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**Agrément Certificate**
**00/3742**
Product Sheet 7 Issue 2

# DELTA MEMBRANE SYSTEMS

# DELTA-MS500 FIRE

This Agrément Certificate Product Sheet(1) relates to Delta-MS500 Fire, a moulded high-density polyethylene (HDPE) membrane for waterproofing and damp-proofing walls, floors and vaulted ceilings in new construction or existing buildings. It is used above or below ground, over a contaminated or damp background, to support a dry lining and flooring.

(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 Second issue: 9 September 2025
Originally certified on 21 July 2022

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).*
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***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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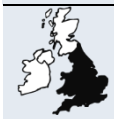
## SUMMARY OF ASSESSMENT AND COMPLIANCE

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 Delta-MS500 Fire, 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 2 of this Certificate. |
| **Requirement:** | **B4(1)** | **External fire spread** |
| Comment: | | The system may be unrestricted by this Requirement. See section 2 of this Certificate. |
| **Requirement:** | **C2(a)(b)** | **Resistance to moisture** |
| Comment: | | The system adequately resists the passage of moisture. 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: | 3.3 | Flooding and ground water |
| Comment: | | The system can contribute to satisfying this Standard, with reference to clause 3.3.1[(1)(2)]. See section 3 of this Certificate. |
| Standard: | 3.4 | Moisture from the ground |
| Comment: | | The system can contribute to satisfying this Standard, with reference to clauses 3.4.1[(1)(2)], 3.4.2[(1)(2)], 3.4.5[(1)(2)], 3.4.6[(1)(2)] and 3.4.7[(1)(2)] . See section 3 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)].<br><br>(1) Technical Handbook (Domestic).<br>(2) Technical Handbook (Non-Domestic). |

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

| | | |
|---|---|---|
| **Regulation:** | **23(1)(a)(i) (iii)(b)(i)** | **Fitness of materials and workmanship** |
| Comment: | | The system is acceptable. See sections 8 and 9 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 may be unrestricted by this Regulation. See section 2 of this Certificate. |

## Additional Information

### NHBC Standards 2025

In the opinion of the BBA, Delta-MS500 Fire, 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 system must be used in combination with either a Type A or B waterproofing protection.

In the opinion of the BBA, the 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.

The opinion of the BBA does not amount to any endorsement or approval by NHBC and does not in any way guarantee that NHBC will approve such product / system as compliant with the NHBC Technical Requirements and Standards.

## Fulfilment of Requirements

The BBA has judged Delta-MS500 Fire to be satisfactory for use as described in this Certificate. The system has been assessed as a membrane for waterproofing and damp-proofing walls, floors and vaulted ceilings in new construction or existing buildings. It is used above or below ground, over a contaminated or damp background, to support a dry lining and flooring.

## ASSESSMENT

## Product description and intended use

The Certificate holder provided the following description for the system under assessment. Delta-MS500 Fire is a translucent, HDPE sheet with moulded studs, for use as a damp-proofing membrane.

The system has the nominal characteristics given in Table 1.

*Table 1 Nominal characteristics*

| Characteristic (unit) | Value |
|---|---|
| Thickness (mm) | 0.5 |
| Stud height (mm) | 8 |
| Weight per unit area ($kg \cdot m^{-2}$) | 0.5 |
| Roll length (m) | 20 |
| Roll width (m)(1) | 2.4 |
| Weight of roll (kg) | 26 |
| Air gap volume ($l \cdot m^{-2}$) | 5.3 |

(1) Includes a 70 mm flanged 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:

- Delta PT Ultrafix Plug — a white, polypropylene fixing plug with a grooved shank for use in masonry walls and concrete. This plug requires butyl rope to be applied around the shank before use (see Figure 1)
- Delta Tape — a black butyl tape for sealing joints in the membrane
- Delta Rope — a black butyl beading for sealing the membrane around pipes and openings, joining floor and wall membranes, and to seal around the head of Delta Plugs prior to fixing the membrane
- Delta Mastic — an acrylic sealant for sealing the membrane around pipes and openings
- Delta Ultratape — a 150 mm wide butyl tape with foil backing for sealing joints in the membrane. Delta Primer — a solvent-based primer for sealing porous substrates prior to application of the Delta range of butyl-based sealing products.

Applications

Delta-MS500 Fire is satisfactory for use to damp-proof 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 damp proof course (DPC) system where the walls and floors have a high salt content, and/or where 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
- an underfloor damp-proof membrane
- a dry lining for walls, ventilated into the room via aeration slots at the top and bottom of the wall or via passive air vents, where access through an external wall is available
- a sealed system covering wall, floor and ceiling, with provision made for disposing of water build-up behind the membrane via a sump and pump.

Delta-MS500 Fire 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 outcomes of the assessments are 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 characteristic.

1.1 Mechanical properties

1.1.1 The system was tested for mechanical properties and the results are given in Table 2.

*Table 2 Mechanical properties*

| Product assessed | Assessment method | Requirement | Result |
|---|---|---|---|
| Delta-MS500 Fire | Short term compression to SPF Verksnorm 2200 :1995 | Value achieved | 0.07 $N \cdot mm^{-2}$ |
| | Resistance to nail tear to PR EN 12310-1 : 2000 | Value achieved | |
| | Longitudinal direction | | 257 N |
| | Transverse direction | | 273 N |
| | Short-term compression to a BBA method | Value achieved | 12.88 N |

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 Properties in relation to fire

2.1.1 The reaction to fire classification for the system is given in Table 3.

*Table 3 Reaction to fire classification*

| Product assessed | Assessment method | Requirement | Result |
|---|---|---|---|
| Delta-MS500 Fire | BS EN 13501-1 : 2018 | Classification achieved | B-s2, d0[(1)(2)] |

(1) Classification report Q101176-1002, Issue 1, issued by BRE Global Ltd, copies available from the Certificate holder on request.
(2) Mounted (loose-laid or mechanically fixed using metallic fixings) directly against an end-use substrate with a density greater than or equal to 653 $kg.m^{-3}$, with a thickness greater than or equal to 11 mm and classified A2-s1, d0 or A1 in accordance with BS EN 13501-1 : 2018, excluding paper-faced gypsum plasterboard.

2.1.2 On the basis of data assessed, in England, Wales and Northern Ireland, the use of the system in the construction given in Table 3 is unrestricted in terms of building height by the documents supporting the national Building Regulations.

2.1.3 The classification and permissible areas of use in other constructions must be determined in accordance with the documents supporting the national Building Regulations.

2.1.4 In Scotland, the use of the system is unrestricted with respect to building height and proximity to a relevant boundary. However, restrictions on the overall construction may apply, depending on the reaction to fire classification achieved by the built-up system, which must be established on a case-by-case basis.

2.1.5 Cavity barriers must be used to satisfy the requirements of 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 properties in relation to water tests are given in Table 4.

*Table 4 Properties in relation to water*

| Product assessed | Assessment method | Requirement | Result |
|---|---|---|---|
| Delta-MS500 Fire | Puncture resistance to PR EN 12730 : 2001 | No damage at 20 kg loading | Pass |
| | Water absorption to BA method 28 days | Value achieved | 0.02% |

3.1.2 Watertightness was assessed on the basis of existing test data for representative related products.

3.1.3 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 section 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.

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

3.2 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 must be carried out to BS 5250 : 2021 and designers must 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).

## 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*

| Property tested | Assessment method | Requirement | Result |
|---|---|---|---|
| Delta-MS500 Fire | Resistance to long-term loading to a BBA method | Value achieved | 0.97 mm<br>12.3% Compression |

8.3 Service life

Under normal service conditions, the system will have a life at least as long as the building in which it is incorporated, provided that 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, 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 installation area is below ground, or where conditions 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 All joints and fixings must be sealed with Delta sealing products; drainage channels and gullies, or sumps and pumps, must be installed as necessary to disperse excess or standing water.

9.1.8 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.

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. A summary of instructions and guidance are provided in Annex A of this Certificate.

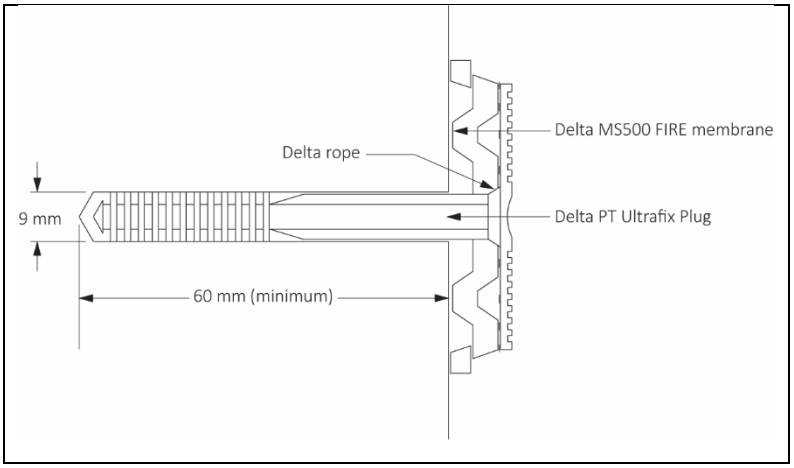
**General**

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

9.2.4 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 Delta Tape. Stud-to-stud joints (without the flanged edge) are sealed by overlapping the membrane by a minimum of three studs and positioning Delta Rope between the last two rows of studs or oversealing the joint with Delta Ultratape.

9.2.5 Fixings are made through the membrane into 9 mm holes drilled centrally through the studs. Delta Ultrafix Plugs (to which Delta Rope has been applied around the shaft, next to the head) are inserted into the holes and hammered flush with the membrane with a club hammer. Delta Rope forms a sealing gasket between the plug and the membrane.

*Figure 1 Delta Ultrafix Plug*




9.2.6 Where internal or external corners occur, they must be oversealed using Delta Ultratape, in accordance with the Certificate holder's installation instructions.

**Ceilings**

9.2.7 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. Membrane sheets must have an overlap of 200 mm.

9.2.8 Delta Ultrafix Plugs sealed with Delta Rope must be used to fix the membrane to vaulted ceilings. Any sagging of the membrane between fixing points on ceilings must not be great enough for ponding to occur. The Certificate holder can advise on specific applications, but such advice is outside the scope of this Certificate.

9.2.9 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 Delta Tape, Delta Rope, or Delta Ultratape. The wall membrane must be cut to fit the curve of the ceiling and fixed in front of the ceiling membrane, and the gap sealed with Delta Rope.

**Walls**

9.2.10 Installation of the membrane is usually 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 must be overlapped by a minimum of 100 mm. For horizontal joints, the lower sheet is always positioned in front of the upper sheet.

9.2.11 Spacing between fixings will depend on the method of dry lining to be applied. When using preservative-treated timber battens, the fixings must be spaced at 600 mm centres. 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 must then be sealed with Delta Tape, Delta Rope or Delta Ultratape.

9.2.13 For doors and some obstructions, the technique covered in section 9.2.10 cannot be used. Instead, the membrane must be installed up to the perimeter and the gap sealed in the same manner.

**Ceilings**

9.2.14 Ceilings to be covered must always have a fall, as per vaulted cellar constructions, to ensure water does not build up against the membrane or a joint. Membrane sheets must have an overlap of 200 mm.

9.2.15 Delta PT Ultrafix Plugs sealed with Delta Rope must be used to fix the membrane to vaulted ceilings. Any sagging of the membrane between fixing points on ceilings must not be great enough for ponding to occur. The Certificate holder can advise on specific applications, but such advice is outside the scope of this Certificate. The membrane is fitted as necessary to the curve of the ceiling and the joints sealed with Delta-Tape, Delta Rope or Delta Ultratape.

9.2.16 At the end walls of vaulted constructions, the membrane must be turned down onto the end wall by a minimum 200 mm. The membrane is mitred as necessary to fit the curve of the ceiling, and the joints sealed with Delta Tape, Delta Rope, or Delta Ultratape. The wall membrane must be cut into the curve of the ceiling, fixed in front of the ceiling membrane and the gap sealed with Delta Rope.

**Floors**

9.2.17 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.

9.2.18 Uneven floor substrates must be dubbed out with a cement-sand (1:4) or cement-lime-sand (1:1:6) render or screed, to the tolerance described in Section 9.1.6, and allowed to dry thoroughly before Delta-MS500 Fire is installed above.

9.2.19 The membrane is rolled out ‘studs down’ over the floor, and consecutive sheet widths must be laid so the flanged edge overlaps the first sheet by three studs. Joints must be sealed using Delta Tape. Stud-to-stud joints can be over-sealed using Delta Ultratape in accordance with Section 9.2.4.

9.2.20 The membrane is cut within 5 mm of any pipes and services in the floor, and the gap filled with Delta Rope. If necessary, a patch of the membrane is overlaid and sealed to the service with Delta Rope, and its perimeter sealed with Delta Ultratape.

9.2.21 Fixings must not be applied through the floor membrane.

9.2.22 Where appropriate, at wall/floor junctions and corners of the installation, the membrane may be cut flush and the gap between the wall and floor membranes sealed with Delta Ultratape. Alternatively, the floor membrane may be turned up by 100 mm at the wall.

9.3 Workmanship

Practicability of installation was assessed by the BBA, on the basis of Certificate holder’s information and site visits to witness installation in progress. To achieve the performance described in this Certificate, installation of the system must be carried out by competent specialist contractors experienced with damp-proofing work.

9.4 Maintenance and repair

9.4 1 As the system is confined 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 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 packaging bearing the system and Certificate holder's names and the BBA logo incorporating the number of this Certificate.

11.2 The packaging details of the ancillary items are shown in Table 6.

*Table 6 Packaging details*

| Item | Dimensions/volume | Packaging/quantity |
|---|---|---|
| Delta Ultrafix Plus | 9 mm diameter, 52 mm long | Boxes of 200 |
| Delta Tape | 22.5 m long, 28 mm wide, 2 mm thick | 1 roll per box, 10 rolls per outer box |
| Delta Rope | 4.75 m long, 10 mm diameter | 1 roll per box, 10 rolls per outer box |
| Delta Mastic | 0.4 litre cartridges | 25 cartridges per box |
| Delta Ultratape | 20 m long, 150 mm wide, 1 mm thick | 1 roll per box |
| Delta Primer | 10 litres | Tins |

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

11.3.1 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.

### CLP Regulation

The Certificate holder has taken the responsibility of classifying and labelling the system under the *GB CLG Regulation* and *CLP Regulation (EC) No 1272/2008 on the 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 membrane in accordance with harmonised European Standard BS 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 TÜV (Certificate 01 100 041012/3)

### Additional information on installation

A.1 Delta-MS500 Fire may be used in combination with any of the appropriate Delta membranes that are the subjects 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 must 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 In above-ground installations, the build-up of water vapour behind the membrane is controlled by venting into the room via ventilation gaps provided at the ceiling and skirting board levels or via passive air vents, where access through an external wall is available.

A.5 The translucence of the membrane allows the contractor to view through to the substrate and choose the optimum site for each fixing.

A.6 On walls and ceilings, preservative-treated timber battens of minimum dimensions 25 by 38 mm are fixed into the Delta Ultrafix Plug, fixing hole using No 10 screws, with a maximum screwing-in depth of 30 mm. The membrane can also be dry-lined, using free-standing framework, blockwork or similar. Where necessary, these should be tied back by fixing into the Delta Ultrafix Plug.

A.7 Wall-mounted fittings (apart from lightweight items such as framed pictures) must be fixed where possible into battens, whose position and number of support fixings into the loadbearing structure are predetermined.

A.8 After the membrane has been installed and the walls dry-lined, permanent decorations (such as vinyl paper or oil paint) may be applied. Temporary permeable decorations (necessary with traditional, cement-based waterproofers) are not necessary with the system.

Dry lining of walls

A.9 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 must be taken to ensure that penetration of the plasterboard by screws or nails is less than the depth of the batten, to avoid puncturing the membrane.

Floor membrane coverings

A.10 Under normal operating conditions, Delta-MS500 Fire is not affected by underfloor heating.

A.11 If required, extruded, closed-cell polystyrene insulation boards (minimum density 30 $kg \cdot m^{-3}$) are laid over the membrane.

A.12 Suitable tongue-and-groove flooring board 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.13 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 or screed should be reinforced to inhibit shrinkage cracks.

A.14 Proprietary screeds, which can generally be laid at thicknesses less than 50 mm, may also be considered but use of these systems has not been assessed by the BBA, and is outside the scope of this Certificate.

## Bibliography


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 8000-4 : 1989 *Workmanship on building sites — Code of practice for waterproofing*

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 cement sand 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*

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 panels for use in floors, roofs and walls*

BS EN 13501-1 : 2018 *Fire Classification of construction products and building elements*

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

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

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*

Pr EN 12310-1 : 2000 *Flexible Sheets for Waterproofing — Determination of Resistance to Tearing (Nail Shank)*

Property Care Association COP09 *Code of Practice for Installation of Remedial Damp-proof Courses in Masonry Walls*
*SPF Verksnorm 2200 :1995 -Material property report — type testing by National institute of Technology, Norway*

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

## 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
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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.

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