Spacings between fixings will depend on the method of dry lining to be applied. When using preservative-treated timber battens, the fixings must be kept to a maximum of 400 mm centres vertically and 600 mm horizontally. Proprietary metal fast track systems and independent frame systems will require fewer fixings, but a sufficient number must be used to ensure that the membrane is reasonably tight to the wall, especially at corners.

9.2.12 The installation is conducted over windows and the membrane is cut away to expose them. The gaps are then sealed with Visqueen CM Butyl Tape or Visqueen CM Butyl Rope, Visqueen CM Butyl Corner Detail Tape or Visqueen CM Butyl Overseal Tape.

9.2.13 For doors and some obstructions, the technique covered in section 9.2.12 cannot be used. Instead, the membrane is installed up to the perimeter and the gap sealed in the same manner.

9.2.14 Wall-mounted fittings (apart from lightweight items such as framed pictures) must be fixed where possible into battens; the position and number of support fixings into the loadbearing structure are predetermined. Only in exceptional circumstances can fittings be fixed through the membrane and lining board to the loadbearing structure behind, using proprietary fixings. Holes made in the membrane must be repaired in accordance with the Certificate holder's instructions.

Figure 2 Tape and rope sealing



Ceilings

9.2.15 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 sheets for horizontal overlaps must be a minimum of four rows of studs.

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

9.2.17 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 Visqueen CM Butyl Tape, Visqueen CM Butyl Rope, Visqueen CM Butyl Corner Detail Tape or Visqueen CM Butyl Overseal Tape. The adjoining wall membrane must be cut to fit the curve of the ceiling, fixed in front of the ceiling membrane, and the gap sealed with Visqueen CM Butyl Tape, Visqueen CM Butyl Rope, Visqueen CM Butyl Corner Detail Tape or Visqueen CM Butyl Overseal Tape.

Floors

9.2.18 Floors must have a drainage outlet point. There must 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.

9.2.19 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 Visqueen CM Butyl Tape applied over the second row of studs. Joints without the flanged edge are overlapped by four rows of studs and sealed with Visqueen CM Butyl Rope applied between the last two rows and over sealed using Visqueen CM Butyl Corner Detail Tape or Visqueen CM Butyl Overseal Tape.

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

9.2.21 Fixings must not be applied through the floor membrane.

9.2.22 At wall/floor junctions, the membrane is turned up at the wall and sealed using Visqueen CM Butyl Corner Detail Tape. The floor membrane can also be sealed to the upstand of the perimeter channel using Visqueen CM Butyl Corner Detail Tape.

Finishing works

9.2.23 All joints and fixings must be sealed with Visqueen CM Butyl Tape or Visqueen CM Butyl Rope sealing products, and drainage channels and gullies, or sumps and pumps must be installed as necessary to disperse excess or standing water. The Certificate holder can advise on suitable materials for this purpose, but such advice and materials are outside of the scope of this Certificate.

9.3 Workmanship

Practicability of installation was assessed by the BBA, on the basis of the Certificate holder's information. To achieve the performance described in this Certificate, installation of the system must be carried out by a competent specialist contractor experienced with this type of system.

9.4 Maintenance and repair

9.4.1 As the membrane is confined within a wall, ceiling or floor space and has suitable durability, maintenance is not required.

9.4.2 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. The advice of the Certificate holder must be sought but such advice is outside of the scope of this Certificate.

10 Manufacture

10.1 The production processes for the system have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors.

10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.3 The quality control procedures and product testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

† 10.2 The BBA has undertaken to review the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

11 Delivery and site handling

11.1 The Certificate holder stated that the system is delivered to site in in wrapped rolls bearing the system and Certificate holder's name and the BBA logo incorporating the number of this Certificate.

11.2 Delivery and site handing must be performed in accordance with the Certificate holder's instructions and this Certificate, including:

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

ANNEX A – SUPPLEMENTARY INFORMATION†

Supporting information in this Annex is relevant to the system but has not formed part of the material assessed for the 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.

CE marking

The Certificate holder has taken the responsibility of CE marking the system in accordance with harmonised European Standard EN 13967 : 2012.

Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by Garek Assured (Certificate 0611/1104/116G).

Additional information on installation

A.1 Visqueen CM20 Membrane may be used in combination with any of the appropriate products from the Visqueen CM System range which are the subject of other Product Sheets of this Certificate.

A.2 Power cables, points and light switches should preferably be remounted in front of the membrane.

A.3 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 are a consideration (such as in proximity to food preparation areas). The advice of the Certificate holder should be sought in these situations, but such advice is outside the scope of this Certificate.

A.4 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.

A.5 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 system.

A.6 Uneven substrates must be made level with a suitable levelling material to the tolerance described in section 9.1.6, which must be allowed to set before the membrane is fixed. The Certificate holder can advise on suitable materials.

A.7 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 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 Visqueen CM Butyl Rope or Visqueen CM Butyl Tape.

Dry lining of walls

A.8 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.

Floor membrane coverings

A.9 If required, extruded, closed-cell polystyrene insulation boards (minimum density 30 $kg \cdot m^{-3}$) are laid over the membrane.

A.10 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 : 2016.

A.11 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.

A.12 Proprietary screeds, which can generally be laid at thicknesses less than 50 mm, may also be considered but use of these products has not been assessed by the BBA, and is outside the scope of this Certificate.

A.13 Under normal operating conditions, the system is not affected by underfloor heating.

Bibliography

BRE Report BR 211: 2015 Radon: *Guidance on protective measures for new buildings*

BS 5250: 2021 *Management of moisture in buildings. Code of practice*

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: 2022 *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 8485: 2015 + A1: 2019 *Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings*

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 1928:2000 *Flexible sheets for waterproofing. Bitumen, plastic and rubber sheets for roof waterproofing. Determination of watertightness*

BS EN 1931 : 2000 *Flexible sheets for waterproofing – Bitumen, plastic and rubber sheets for roof waterproofing – Determination of water vapour transmission properties*

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 12137-2 : 2010 *Flexible sheets for waterproofing — Determination of shear resistance of joints Part 2: Plastic and rubber sheets for roof waterproofing*

BS EN 12310-1:2000 *Flexible sheets for waterproofing. Determination of resistance to tearing (nail shank) – Bitumen sheets for roof waterproofing*

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

BS EN 13501-1: 2018 *Fire classification of construction products and building elements— Classification using data from reaction to fire tests*

BS EN 13967: 2012 + A1 : 2017 *Flexible sheets for waterproofing — Plastic and rubber damp proof sheets including plastic and rubber basement tanking sheet — Definitions and characteristics*

BS EN ISO 9001 : 2015 *Quality management systems — Requirements*

ISO/TS 11665-13: 2017 *Determination of the diffusion coefficient in waterproof materials: membrane two-side activity concentration test method*

Property Care Association COP09 *Code of Practice for Installation of Remedial Damp-proof Courses in Masonry Walls*

Conditions of Certificate

Conditions

1 This Certificate:

- relates only to the product 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
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3 This Certificate will be displayed on the BBA website, and the Certificate Holder is entitled to use the Certificate and Certificate logo, provided that the product 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
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- are reviewed by the BBA as and when it considers appropriate.

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6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product which is contained or referred to in this Certificate is the minimum required to be met when the product 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.

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