

HydroBond 108-LM

Seamless Rubber Waterproofing Membrane

Revision: 6.0 - 27 January 2022
Code: 108-LM & 108 -LM-1

INTRODUCTION

HydroBond 108-LM is a highly radon resistant, cold and spray-applied seamless rubber waterproofing membrane for the external waterproofing of basements (including covered decks) and foundation walls. Normally specified as part of our HydroBond® System in conjunction with HydroBond® 403 Plus, the membrane can also be used on its own, terminating to raft or strip foundations. HydroBond 108-LM is very quick to apply, at up to 1000m² per day, and is not subject to the delays normally associated with liquid membranes as it can be applied in cooler and damper conditions, and without a primer. HydroBond 108-LM is extremely puncture resistant, with high elasticity and a 95% recovery memory. The membrane becomes fully engaged into the concrete surface to prevent water tracking and is suitable for all below-ground and earth-retained structures, ranging from domestic basements to the largest civil engineering projects.



HydroBond 108-LM can be used together with HydroBond 403 Plus to provide a complete waterproof envelope to the structure, forming a Type A (barrier) waterproofing solution suitable for Grades 1, 2 and 3 as defined by BS 8102:2009. Where space is tight, HydroBond 109-LM can be applied instead by roller, brush or small airless spray machine.

The Newton HydroBond® System is supported by BDA Certificate BAB 17-031/04/A and is accepted by the NHBC as a suitable waterproofing system for Type A Waterproofing to Grades 1, 2 & 3 - BS 8102:2009.

APPLICATION



PROPERTIES

H - Hardness and Durability; E - Elasticity and Flexibility; V - Vapour Permeability; C - Curing and Drying; W - Working Time; U - UV Stability



PACKAGING

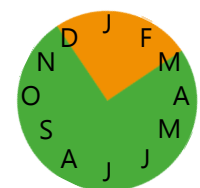


Single component plus catalyst

COVERAGE

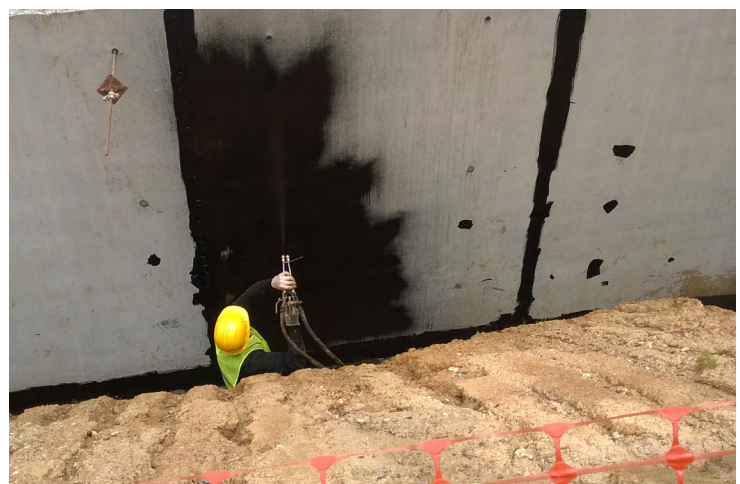


OUTDOOR SEASON



KEY BENEFITS

- Cold applied, fully-bonded seamless membrane
- Very elastic with no shrinkage
- No primer required
- Very quick to apply - up to 1000m² per day
- Cost efficient - The low price of the membrane, coupled with high application rates = a very low installed rate per square metre
- Solvent-free, non-toxic and odourless
- Non-flammable - No VOCs
- Chemically resistant
- Highly radon resistant



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TECHNICAL DATA

Features	Result	Units	
Form	Liquid		
Colour	Brown (in container)		
Density/Specific Gravity	1.1		
Packaging – Drum	200	Litres	
Packaging – IBC	1000	Litres	
Shelf life	12	Months	
Pot life	3	Months (if sealed)	
Application rate – RC walls - Waterproofing only	1.6	Litres/m ²	
Application rate – Joints in concrete walls – band of 250 mm	3.2	Litres/m ²	
Application rate – Block and ICF walls	3.2	Litres/m ²	
Application rate – Radon barrier and	3.2	Litres/m ²	
Application method	Specialist machine		
Application temperature	+3 to +35	°C	
Service temperature	-15 to +40	°C	
Odour	None		
VOC	0	%	
Viscosity – SSF @ 25°C	15 – 20 seconds		
pH	11 -13		
Curing	Result	Units	
Ready for next coat (over joints)	30	Minutes	
To not be adulterated by rain	2	Minutes	
Ready for temporary foot traffic/protection boards	30	Minutes	
Fully cured	30	Minutes	
Cured Performance	Result	Units	Test Method
Colour	Black		
Membrane thickness - RC walls	1.0	mm	
Membrane thickness - RC joints	2.0	mm	
Membrane thickness - Radon barrier and Block & ICF walls	2.0	mm	
Membrane thickness - Horizontal RC elements	3.0	mm	
Density/Specific gravity (no reinforcement)	1.1		
Softening temperature	> 130°C		Ring & Ball
Adhesion to concrete	0.62	N/mm ²	DIN 53232
Tensile strength & elongation at break (reinforced)	0.68	N/mm ²	EN ISO 527-3:1995
Tensile strength & elongation at break (reinforced) (aged)	0.58	N/mm ²	EN ISO 527-3:1995
Loading capability (no reinforcement) - Class 1	0.06	MN/mm ²	EN 15815
Resistance to static indentation (reinforced)	250	N	EOTA TR007:2004
Crack bridging ability (no reinforcement) - Class CB2	≥2	mm	
Resistance to fatigue movement - 1000 actions @ -10°C	Pass		EOTA TR008:2004
Dimensional stability at high temperature - no dripping	≥70	°C	EN 15818
Low temperature flexibility @ -10°C	Pass		DIN 52123
Flexibility at low temperature @ 0°C	Pass		EN 15813
Water vapour diffusion resistance – S _d value	72.4	m	BS EN 1931
Water vapour diffusion resistance - μ value	36200	μ	Calculation from S _d value
Water vapour diffusion resistance	362	MNs/g	Calculation from S _d value
Water tightness	7	bar	ISO=DIS 7031
Water resistance - 21 days at 21°C	Watertight		EN 15817
Impact resistance after UV-ageing - 1000h - 10 mm	Pass		EN 12691:2001
Radon gas diffusion resistance (2 mm membrane)	2.4 x 10 ⁻¹¹	M ² /s	K124/02/95
Reaction to fire classification	Euroclass B2		DIN 4102-1

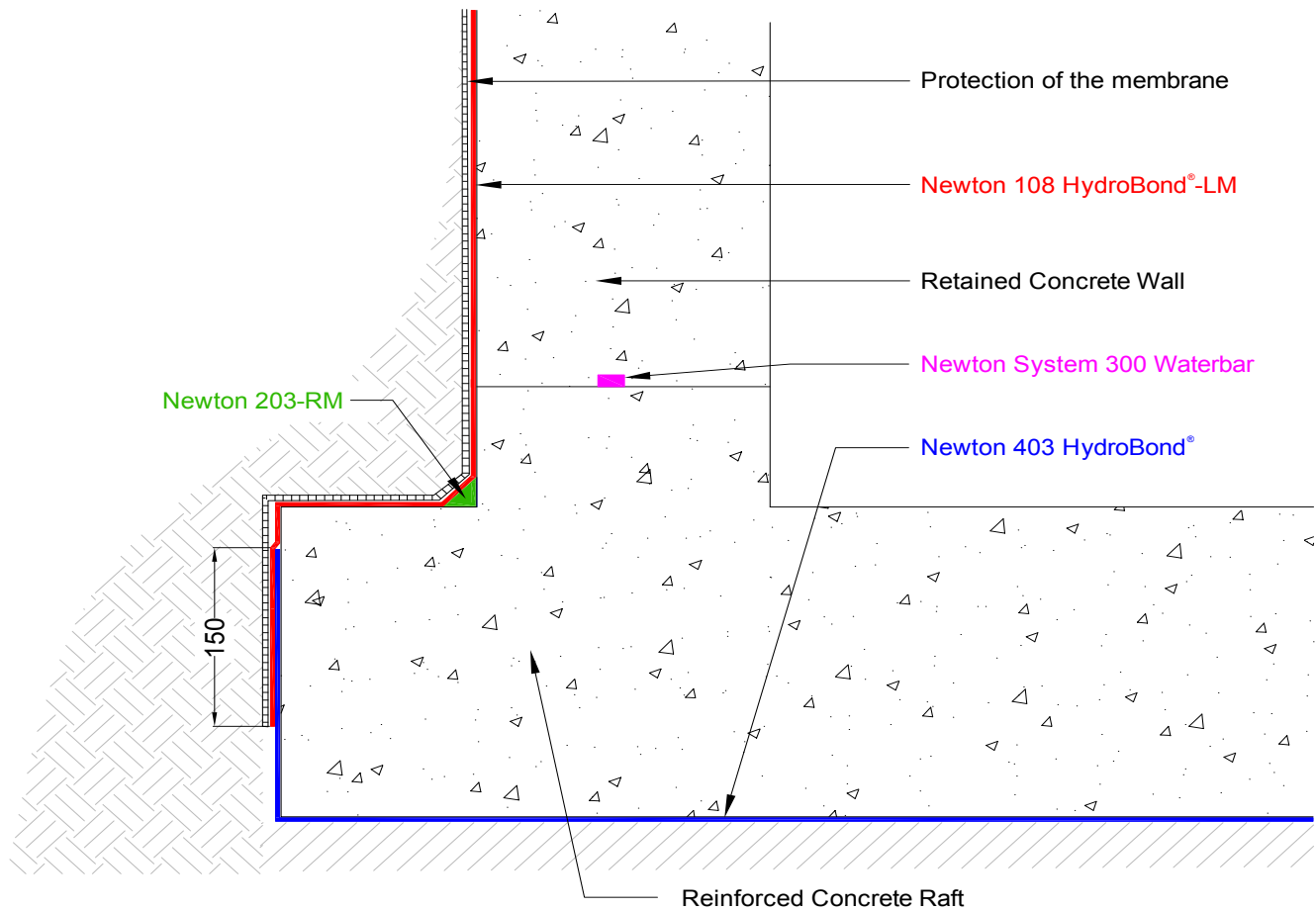
The above data, even if carried out according to regulated tests are indicative and they may change when specific site conditions vary.

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TYPICAL DETAIL

Full HydroBond System showing HydroBond 403 Plus below the RC raft and HydroBond 108-LM to the outside of the exposed RC wall, lapping over the HydroBond 403 Plus at the toe. The building is fully encapsulated by the membrane which is very resistant to puncture. HydroBond 108-LM is fully and monolithically adhered to the concrete so that if defects did occur, water cannot track to the joints.



TYPICAL APPLICATIONS

- Waterproofing and radon protection of basement walls as part of the Newton HydroBond System
- Standalone waterproofing and radon membrane for basements, foundation and earth-retained walls

SUITABLE SUBSTRATES

Correctly prepared substrates of:

- Concrete of at least 20 kN*
- Concrete Screed*
- Concrete block walls with flush pointing
- Insulated formwork walls (ICF)
- 3:1 sand/cement screed mixed with [HydroSeal 908 LB*](#)

SUITABLE SURFACES

- Walls - Positive pressure
- Covered and loaded decks - Positive pressure

*Priming required to horizontal surfaces

METHOD OF APPLICATION

HydroBond 108-LM can only be sprayed with a specialist spray machine. A nationwide network of trained applicators is in place.

SPECIALIST TOOLS REQUIRED

No specialist tools are required apart from the spraying machine mentioned above.

SPECIFICATION

Newton Waterproofing Systems work in partnership with RIBA NBS who publish our products on [NBS Source](#). The platform integrates seamlessly into project workflows, providing all product data from Newton's NBS BIM Objects, NBS Plus Clauses and RIBA Product Selector into one single source of product information.

NBS Source also hosts a large selection of Newton [case studies](#), as well as product [literature and certifications](#).

A wide range of drawings are available [on our website](#).

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TRAINING AND COMPETENCY OF THE USER

HydroBond 108-LM should be installed by those with an understanding of the requirement to waterproof retained structures and the knowledge and training to use the product as part of a coordinated approach to the waterproofing of the structure. In most cases, this will require further products in order to achieve the required habitable grade defined by BS 8102:2009.

HydroBond 108-LM can only be sprayed by those who have access to a suitable spraying machine and have been trained in the use of the machine and how to spray the product correctly.

NSBC contractors are trained by Newton Waterproofing Systems in the correct specification and installation of Newton waterproofing products and will provide the client with a meaningful insurance-backed guarantee for the waterproofing system.



LIFE EXPECTANCY

When specified, installed and protected in accordance with the Data Sheet, fully and permanently isolated from UV light and physical damage or wearing, and only to those substrates confirmed within, HydroBond 108-LM has a service life that can be equal to the design life of the structure.

The membrane is not hard wearing and should be protected during backfilling.

APPLICATION RATE - RC WALLS

Joints - The membrane is applied to a total thickness of 2.0 mm, requiring an application rate of 3.2 litres/m².

Bed in a band of [HydroSeal 914-RT](#) reinforcement tape during the joint application.

Changes in direction - The membrane is applied to a total thickness of 2.0 mm, which requires an application rate of 3.2 litres/m².

Internal changes of direction require a 25 mm x 25 mm smoothing fillet of [HydroSeal 203-RM](#).

Main wall sections - The membrane is applied to a total thickness of 1.0 mm, which requires an application rate of 1.6 litres/m².

APPLICATION RATE - BLOCK & ICF WALLS

The membrane is applied to a total thickness of 2.0 mm, which requires an application rate of 3.2 litres/m².

APPLICATION RATE - RADON BARRIER

Minimum total thickness of 2.0 mm, which requires an application rate of 3.6 litres/m².

APPLICATION RATE - BURIED HORIZONTAL ELEMENTS

Minimum total thickness of 2.0 mm, which requires an application rate of 3.6 litres/m².

ANCILLARY PRODUCTS

- HydroBond 403 Plus - Self healing and fully-bonded sheet membrane that with HydroBond 108-LM and HydroBond 109-LM forms the Agrément certified HydroBond System
- HydroBond 109-LM - Hand or airless spray-applied variant that does not require the specialist spraying machine. Can be applied by brush, roller or standard airless spraying machine.
- HydroSeal 914-RT - Strengthening tape for changes in direction and joints
- [HydroBond 410 GeoDrain](#) - Protection board or drainage membrane for sloping sites
- [NewSeal 408 DeckDrain](#) - Drainage membrane for the removal of water from horizontal sections or decks to suitable drainage. Can also be used as protection board and as a drainage membrane for sloping sites.
- Newton GeoTex - Non-woven geotextile filter layer for protecting the membrane when applied to covered and loaded decks
- [Newton PipeCollar](#) - Flexible preformed collar for sealing pipe protrusions to the membrane

CONSTRUCTION - CONCRETE WALLS

Concrete walls should be constructed to BS EN 1992-3, with the intention of providing a Type B form of waterproofing as described within BS 8102:2009. Joints should be designed out where possible and where unavoidable, they should be waterproofed with a Newton Waterbar or by a proprietary shrinkage joint sealing system.

BURIED HORIZONTAL ELEMENTS

Where the structure continues horizontally below the ground, they should be constructed to the same standard, and as a continuation of the concrete walls.

If other means of construction are used, such as precast beams or block and beam, a structural concrete slab must be placed over the precast elements, isolated by a slip membrane to ensure that movement is not transferred to the waterproofing.

The horizontal elements should be constructed to adequate falls so that water drains away and, where possible, is collected by a perforated pipe or similar. If a screed is required to form the fall, this must be concrete screed or a 3:1 sand/cement with HydroSeal 908 LB mixed to the gauging water at 1:2.

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CONSTRUCTION - BLOCK & ICF WALLS

Walls should be designed by a Structural Engineer to withstand the load of the retained earth, as well as the expected water pressure defined by BS 8102:2009. The mortar joints should be pointed flush to the surface of the wall.

SURFACE PREPARATION - CONCRETE

- The surface must be clean, and free from dust, laitance, release agents, oils, paints or other forms of contamination. Jet washing with a mild detergent may be required. If contaminants are still present, more aggressive preparation, such as grit blasting, will be needed
- Holes, cracks, voids and honeycombing should be filled and made good with HydroSeal 203-RM
- Pin holes and non-structural cracks that are between 0.5 mm and 2 mm wide, and block walls, should be filled with HydroSeal 203-RM using a bag rubbing technique

Concrete must have reached first stage cure at between 14 and 28 days, which is dependent on the water/cement ratio of the mix.



SURFACE PREPARATION - BLOCK WALLS

- Mortar joints should be flush pointed. If they are not, re-point or apply a smoothing coat of sand/cement render with HydroSeal 908 LB mixed into the gauging water at a ratio of 1:2
- Large holes or indentations should be filled with HydroSeal 203-RM
- Remove snots
- Blocks with an open surface should be smoothed with HydroSeal 203-RM using a bag rubbing technique

SURFACE PREPARATION - ICF

- Holes, voids and indentations should be filled with HydroSeal 203-RM
- Where the insulation is badly damaged, remove back to good formwork and make good with HydroSeal 203-RM



SURFACE PREPARATION - BURIED CONCRETE HORIZONTAL ELEMENTS

Horizontal elements will require priming with [NewCoat / DampSafe 901 Primer](#) and/or [DampSafe / NewCoat DPM](#) primers. Please refer to the preparation requirements within these two documents.

PRIMING

HydroBond 108-LM does not require a primer unless applied to horizontal surfaces. With porous substrate, the operative may apply a mist coat of the product without the salt catalyst to seal the surface prior to the main application.

JOINTS & CHANGES OF DIRECTION

- Reinforce static joints with HydroSeal 914-RT
- Over shrinkage or movement joints, apply the HydroSeal 914-RT over a strip of 25 mm wide masking tape to create delamination over the shrinkage/movement element of the joint
- With movement joints, lap the HydroBond 108-LM into the joint and then use our standard [FlexProof 106 NV](#) movement joint detail. Please speak to our Technical Department if you require assistance on the correct specification to joints
- Internal changes of direction require a smoothing fillet of 25 mm x 25 mm. Consider using HydroSeal 203-RM for the smoothing fillet as the fillet will be cured ready for application in 15-30 minutes

MIXING & STIRRING

HydroBond 108-LM does not require mixing or stirring.

APPLICATION

Trained operatives will apply the correct thickness of material by spraying with the specialist spraying machine.

LAPPING TO HYDROBOND 403 PLUS

When used in conjunction with HydroBond 403 Plus or HydroBond 403 Plus GB as a full HydroBond System, Overlap by a minimum of 150 mm as shown on the detail on page 3.

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CURING

The product forms an instantly set rubber membrane that is dry to the touch within seconds of application. There are no curing requirements.

POT LIFE & FURTHER USE

Unused product remains in the storage container and so has no pot life.

If the container is sealed, the product has a useful life of up to 3 months.

CLEANING

The machine is cleaned by the trained operatives ready for next use.

Tools can be cleaned with water immediately after use.

PROTECTION OF THE MEMBRANE

HydroBond 108-LM should be protected during the backfilling operation. This can be achieved with [CDM Fibrax XPS-500C](#) or protection boards. Alternatively, HydroBond 410 GeoDrain can be used as a drainage and protection layer.

To horizontal surfaces, the membrane must be both protected and loaded:

- Protect with Newton GeoTex geotextile
- Drain with NewSeal 408 DeckDrain
- Load with earth or floor finish

If screed or concrete is to be placed above the membrane, 100% broadcast a tack-coat of HydroBond 109-LM with dry-kiln sand, even if a DPM is used.

LIMITATIONS

The product is not seasonal, but careful planning is required for use in the winter.

Regardless of the time of year, do not apply prior to rain - please see information within the curing table on page 2.

- Do not apply at temperatures lower than +3°C or higher than +35°C
- Always use the correct preparation and priming of the support substrate as directed above
- HydroBond 108-LM is sprayed by a large specialist spraying machine. In some cases it may not be possible to site the machine close enough to the working area
- Delivery to site and setting up of the machine can be costly for application to areas below 250 m²

COLOUR

Brown in container. Black when cured.



STORAGE

Store in dry conditions at temperatures between +5°C and +25°C with containers fully sealed. Do not expose to freezing conditions.

If these conditions are maintained and the product packaging is unopened, then a shelf life of up to 12 months can be expected.

HEALTH & SAFETY

Use appropriate PPE for the environment the system is installed within. Use products only as stated within this Data Sheet and MSDS.

		Newton Waterproofing Systems Newton House 17-20 Sovereign Way Tonbridge Kent TN9 1RH	108-LM EN 15814:2011+A2:2014 1211 / 0797 Polymer modified bituminous thick coatings for waterproofing
Essential characteristics	Declared Performance	Test Standard	Harmonised Technical Standard
Crack bridging ability	Class CB2	EN 15812	EN 15814:2011+A2:2014
Resistance to rain	Class R3	EN 15816	
Water resistance	Pass	EN 15817	
Flexibility at low temperature	Pass	EN 15813	
Dimensional stability at high temperature	Pass	EN 15818	
Reaction to fire	Class E	EN 13501	
Watertightness	Class W2B	EN 15820	
Resistance to compression	Class C	EN 15815	
Durability of watertightness and reaction to fire	Pass	as above	

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