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Agrément Certificate
22/6047
Product Sheet 1 Issue 2

DELTA MEMBRANE WATERPROOFING SYSTEMS

DELTA AMPHIBIA

This Agrément Certificate Product Sheet(1) relates to Delta Amphibia, a multi-layer membrane with hydro-active properties, for use in waterproofing and damp-proofing underground reinforced concrete structures, and for protection from methane, carbon dioxide and radon gases from the ground.

(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 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 Agrément

Date of Second issue: 24 September 2024
Originally certified on 7 April 2022

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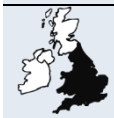
SUMMARY OF ASSESSMENT AND COMPLIANCE

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 Delta Amphibia, 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:	**C1(2)**	**Preparation of site and resistance to contaminants**
Comment:		The product, including joints, can contribute to a structure satisfying this Requirement. See section 3 of this Certificate.
Requirement:	**C2(a)**	**Resistance to moisture**
Comment:		The product, including joints, will enable a structure to satisfy this Requirement. See section 3 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship**
Comment:		The product 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 product can contribute to a construction satisfying this Regulation. See sections 8 and 9 of this Certificate.
Regulation:	**9**	**Building standards – construction**
Standard:	3.1	Site preparation – harmful and dangerous substances
Standard:	3.2	Site preparation – protection from radon gas
		The product, including joints can contribute to satisfying these Standards, with reference to clauses 3.1.2(1)(2), 3.1.6(1)(2), 3.1.7(1)(2) and 3.2.2(1)(2). See section 3 of this Certificate.
Standard:	3.4	Moisture from the ground
Comment:		The product, including joints, will enable a structure to satisfy this Standard, with reference to clauses 3.4.2(1)(2), 3.4.6(1)(2) and 3.4.7(1)(2). See section 3 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The product can contribute to satisfying 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 given for 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(1)(a)(i)**	**Fitness of materials and workmanship**
Comment:	**(iii)(b)(i)**	The product is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	**26(1)(b)**	**Site preparation and resistance to contaminants**
Comment:	**26(2)**	The product will contribute to a structure satisfying these Regulations. See section 3 of this Certificate.
Regulation:	**28(a)**	**Resistance to moisture and weather**
Comment:		The product, including joints, will enable a structure to satisfy this Regulation. See section 3 of this Certificate.

Additional Information

NHBC Standards 2024

In the opinion of the BBA, Delta Amphibia, 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,* 5.1 *Substructure and ground-bearing floors*, Clause 5.1.20 *Damp-proofing concrete floors,* and 5.4 *Waterproofing of basements and other below ground structures.*

Where Grade 3 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 must be used in combination with either a Type B or C waterproofing protection, as defined in BS 8102 : 2022.

In addition, in the opinion of the BBA, the product 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 this chapter and the suitability of the substrate to receive the product.

Fulfilment of Requirements

The BBA has judged Delta Amphibia to be satisfactory for use as described in this Certificate. The product has been assessed for use in waterproofing and damp-proofing underground reinforced concrete structures, and for protection from methane, carbon dioxide and radon gases from the ground.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the product under assessment. Delta Amphibia is a pre-applied multilayer membrane incorporating a top layer of ethylene propylene diene monomer (EPDM) rubber, a hydro-expansive core and an active layer that facilitates the sealing of overlaps. The membrane has a non-woven polypropylene fleece attached to the active face.

The product has the nominal characteristics given in Table 1.

Table 1 Nominal characteristics of Delta Amphibia

Characteristic (unit)	Value
Thickness (mm)	1.3 and 1.6
Roll length (m)	10 and 20
Roll width (m)	0.9 and 1.8
Mass per unit area ($kg \cdot m^{-2}$)	1.33 and 1.66

Ancillary items

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

- Delta Amphibia Safety Tape – a 60 mm wide single-sided adhesive tape used over lapped joints to protect the joint during subsequent works and enclosure in the structure
- Delta Amphibia BI Mastic – a modified silicone (MS) sealant/adhesive used to seal lap joints in Delta Amphibia where complete confinement may not be possible
- Delta Amphibia AKTI-VO 201 – a hydrophilic sealant for sealing around penetrations and to provide additional waterproofing protection at changes of direction and in corners
- Delta Amphibia Stopper – a plastic plug used in conjunction with Delta Amphibia AKTI-VO 201 to seal formwork spacer holes
- Delta Amphibia Pressure corners 90° and 270° and Pressure Line – prefabricated steel profiles laminated with Delta Amphibia membrane used for jointing and terminations
- Delta Amphibia Lap Seal – a 60 mm wide single sided butyl tape used over lapped joints in gas protection applications.

The Certificate holder recommends the following ancillary items for use with the product, but these materials have not been assessed by the BBA and are outside the scope of this Certificate:

- protection fleece and/or protection boards for use over the membrane to protect it from damage by trafficking during the installation and backfilling operations
- specialist sealants and waterstops
- specialist concrete repair mortars
- formwork plugs – plastic plugs used in conjunction with Delta Amphibia AKTI-VO 201 to seal formwork spacer holes
- concrete repair products.

Applications

The product is intended for use as a fully bonded, Type A waterproofing protection as defined in BS 8102 : 2022, for waterproofing on new-build underground concrete structures and as a damp-proofing membrane for solid concrete floors in accordance with the relevant clauses of CP 102 : 1973, Section 3.

The product can be used externally, to provide an effective barrier to the transmission of liquid water where Grades 1a to 3 waterproofing protection is required, as defined in BS 8102 : 2022, Table 2. The product is not suitable for use in negative side pressure waterproofing applications.

Where Grade 3 waterproofing protection is required, the environment must also be controlled by use of ventilation, dehumidification and/or air conditioning, as appropriate, to ensure that dampness does not occur.

The product is not a gas membrane as defined in BS 8485 : 2015 but can be used as part of the gas protection system to mitigate the ingress of methane, carbon dioxide and radon gases from the ground.

Product assessment – key factors

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

1 Mechanical resistance and stability

Not applicable.

2 Safety in case of fire

Not applicable.

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Resistance to water and water vapour

3.1.1 Results of resistance to water and water vapour resistance tests are given in Table 2.

Table 2 Results of resistance to water and water vapour tests

Product assessed	Assessment method	Requirement	Result
Delta Amphibia 1.3 mm	Water vapour diffusion - equivalent air layer thickness (s_d) to EN 1931 : 2000	Value achieved	157 m
Delta Amphibia 1.6 mm			412 m
Delta Amphibia 1.3 mm	Watertightness to EN 1928 : 2000	≥ 60 kPa	Pass
Delta Amphibia 1.6 mm	Watertightness to EN 1928 : 2000	≥ 60 kPa	Pass
Delta Amphibia AKTI-VO 201	Watertightness under 500 kPa to a BBA Method	No leakage	Pass

3.1.2 On the basis of data assessed, the product, including joints, when completely sealed and consolidated, will resist the passage of water under hydrostatic pressure and moisture from the ground, and so satisfy the relevant requirements of the national Building Regulations.

3.1.3 The product complies with the minimum sheet thickness detailed in the documents supporting the national Building Regulations for damp-proof membranes.

3.2 Resistance to hazardous ground gases

3.2.1 Results of resistance to hazardous ground gases tests are given in Table 3.

Table 3 Results of resistance to hazardous ground gases tests

Product assessed	Assessment method	Requirement	Result(1)
Delta Amphibia 1.3 mm	Methane gas transmission rate to BS ISO 15105-1 : 2007	BS 8485 : 2015	
- without joint		<40 $ml \cdot m^{-2} \cdot d^{-1} \cdot atm^{-1}$	443 $ml \cdot m^{-2} \cdot d^{-1} \cdot atm^{-1}$
- with joint(2)			492 $ml \cdot m^{-2} \cdot d^{-1} \cdot atm^{-1}$
Delta Amphibia 1.6 mm			
- without joint			348 $ml \cdot m^{-2} \cdot d^{-1} \cdot atm^{-1}$
- with joint(2)			394 $ml \cdot m^{-2} \cdot d^{-1} \cdot atm^{-1}$
Delta Amphibia 1.3 mm	Radon gas diffusion coefficient to ISO/TS 11665-13 : 2017, Method A	Value achieved	
- without joint			4.1×10^{-11} $m^2 \cdot s^{-1}$
- with joint(2)			2.9×10^{-11} $m^2 \cdot s^{-1}$
Delta Amphibia 1.6 mm			
- without joint			3.5×10^{-11} $m^2 \cdot s^{-1}$
- with joint(2)			2.8×10^{-11} $m^2 \cdot s^{-1}$

(1) Tests carried out on non-hydrated product.
(2) Joint sealed with 50 mm wide band of Delta Amphibia BI Mastic and externally lapped with 60 mm wide Delta Amphibia Lap Seal tape.

3.2.2 On the basis of the data assessed, the product, including joints, will restrict the ingress of methane, carbon dioxide and radon into buildings from naturally occurring sources.

3.2.3 The product does not constitute a gas membrane as defined in BS 8485 : 2015 and cannot be awarded a gas score. However, when used in addition to a Type B structural barrier waterproofing in basement floor and wall constructions conforming to BS 8102 : 2022, Grades 2 or 3 waterproofing, the product may contribute to restricting the ingress of methane and carbon dioxide into a building from landfill and naturally occurring sources, with reference to BS 8485 : 2015, Table 5.

3.3 Resistance to mechanical damage

3.3.1 Results of resistance to mechanical damage tests are given in Table 4.

Table 4 Results of resistance to mechanical damage tests

Product assessed	Assessment method	Requirement	Result
Delta Amphibia 1.3 mm	Tensile strength to EN 12311-2 : 2013	Value achieved	
	Longitudinal direction		569 N·(50 mm)$^{-1}$
	Transverse direction		319 N·(50 mm)$^{-1}$
Delta Amphibia 1.6 mm	Longitudinal direction		504 N·(50 mm)$^{-1}$
	Transverse direction		447 N·(50 mm)$^{-1}$
Delta Amphibia 1.3 mm	Elongation to EN 12311-2 : 2013	Value achieved	
	Longitudinal direction		35%
	Transverse direction		127%
Delta Amphibia 1.6 mm	Longitudinal direction		541%
	Transverse direction		613%
Delta Amphibia 1.3 mm - on soft substrate	Static loading to EN 12730 : 2001	20 kg	Pass
Delta Amphibia 1.6 mm - on hard substrate		20 kg	Pass
Delta Amphibia 1.3 mm	Impact loading to EN 12691 : 2006	Value achieved	
	Method A		250 mm
	Method B		2000 mm
Delta Amphibia 1.6 mm	Method A		300 mm
	Method B		1750 mm
Delta Amphibia 1.3 mm	Resistance to tearing (nail shank) to EN 12310-1 : 2000	Value achieved	
	Longitudinal direction		422 N
	Transverse direction		434 N
Delta Amphibia 1.6 mm	Longitudinal direction		511 N
	Transverse direction		495 N
Delta Amphibia 1.3 mm	Shear resistance of joints to EN 12317-2 : 2010	Value achieved	233 N
Delta Amphibia 1.6 mm - on concrete	Peel bond strength to MOAT 27 : 5.1.3 : 1983	Value achieved	78 N
- on Delta Amphibia Safety Tape			36.8 N·(50 mm)$^{-1}$
Delta Amphibia 1.3 mm	Chisel impact to a BBA Method	No perforation	Pass

3.3.2 On the basis of the data assessed, the product is capable of accommodating the minor movements likely to occur under normal service conditions and can accept the limited foot traffic and light loads associated with installation.

3.3.3 The product can be punctured by sharp objects and care must therefore be taken in handling building materials and equipment over the exposed surface, particularly when the products are exposed during construction and back filling or screeding operations.

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

Not applicable.

8 Durability

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

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

Table 5 Results of durability tests

Product assessed	Assessment method	Requirement	Result
Delta Amphibia 1.3 mm	Watertightness to EN 1928 : 2000 after heat ageing at 70°C for 84 days to EN 1296 : 2001	≥ 60 kPa	Pass
	After exposure to lime water to EN 1847 : 2009		Pass
Delta Amphibia 1.6 mm	Watertightness to EN 1928 : 2000 after heat ageing at 70°C for 84 days to EN 1296 : 2001	≥ 60 kPa	Pass
	After exposure to lime water to EN 1847 : 2009		Pass
Delta Amphibia 1.6 mm	Static loading to BS EN 12730 : 2015 after heat ageing at 70°C for 84 days	20 kg	Pass
	After water soak at 23°C for 180 days		Pass

8.3 Service life

Under normal service conditions, the product, when fully protected, will provide an effective barrier to the transmission of water and water vapour, and will contribute to restricting the ingress of radon and methane for the life of the structure 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 and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 The design of gas protection systems must be carried out by competent professionals with sufficient knowledge of ground gas risk and the construction methods and materials.

9.1.3 The continuity of the gas protection must extend over the footprint of the building, and the product must be sealed to a gas-resistant damp proof course (DPC).

9.1.4 Where the construction is subject to NHBC requirements, reference must be made to NHBC NF94 *Hazardous Ground Gas - an essential guide for housebuilders*, figure 4.8, which states requirements for gas transmission rates and minimum membrane thicknesses.

9.1.5 The Certificate holder must be consulted for advice on approved Type B and C solutions, but such advice is outside the scope of this Certificate.

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, the Certificate holder's instructions and the relevant requirements of BS 8102 : 2022, CP 102 : 1973, Section 3 and NHBC NF94.

9.2.3 The product must be installed under dry conditions at temperatures between 5 and 35°C and avoiding contamination that could affect jointing.

9.2.4 All surfaces on which the membrane is to be supported must be sound, solid and free from sharp protrusions and loose aggregate to eliminate movement during the concrete pour, damage to the membrane, and to ensure that the membrane is fully loaded within the structure to ensure that the overlapped joints are watertight. In situations where full loading cannot be guaranteed, eg in some vertical applications, then the overlaps must be sealed with Delta Amphibia BI Mastic in accordance with the Certificate holder's instructions.

9.2.5 Delta Amphibia AKTI-VO 201 must be applied around penetrations, in corners and other details in accordance with the Certificate holder's instructions.

9.2.6 The membrane must be protected with a suitable protection membrane or board as soon as practicable following installation, to minimise the risk of damage from UV exposure, backfilling and from direct foot trafficking prior to the concrete pour. Direct trafficking by vehicles must be avoided.

9.2.7 For horizontal application, Delta Amphibia membrane is unrolled onto lean concrete with the white fleece component of the membrane facing up, ie towards the concrete pour.

9.2.8 Subsequent sheets are then laid parallel to the first sheet using the guideline printed on the membrane to ensure an overlap of minimum 50 mm at the edge to align evenly, and ensuring that end laps are staggered by a minimum of 300 mm.

9.2.9 Where adequate loading of the membrane cannot be guaranteed and/or for additional protection, then an 8 to 10 mm bead of Delta Amphibia BI Mastic must be applied centrally along the joint area before overlapping. The joint must be rolled with a suitable roller to ensure the sealant is spread throughout the jointed area.

9.2.10 All lap joints must be over-taped with Delta Amphibia Safety Tape for protection against damage from subsequent works.

9.2.11 The membrane must be taken up the formwork, making sure that it will extend sufficiently over the top edge of the finished slab when poured to allow for jointing.

9.2.12 For vertical application, a strip of Delta Amphibia membrane is applied to the top face of the foundation slab along the edge. The strip must be wide enough to span from the edge of the slab to the external face of the wall to be cast.

9.2.13 The Delta Amphibia membrane is then turned over the Delta Amphibia membrane strip and secured at the external edge of the slab using the Pressure corner 90° profile with a suitable nail gun and masonry nails. The opposite edge of the Delta Amphibia membrane strip is then secured to the slab using the Pressure corner 270° profile, ensuring that the profile is in line with the external face of the wall to be cast.

9.2.14 After the formwork for the wall has been placed, the Delta Amphibia membrane is applied to the formwork, ensuring that the face with the fleece faces the concrete pour. All corners, sealing strip edges and other fixings/penetrations through the membrane must be sealed with Delta Amphibia AKTI-VO 201.

9.2.15 Adjacent sheets are laid parallel to each other using the guideline printed on the membrane, to ensure an overlap of at least 50 mm at the edge, to align evenly and ensuring that end laps are staggered by a minimum of 300 mm. The top of the membrane is secured using the Pressure line profile in conjunction with Delta Amphibia AKTI-VO 201. When applied to wooden formwork, and adequate loading of the membrane can be guaranteed, the overlapped sheets can be stapled together in accordance with the Certificate holder's instructions, ensuring that there is full contact between the overlapped sheets along the whole length of the joint.

9.2.16 In all vertical situations (eg when the membrane is applied to slurry walls, piling/formwork), an 8 to 10 mm bead of Delta Amphibia BI Mastic must be applied centrally along the joint area before overlapping. The joint must be rolled with a suitable roller to ensure the sealant is spread throughout the jointed area.

9.2.17 The top of the membrane is secured using the Pressure Line profile in conjunction with Delta Amphibia AKTI-VO 201 once the wall has been cast and the formwork removed.

9.2.18 For gas control applications , the membrane joints must be sealed with Delta Amphibia BI Mastic and over-taped with Delta Amphibia Lap Seal in accordance with the Certificate holder's instructions.

9.2.19 Formwork tie holes must be sealed using Delta Amphibia Stopper plugs with Delta Amphibia AKTI-VO 201.

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 product must be carried out by installers trained and approved by the Certificate holder.

9.4 Maintenance and repair

9.4.1 As the product is confined and has suitable durability, maintenance is not required. However, any damage occurring during installation must be repaired prior to backfilling.

9.4.2 Any damage to the product must be repaired by cleaning the surrounding area in accordance with the Certificate holder's instructions and applying a patch of Delta Amphibia. All patched areas must extend a minimum of 100 mm from the damaged area.

9.4.3 Overlaps must be sealed using Delta Amphibia BI Mastic and secured with Delta Amphibia Safety Tape.

10 Manufacture

10.1 The production processes for the product 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 1.8 m wide rolls are packaged individually in plastic bags and the 0.9 m wide rolls are packaged individually in cardboard boxes. The rolls are supplied to site on pallets. The approximate weight of each roll and the maximum number of rolls per pallet is given in Table 6. Each roll bears a bar code that allows traceability back to production records.

Table 6 Products – packaging sizes

Roll size (m)	Thickness (mm)	Approximate weight (kg)	Maximum number of rolls per pallet
1.8 by 20	1.3	47	20
1.8 by 10	1.3	23	30
0.9 by 10	1.3	12	36
1.8 by 20	1.6	59	20
1.8 by 10	1.6	30	30
0.9 by 10	1.6	15	30

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

11.3 The ancillary products are supplied in the sizes detailed in Table 7.

Table 7 Ancillary products – packaging sizes

Product	Package size
Delta Amphibia Safety Tape	25 m rolls
Delta Amphibia Lap Seal	10 m rolls
Delta Amphibia AKTI-VO 201	320 ml cartridges
Delta Amphibia BI Mastic	600 ml sachets
Delta Amphibia Stoppers	50 pieces in plastic bags

†ANNEX A – SUPPLEMENTARY INFORMATION

Supporting information in this Annex is relevant to the product 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.

CLP Regulations

The Certificate holder has taken the responsibility of classifying and labelling the product under the *GB CLP Regulation* and *CLP Regulation (EC) No 1272/2008 - classification, labelling and packaging of substances and mixtures*. Users must refer to the relevant Safety Data Sheet(s).

CE marking

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

Additional guidance on installation

A.1 Additional guidance on the use of damp-proof membranes is given in BS 8000-0 : 2014 and BS 8000-4 : 1989.

Bibliography

BS 8000-0 : 2014 + A1 : 2024 *Workmanship on construction sites – Introduction and general principles*
BS 8000-4 : 1989 *Workmanship on building sites – Code of practice for waterproofing*

BS 8102 : 2022 *Protection of below ground structures against water ingress – 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 12730 : 2015 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of resistance to static loading*

BS ISO 15105-1 : 2007 *Plastics — Film and sheeting — Determination of gas-transmission rate – Differential-pressure methods*

CP 102 : 1973 *Code of practice for protection of buildings against water from the ground*

EN 1296 : 2001 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roofing — Method of artificial ageing by long term exposure to elevated temperature*

EN 1847 : 2009 *Flexible sheets for waterproofing – Plastics and rubber sheets for roof waterproofing – Methods for exposure to liquid chemicals, including water*

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

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

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

EN 12311-2 : 2013 *Flexible sheets for waterproofing — Determination of tensile properties – Plastic and rubber sheets for roof waterproofing*

EN 12317-2 : 2010 *Flexible sheets for waterproofing — Determination of shear resistance of joints – Plastic and rubber sheets for roof waterproofing*

EN 12691 : 2006 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of resistance to impact*

EN 12730 : 2001 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of resistance to static loading*

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*

MOAT 27 : 1983 *General Directive for the Assessment of Roof Waterproofing Systems*

ISO/TS 11665-13 : 2017 *Measurement of radioactivity in the environment — Air: radon 222 – Determination of the diffusion coefficient in waterproof materials: membrane two-side activity concentration test method*

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
- 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.

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.

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
- 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.

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

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 or any other product
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product
- actual installations of the product, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to UKCA marking and CE marking.

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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