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Agrément Certificate
94/3010
Product Sheet 1 Issue 5

NEWTON WATERPROOFING SYSTEMS

NEWTON 508 AND NEWTON 508R

This Agrément Certificate Product Sheet(1) relates to Newton 508 and Newton 508R, moulded high density polyethylene (HDPE) membranes for waterproofing and damp-proofing on walls, floors and vaulted ceilings in new construction or in existing buildings. They can be used above and below ground, over a contaminated or damp background, to support a dry lining. Newton 508R 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 systems described herein. These systems have 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 Fifth issue: 17 December 2024
Originally certified on 29 March 1994

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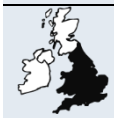
SUMMARY OF ASSESSMENT AND COMPLIANCE

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 Newton 508 and Newton 508R, 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 systems can contribute to satisfying this Requirement. See section 2 of this Certificate.
Requirement:	**B4(1)**	**External fire spread**
Comment:		The systems are restricted by this Requirement. See section 2 of this Certificate.
Requirement:	**C1(2)**	**Site preparation and resistance to contaminants**
Comment:		When properly installed in a correctly designed structure, Newton 508R 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 systems can contribute to satisfying this Requirement. See section 3 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship (applicable to England only)**
Comment:		The systems are 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 systems are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	**9**	**Building standards - construction**
Standard:	2.4	Cavities
Comment:		The systems can contribute to satisfying this Standard, with reference to clause 2.4.2(1)(2). See section 2 of this Certificate.
Standard:	3.1	Site preparation – harmful and dangerous substances
Standard:	3.2	Site preparation – protection from radon gas
Comment:		Newton 508R 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(1)(2) and 3.2.2(1)(2). See section 3 of this Certificate.
Standard:	3.3	Flooding and ground water
Comment:		The systems 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 systems can contribute to satisfying this Standard, 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 systems 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 systems 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 systems 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 in relation to the systems 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) (iii)(b)(i)**	**Fitness of materials and workmanship**
Comment:		The systems are 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, Newton 508R forms an effective barrier to radon and so can contribute to satisfying this Regulation. See section 13 of this Certificate.
Regulation:	**28(a)(b)**	**Resistance to moisture and weather**
Comment:		The systems can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation:	**35(4)**	**Internal fire spread – Structure**
Comment:		The systems can contribute to satisfying this Regulation. See section 2 of this Certificate.
Regulation:	**36(a)**	**External fire spread**
Comment:		The systems are restricted by this Regulation. See section 2 of this Certificate.

Additional Information

NHBC Standards 2024

In the opinion of the BBA, Newton 508 and Newton 508R, 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*, 4.1 *Land quality – managing ground conditions*, 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 systems must be used in combination with either a Type A or B waterproofing protection.

In the opinion of the BBA, use of the systems on existing structures, if 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 Newton 508 and Newton 508R to be satisfactory for use as described in this Certificate. The systems have been assessed for use as waterproofing and damp-proofing on walls, floors and vaulted ceilings, in new construction or in existing buildings. They can be used above and below ground, over a contaminated or damp background, to support a dry lining. Newton 508R may also be used 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 systems under assessment. Newton 508 and Newton 508R are translucent HDPE sheets with moulded studs at 28 mm centres.

The systems have the nominal characteristics given in Table 1.

Table 1 Nominal characteristics

Characteristic (unit)	Newton 508	Newton 508R
Thickness (mm)	0.5	0.7
Stud height (mm)	8.0	8.0
Weight per unit area ($kg \cdot m^{-2}$)	0.5	0.7
Roll length (m)	20.0	20.0
Roll width (m)	2.4	2.07 and 2.4
Weight of roll (kg)	24.50	29.40 and 33.82
Air gap volume ($l \cdot m^{-2}$)	5.51	5.51

Ancillary Items

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

- Newton MultiPlug — a dark blue plastic plug supplied with preformed rubber seal, for use in masonry walls and concrete. The plug acts as a waterproof wall plug for securing the membrane to the wall. Battens, independent wall lining systems or wall ties can be secured into the head of the plug without having to make additional holes through the membrane
- Newton Nu-Seal Plug — a blue plastic nylon plug for securing Newton membranes in below-ground situations. The plug requires Newton Waterseal Rope to be wrapped in a bead around the plug head prior to fixing the membrane. Nu-Seal Plugs are used to fix the membranes to vaulted brick arches
- Newton Waterseal Tape — a black butyl tape for sealing joints in the membrane
- Newton Waterseal Rope — a black butyl beading for sealing the air gap around pipes and the edges of the membrane, and joining floor and wall membranes. It is also used to seal around the head of Nu-Seal Plugs prior to fixing the membranes
- Newton Mastic Sealer — a silicone sealant for sealing the membranes in an above-ground situation where no hydrostatic pressure is possible
- Newton Overtape — a self-adhesive membrane strip for sealing junctions between walls and floors, and for sealing joints at corners. It can also be used for sealing around service penetrations
- Newton Basedrain — a PVC-U system of drainage channels with 18 mm diameter holes every 100 mm along its length, to collect excess water at the base of the membrane and conduct it to a collection point for subsequent discharge. It is available in straight lengths and also in preformed angles for use at corners and junctions
- Newton Floordrain — as Newton Basedrain but without the upstand or flange and used to receive water from floor construction joints and to connect Basedrain to internally sited sumps
- Newton Drainage Adaptor — changes profile from Basedrain or Floordrain to receive 63 mm outside diameter pipe for connections to services or to sumps
- Newton 508 mesh — a moulded HDPE membrane incorporating a polypropylene mesh as a key for plaster, render or dry lining applied on plaster dabs.

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

- Newton CDM Lime Inhibitor — for use prior to the installation of a Newton CDM cavity drain membrane waterproofing system
- Newton Basedrain Inspection Port — to allow access to the Basedrain drainage system for inspection and maintenance
- Newton Condensation Strip — a strip of 8 mm membrane
- Newton Fibran XPS 500-C Insulation — a 50 mm insulated spacer
- Newton Basedrain Swept Corner — pre formed swept drainage corner for use in the Basedrain System
- Newton BaseDrain T Piece — T section of Floordrain which aids in connecting FloorDrain to the BaseDrain System
- Newton BaseDrain Drainage Connector - connection bracket which joins the either the BaseDrain or FloorDrain together
- Newton BaseDrain Inspection Port Base - Preformed units which allow for ease of Access into the BaseDrain system. Ducting is available to insert into the Inspection Ports to rise up to BaseDrain Access Hatch
- BaseDrain Access Hatch - Access Panel which is inserted into either Dryling or Block Work to give ease of access to the Inspection Port
- Newton Joint Liner - Pre-formed Cloaks for pocketing steels and linking to the Cavity Drain System.

Applications

The systems are satisfactory for use in waterproofing and damp-proofing walls and vaulted ceilings, above and below ground, as part of the Newton CDM System(1), in new construction or in existing buildings over a contaminated or damp background. It can support a dry lining in the following situations:

- on damp walls 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 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
- Newton 508R is suitable as a component part of a radon protection system(1) alongside alarm and extraction systems in accordance with BS 8485 : 2015
- an underfloor damp-proof membrane (508R only)
- a dry lining for walls for use above ground.

(1) Newton CDM System is a Type C, below-ground waterproofing system for both new build and refurbishment projects, consisting of Newton waterproof membranes linked to a water drainage system and pumping system to convey excess water safely away from the property. All components other than Newton 508 and Newton 508R are outside the scope of this Certificate.
(2) Other components of the gas protection system are outside the scope of this Certificate.

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

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

Product assessment – key factors

The systems were 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 system was tested for resistance to nail tear is and the result is given in Table 2.

Table 2 Mechanical properties

Product assessed	Assessment method	Requirement	Result
Newton 508R	BS EN 12310-1 : 2000	Value achieved	
	Longitudinal direction		558N
	Transverse direction		492N

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 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 systems in accordance with BS EN 13501-1 : 2018.

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

2.1.3 In England, the systems must not be used above ground on walls of 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, student accommodation, care homes, sheltered housing, hospitals or dormitories in boarding schools.

2.1.4 In Wales and Northern Ireland, the systems must not be used above ground on walls of 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, the use of the systems 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.

2.1.6 Where the systems form 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 The result of a watertightness test is given in Table 3.

Table 3 Watertightness

Product assessed	Assessment method	Requirement	Result
Newton 508 with stud/stud joint with Waterseal Rope	Resistance to water pressure to MOAT 27 : 1983	No leakage at 40 kPa for 24 hours	Pass

3.1.2 On the basis of data assessed, the systems are water resistant and have a high resistance to water vapour transmission. However, as installed, they are 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 systems provide an effective barrier to the transmission of salts or other contaminants from the substrate.

3.2 Condensation

In common with most waterproofing membranes, the systems have 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).

3.3 Properties in relation to external factors

3.3.1 Resistance to underground gases

3.3.2 Measured radon permeability/diffusion values on an unjointed Newton 508R membrane are given in Table 4.

Table 4 Radon permeability of Newton 508R

Product assessed	Assessment method	Requirement	Result
Newton 508R Membrane Unjointed	K124/02/95	Value achieved	3.1×10^{-12} $m^2 \cdot s^{-1}$
Newton 508R Membrane jointed with Newton Waterseal Tape	K124/02/95	Value achieved	2.7×10^{-12} $m^2 \cdot s^{-1}$

3.3.3 On the basis of data assessed, Newton 508R, as part of a gas protection system(1), will restrict the ingress of radon into buildings from naturally occurring sources.

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

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 systems comprise HDPE, which can be recycled.

8 Durability

Data were assessed for the following characteristics.

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

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

Table 5 Result of durability test

Product assessed	Assessment method	Requirement	Result
Newton 508R	Long term compression to a BBA test method	Value achieved	
	Deflection after 1 day		0.41
	7 days		0.48
	28 days		0.50

8.3 Service life

Under normal service conditions, the systems will have a life at least as long as the building in which they are incorporated, provided that they are 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 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 the systems are used in new floor 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 system, 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 must 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 systems are to be used as part of a gas protection system with regard to the other components of the system, but such advice and products are outside the scope of this Certificate.

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

9.1.12 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 following the relevant guidance given in BRE Report BR 211 : 2023, BS 8485 : 2015 and NHBC NF 94. A summary of instructions and guidance is 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 must then be 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 by the width of the 70 mm flange. Joints with the flanged edge must be sealed using Newton Waterseal Tape, while stud-to-stud joints (where the studs both overlap and fully interlock) are sealed by overlapping the membrane by a minimum of three studs and positioning the Newton Waterseal Tape to the point of contact between both membranes, between the last row of studs.

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

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

Walls

9.2.7 Installation of the membrane is commenced at the top of the construction. The membrane may require initial fixing on a ceiling or along the upper edge of a wall, prior to final fixings along batten runs. For joints where the flanged edge is not used, the two sheets must be 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.

9.2.8 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. Newton MultiPlugs (complete with preformed rubber seal) are inserted into the holes and hammered flush with the membrane with a club hammer. The seal must be compressed to function as a barrier against water ingress, and this must be visually checked as each plug is fixed. Any item screwed into the MultiPlug fixing hole must have a maximum screwing-in depth of 25 mm.

9.2.9 Spacings between fixings will depend on the method of dry lining to be applied. When using preservative-treated timber battens, the Newton MultiPlug fixings must be spaced at 600 mm centres vertically and at 400 mm centres horizontally. Free-standing timber and metal frames do not require specific fixing centres, and sufficient fixings must be used to ensure that the membrane is reasonably tight to the wall, especially at corners.

9.2.10 Where lateral support is needed for independent framework, bracing can be applied into the plug heads for stability.

9.2.11 The installation is conducted over windows, and the membrane is cut away to expose them, with proprietary liquid or physical DPM used to the damp-proof membrane reveals. The joints between the wall membrane and the reveals are sealed with Waterseal Rope and Overtape.

9.2.12 In most cases, for doors and some obstructions, the technique covered in section 9.2.10 apply. Where there is risk of water ingress or dampness to the head of the door other techniques will need to be employed and the Certificate holder must be contacted, but such advice is outside the scope of this Certificate.

9.2.13 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 with either Newton Waterseal Rope or Newton Overtape.

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. The vertical drop between the ends of two membrane sheets for horizontal overlaps must be the width of the flange or three studs.

9.2.15 Newton Nu-Seal Plugs or Newton Multiplugs sealed with Waterseal 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.

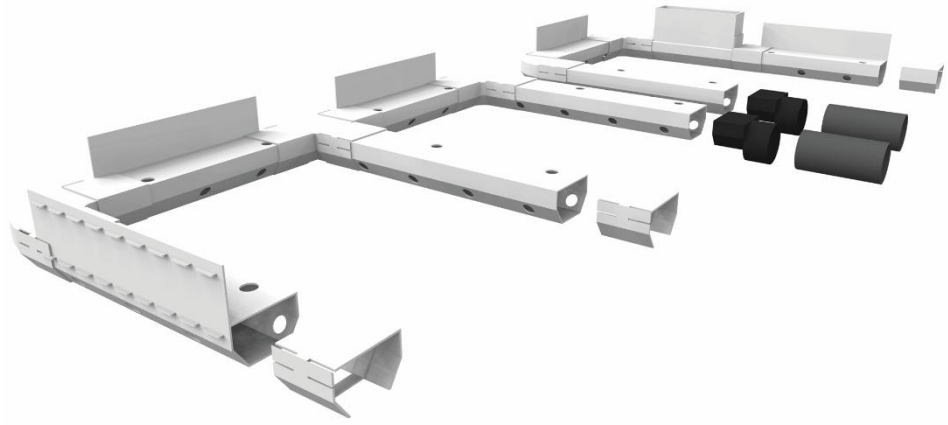
9.2.16 At the end walls of vaulted constructions, the membrane must be turned down onto the end wall by a minimum of 200 mm. The membrane is mitred as necessary to fit the curve of the ceiling, and the joint sealed with Newton Waterseal Rope. The adjoining wall membrane must be cut to fit the curve of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

Floors

9.2.17 When used below ground level, provision must be made for the disposal of any water which may find its way into the structure. The Certificate holder can advise on suitable materials for this purpose, but such advice and materials are outside the scope of this Certificate.

9.2.18 Newton Basedrain (see Figure 1) is installed at wall/floor junctions around the perimeter of walls to convey ingressing water to a collection point (sump). The Newton Basedrain can be cut on site using a handsaw to form mitred joints around corners, or preformed angled pieces can be used. In either case, sections of Basedrain are joined together using tapes or the Newton BaseDrain Drainage Connector supplied by the Certificate holder. Newton Floordrain must be used across construction joints in the slab.

Figure 1 Newton Basedrain



9.2.19 Newton Basedrain is either sunk into formed channels in the floor slab adjacent to the wall, or placed on the existing floor with Newton Fibran XPS 500-C Insulation butted up to it (see Figures 2 and 3). The Certificate holder can advise on suitable materials for this purpose, but such advice and materials are outside the scope of this Certificate.

9.2.20 The membrane must be laid directly on top of the Newton Fibran XPS 500-C Insulation and a suitable screed chipboard flooring installed used over the top. The Certificate holder can advise on suitable materials for this purpose, but such advice is outside the scope of this Certificate.

9.2.21 The membrane is rolled out 'studs down' over the floor, and consecutive membrane widths are laid so the flanged edge overlaps the first sheet by the width of the 70 m flange. The joints are sealed in accordance with section 9.2.5.

9.2.22 The membrane is cut within 5 mm of any pipes and services in the floor, and the gap filled with Newton Waterseal Rope. A patch of membrane is overlaid and sealed to the services with Newton Waterseal Rope, and its circumference sealed with Newton Waterseal Tape. Pre-formed pipe-seals are available from the Certificate holder but are outside the scope of this Certificate.

9.2.23 Penetrations through the floor membrane must be sealed with Newton Waterseal Tape or Waterseal Rope or Newton Overtape. The penetrating item may require application of a primer to ensure satisfactory adhesion. The Certificate holder can advise on suitable materials for this purpose, but such advice and materials are outside the scope of this Certificate.

Figure 2 Installation detail – channel over slab

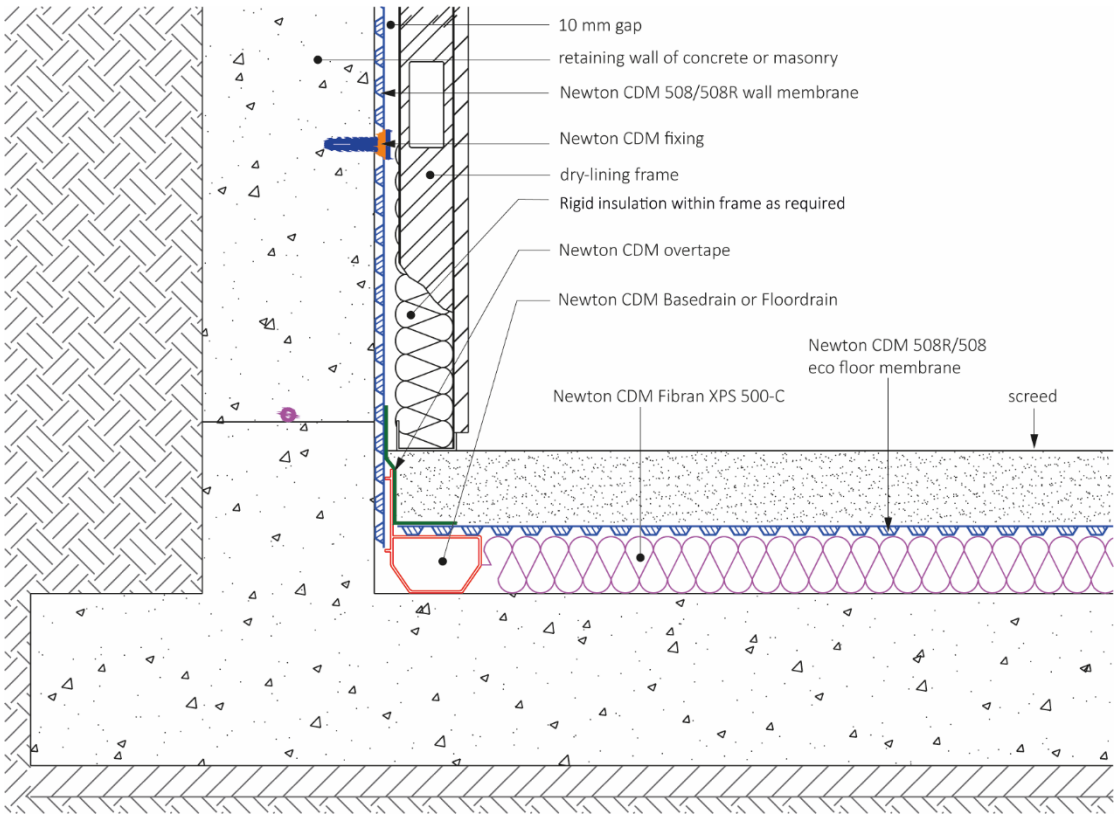
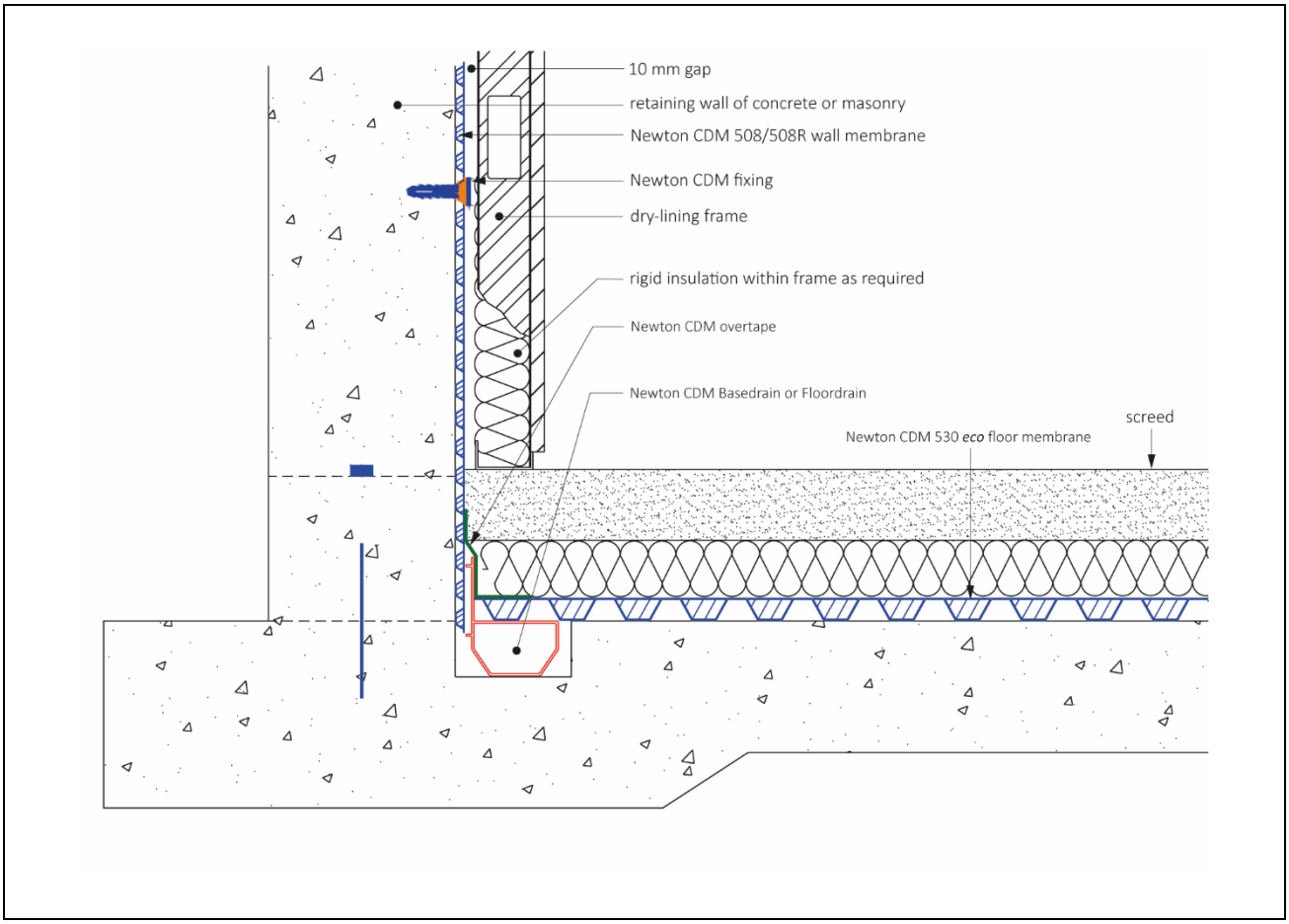


Figure 3 Installation detail — preformed recess



Finishing works

9.2.24 All joints and fixings must be sealed with Newton sealing products, and drainage channels and gullies, or sumps and pumps, should 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 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 and a site visit to witness an installation in progress. To achieve the performance described in this Certificate, installation of the systems must be carried out by installers who have been trained and approved by the Certificate holder.

9.4 Maintenance and repair

9.4.1 As the systems are confined and have 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 systems 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 systems are delivered to site in rolls packaged in woven plastic sacks, bearing the Certificate holder and system 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
Newton Nu-Seal Plug	25 mm diameter head 70 mm long	Bags of 100
Newton Multiplug	25 mm diameter head 57 mm long	Bags of 100
Newton Waterseal Tape	22.5 m long x 30 mm wide x 2 mm thick	12 rolls per box
Newton Waterseal Rope	4.75 m long x 10 mm diameter	12 rolls per box
Newton Mastic Sealer	0.4 litre cartridges	25 cartridges per carton
Newton Overtape	20 m x 150 mm in black or white 20 m x 100 mm in black	2 rolls per box 4 rolls per box
Newton Basedrain and Newton Floordrain	2 m lengths	6 lengths per pack

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 systems 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 systems, in accordance with harmonised European Standard EN 13967 : 2012.

Additional information on installation

A.1 When used as part of the Newton CDM System, Newton 508 and Newton 508R may be used in combination with any of the appropriate Newton membranes which are the subject of Product Sheets 2 to 4, and 7 to 9 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 The translucence of the membrane allows the contractor to view through to the substrate and choose the optimum site for each fixing.

A.5 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.6 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 systems.

Dry lining of walls

A.7 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.

A.8 When a plaster finish is required, Newton 508 or Newton 508R on walls may be substituted by any of the Newton meshed membrane systems which are the subject of other Product Sheets of this Certificate. However, the fixings designed for below-ground use (MultiPlugs and Nu-Seal Plugs) must be used.

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 Under normal operating conditions, the systems are not affected by underfloor heating.

Additional information

A.11 The certificate holder operates a nationwide approved installer network who can act as the principle waterproofing designer and offer insurance backed warranties on the installation of the system

Bibliography

BRE Report BR 211 : 2023 *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 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 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 520 : 2004 + A1: 2009 *Gypsum plasterboards — Definitions, requirements, and test methods*

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

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

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

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*

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

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
- 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
- and any matter arising out of or in connection with it or its subject matter (including non-contractual disputes or claims) is governed by and construed in accordance with the law of England and Wales.
- the courts of England and Wales shall have exclusive jurisdiction to settle any matter arising out of or in connection with this Certificate or its subject matter (including non-contractual disputes or claims).

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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