

System 500

NEWTON 508

8mm Cavity Drain Membrane

Rev 7.2 - 10 February 2017

PRODUCT CODES - M1, M1R, M2R & M3

PRODUCT OVERVIEW

Newton 508 is a high quality cavity drain waterproofing membrane, which is supplied in a number of variants for use within Newton System 500, our, internally applied waterproofing system that includes Newton drainage and pumping systems. Depending on the variant, Newton 508 is suitable for the waterproofing of earth retained walls, vaulted soffits and floors and is guaranteed against deterioration for 30 years, with a life expectancy of at least 50 years (DIN 9001:2000) and is supported by BBA Certification Number 94/3010.



Newton 508 is inert and, therefore, non-polluting to drinking water, highly resistant to water, alkalies, saline solutions and organic acids, and not affected by minerals and hydro-carbons. It is also impervious to root penetration, is rot-proof, and resistant to bacteria, fungi and other small organisms. Newton 508R exhibits high compressive loading stability.

Newton 508R is also independently tested as an effective barrier to methane and radon ground gasses and is the membrane used within our patented combined ground gas and waterproofing system, Newton PAC.

KEY BENEFITS

- Does not require extensive and damaging preparation to the wall surface
- Speed of installation
- Provides vapour control and, when used with humidity control systems, is capable of delivering an environment to all levels within a Grade 3 environment to BS 8102:2009
- 508R is independently certified as a barrier to hydro-carbon gases, radon and methane
- Resistant to chemically aggressive groundwater, efflorescing salts and hydrocarbon contamination
- Rot-proof and resistant to root penetration

TYPICAL APPLICATIONS

Wall and floor membrane as part of Newton System 500.

SUITABLE SUBSTRATE - WALLS

- Concrete
- Brick
- Concrete block
- ICF - With special longer fixing plugs

SUITABLE SUBSTRATE - SOFFITS

- Concrete - To fall
- Brick - Arched or vaulted

SUITABLE SUBSTRATE - FLOOR

- Concrete raft or slab
- Newton [Fibran XPS 500-C](#) closed cell extruded polystyrene insulation (see section on page 3 for further information)



SUITABLE SURFACES

- Walls - 508, 508R & 508 Mesh
- Slab/raft - 508R

APPLICATION

Newton 508 is a constituent part of Newton System 500, our Type C, internally waterproofing system. Newton recommend that System 500 be installed by Newton NSBC contractors who are trained by Newton in the correct design and installation of the waterproofing system. This is also a requirement of the BBA Certificate.

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TECHNICAL DATA

Features	Result			Units	
	508	508R	508 Mesh		
Material	HDPE	HDPE	HDPE		
Colour	White	White	White		
Density	500	700	600	g/m ²	
Width	2.4	2.07/2.4	2.0	m	
Length	20	20	20	m	
Area	48	40/48	40	m ²	
Height	8.0	8.0	7.4	mm	
Membrane thickness	0.6	0.8	0.8	mm	
Stud depth	7.4	7.2	6.6	mm	
Vicat softening temperature	126			°C	
Packaged weight	24.5	29.40 / 33.82	26.96	kg	
Service temperature	-40 to +80			°C	
Installed Performance	Result			Units	Test Method
Compressive strength	170	280	N/A	kPa	EN 25619-1
Thermal conductivity	0.461			W/mK	EN 12667
Colour	White	White	Black		
Water vapour diffusion resistance – S _D value	>604			m	BS EN 1931
Water vapour diffusion resistance – μ value	>1208000			μ	Calculated from S _D value
Water vapour diffusion resistance	>3020			MNs/g	Calculated from S _D value
Resistance to fire	Euroclass F				BS EN 13501-1
Chemical resistance – Excellent	100			%	EN 14030
Oxidation resistance – Excellent	100			%	EN ISO 13438

The above data, even if carried out according to regulated tests are indicative and they may change when specific site conditions vary.

SPECIALIST TOOLS REQUIRED

- High quality SDS drill and drill bits
- Heat gun
- Rotating laser level is recommended but not required

COLOUR

- Translucent white - 508, 508R & 508 Mesh

ANCILLARY PRODUCTS

Please refer to [Newton System 500 Installation Manual](#)

SPECIFICATION

Newton Waterproofing Systems are in partnership with RIBA NBS who publish details of our products and systems within their specification clause library to allow Architects ease of specification through their NBS Plus interface. NBS clauses can be accessed via the technical resources area of the web site where a live NBS Feed is available at [NBS Plus Live Feed](#)

Our website has drawings available for download in [Technical Drawings](#). A selection are also available via [FastrackCAD](#), as well as a range of BIM objects on the [NBS National BIM Library](#)

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VARIANTS

Newton 508

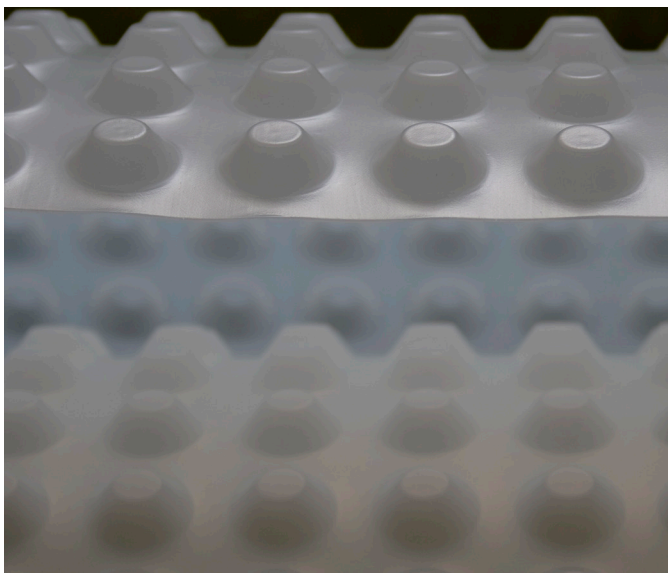


Code: M1

Use: Walls, vaulted and sloping soffits

Advantages: Lightweight and so easier to fit to large or high walls and to soffits

Newton 508R



Code: M1R & M2R

Use: Floors, walls, vaulted and sloping soffits. Used with The Newton PAC System for combined water and gas control

Advantages: Heavier and stronger than Newton 508. Is certified for use as a barrier to ground gasses and is suitable to be used where the ground suffers from hydrocarbon contamination

Newton 508 Mesh



Code: M3

Use: Walls, vaulted and sloping soffits

Advantages: A strong polyethylene mesh is thermally welded to the face of the membrane during the manufacturing process. The mesh provides a key for plasters and renders

TRAINING AND COMPETENCY OF THE USER

Newton 508 should be installed by those with experience of structural waterproofing.

It is recommended that Newton 508 and its ancillary products be installed by contractors trained by Newton Waterproofing Systems in the correct use and specification of the product.

LIFE EXPECTANCY

When specified, installed and protected in accordance with the Data Sheet and Installation Manual, and fully and permanently isolated from UV light and physical damage or wearing, and only to those substrates confirmed within, Newton 508 has a service life that can be equal to the design life of the structure.

PRODUCT WARRANTY

Newton 508 is supplied with a product warranty of 30 years, and has a life expectancy of at least 50 years (DIN 9001:2000). Please note that this is not a guarantee. The waterproofing guarantee is provided by the specialist waterproofing contractor.

PACKAGING

Newton 508 - Code M1 - 2.4 m x 20 m

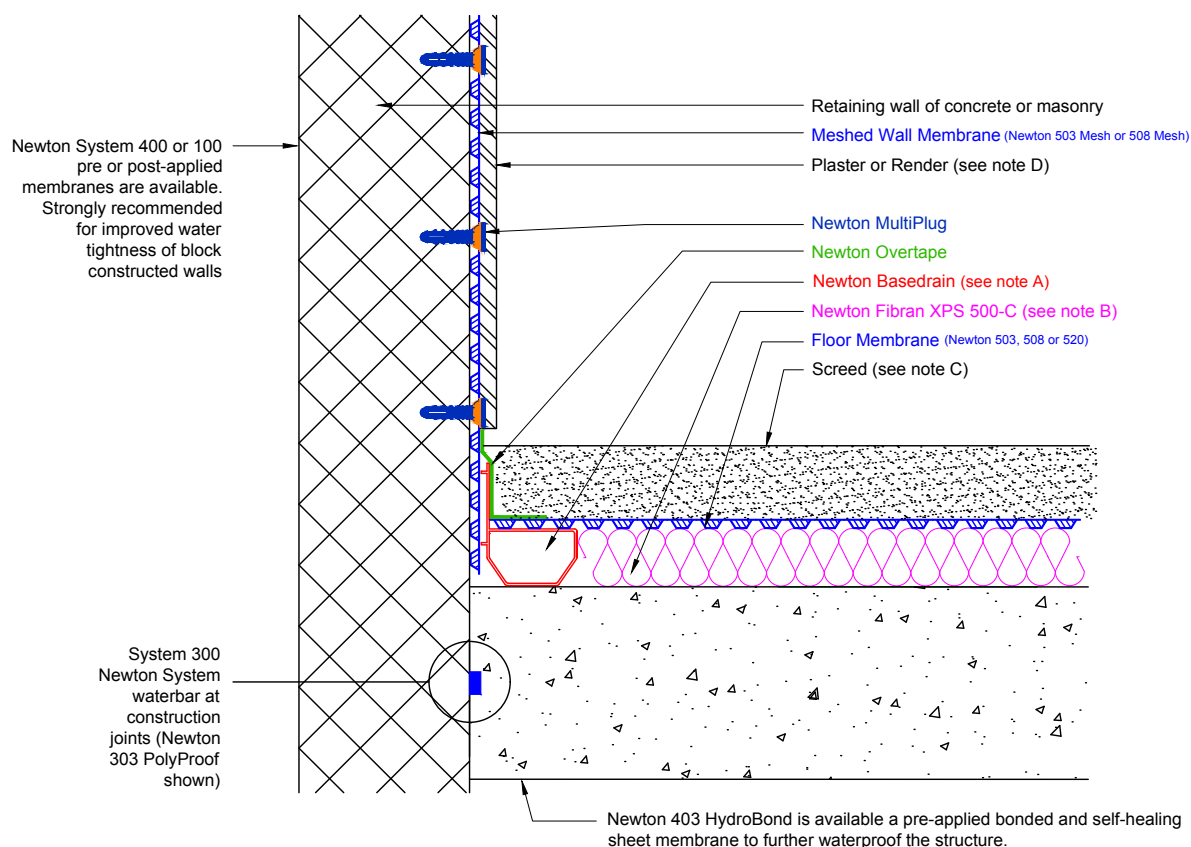
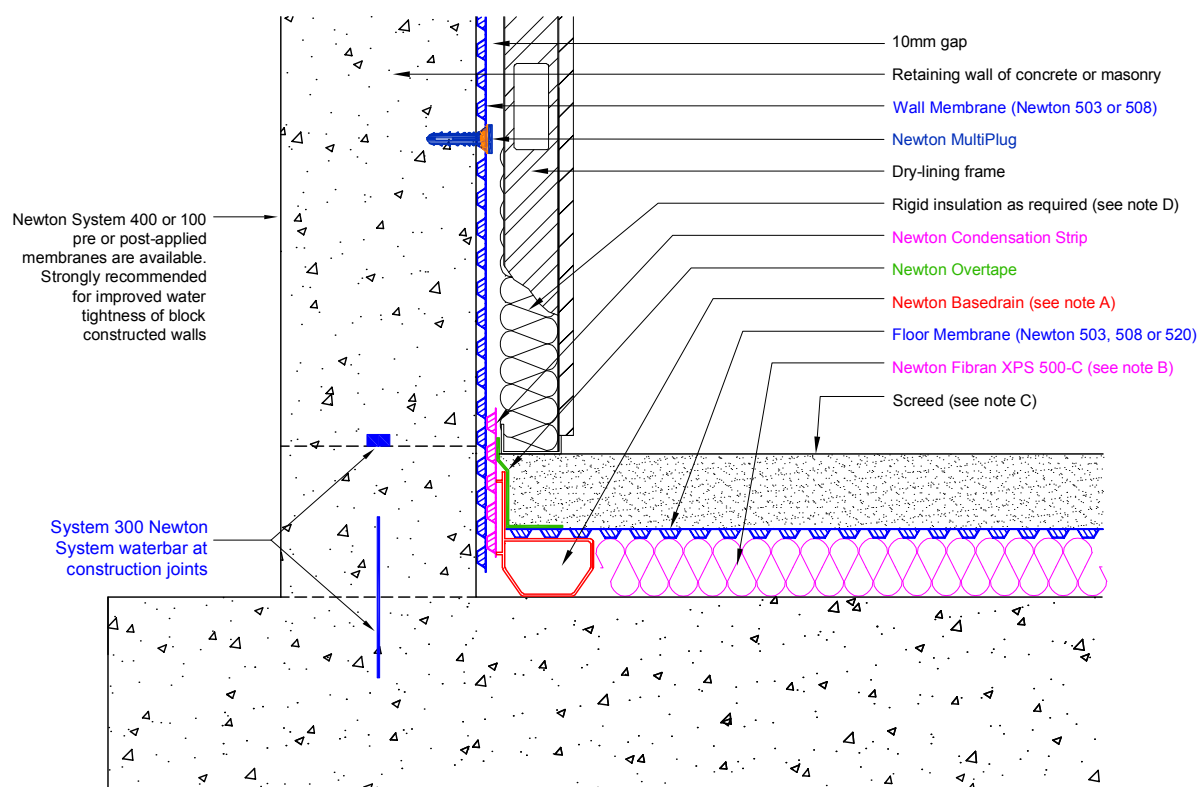
Newton 508R - Code M1R & M2R - 2.4/2.07m x 20 m

Newton 500 Mesh - Code M3 - 2.0 m x 20 m

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TYPICAL DETAIL



Newton Waterproofing Systems reserve the right to update product literature at any time. Please always refer to our [website](https://www.newtonwaterproofing.co.uk) for the latest versions.

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PROTECTION OF THE MEMBRANE

The membrane should always be protected by suitable surface finishes.

Protection methods to walls and vaulted soffits include:

- Suitable plasters or renders (Newton 508 Mesh only)
- Floor supported dry-lin frame and plasterboard
- Timber battens fixed into Newton MultiPlugs as a support for plasterboard or wooden sheeting

Protection methods to floors include:

- Screed
- T&G Chipboard
- Timber floor supported by a fixed lattice of timber supports
- Insulation with screed or T&G chipboard above
- Under-floor heating tray with screed above

NOTE: All variants of Newton 508 are Fire Rated to Euroclass E, the same as plastic based insulation. As such the membrane must always be protected from fire by surface finished, as would be the case with insulation.

APPLICATION ABOVE INSULATION SPACER

Where the membrane is installed above a spacer of 50mm of insulation, please ensure the following:

Type of insulation

In theory any insulation that is recommended for use within wet conditions is suitable. Newton Fibran XPS 500-C is specifically designed for use as the Basedrain spacer below the floor membrane.

Loading of the insulation

The contact area of the studded membrane with the insulation relative to the upper flat area is 10% for Newton 508R and 12.5% for Newton 520. When calculating loading through the membrane to the insulation, be aware that the load to the floor must be multiplied by 10, 8 and 6.6 respectively to give the representative point load to the insulation. For example:

Floor load is 10kN/m². With Newton Eco Floor, multiply the load by 6.6 = 66kN/m² to give point load above the insulation.

Use only the *Compressive creep (design load) max* 2% deflection after 50 years figure from the insulation data sheet. If the point load is too high, please contact Newton for further advice.

INSTALLATION INSTRUCTIONS

Please refer to the System 500 Installation Manual.

LIMITATIONS

- Do not apply to flat soffits unless the soffit is at least 400mm narrower than the membrane to be used and then only by very experienced contractors
- Newton 508 is not a stand-alone product and have no capability to withstand water pressure. Must be used as part of a Type C cavity drain waterproofing system that safely removes water from the building
- Newton System 500, of which Newton 508 is a constituent part, is a professional fit waterproofing system that should be designed and installed by those trained and registered by Newton Waterproofing and registered within our NSBC scheme

STORAGE

Store upright in dry conditions at temperatures between 5°C and 25°C. Do not expose to freezing conditions or direct sunlight.

HEALTH & SAFETY

Use product only as stated within the Application Guides. Read the MSDS and [System 500](#) Installation Manual before use.