Liquid Gas Membrane

Ground Gas, Radon, Vapour and Damp-proof Membrane

Version: 1 - 21 September 2026
Code: LGM-15

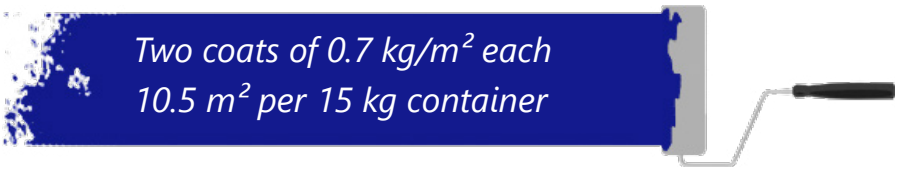
INTRODUCTION

Newton Liquid Gas Membrane is a single-component, liquid-applied barrier specifically formulated for professional use in applications requiring protection against ground gases and moisture. Once cured, it forms a flexible, seamless membrane that resists the ingress of methane, radon, carbon dioxide, and hydrocarbon vapours, while also serving as an effective damp-proof membrane. The water-based, low-VOC formulation is designed for safe application in confined or occupied environments by brush, roller or airless spray.

APPLICATION METHOD

PACKAGING

COVERAGE



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QR CODES & HYPERLINKS

Please use the links below to access the relevant web pages. If reading in paper format, please scan the QR Code to access the web landing page on your mobile device.

Web page for Newton Liquid Gas Membrane

KEY BENEFITS

- Rapid drying, touch-dry in an hour
- Flexible, accommodates minor substrate movement and bridges hairline cracks
- Resists methane, radon, CO_2, and hydrocarbon vapours
- Screed-compatible, suitable for use beneath both cement-based and latex self-levelling screeds
- Solvent-free – water-based formulation with low VOCs
- Versatile application, suitable for both horizontal and vertical surfaces, above or below ground
- Easy to apply by brush, roller, or airless spray

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Opening Hours:
Monday to Friday 7:00am - 5:00pm

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TECHNICAL DATA

Features	Result	Units
Form – Single Component	Liquid	
Colour	Grey	
Density	1.2 - 1.27g	g/cm^3
Pack size	15	kg
Shelf life	12	Months
Yield per 15 kg package	12.5	Litres
Coverage per 15 kg package	10.5	m^2
Application rate – per coat - two coat application	0.7	Kg/m^2
Wet film thickness - two coats	1.1	mm
Recommended dry film thickness - two coats	0.6	mm
Viscosity (20 °C, sp5, 10rpm)	~25,000	cp
Solids content	~57	%
Drying time (touch dry, 20°C)	1	Hour
Pot life / working life at 20°C	30	Minutes
Application temperature	+5 to +35	°C
Service temperature	As substrate applied to	
Odour	Mild latex. Odourless when dry	
VOC content	<5	g/litre

CURING

	5°C	10°C	15°C	20°C	25°C	Units
Ready for further coat	6-8	3-4	1.5-2	1	0.5-0.75	Hours
Initial set	3-4	1.5-2	0.75-1	0.5	0.25-0.5	Hours
Fully cured	7-10	5-7	4-6	3-5	2-3	Days

CURED PERFORMANCE

Features	Result	Units	Testing Method
Colour	Grey		
Adhesion strength - prepared concrete	1.1	N/mm^2	
Elongation at break	350	%	ASTM D2370
Water (liquid) resistance (laboratory test) No visible leakage when tested on a concrete substrate	>2	bar	Internal laboratory hydrostatic pressure test (concrete substrate)
Water vapour permeability	<0.5	g/m^2/day	EN ISO 7783
Methane permeability	<25	ml/m^2/day/atm	EN ISO 15105-1
Carbon dioxide permeability	<260	ml/m^2/day/atm	EN ISO 15105-1
Radon permeability	<9.0	x 10^{-12} m^2/s	Two-chamber steady-state radon diffusion method
Reaction to fire	NPD		

The properties given above are obtained from laboratory tests: results obtained from on-site testing may vary according to site conditions.

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APPLICATION RATE

To achieve the required dry film thickness of 0.6 mm:

- Number of coats - two
- Application rate per coat - 0.7 kg
- Wet film thickness per coat - 0.55 mm
- Wet film thickness over two coats - 1.1 mm
- Dry Film thickness over two coats - 0.6 mm
- Coverage for 15 kg unit - 10.5 m^2

TYPICAL APPLICATIONS

- Gas and damp-proofing for below-ground structures, including basements, cellars and floor slabs, to prevent the ingress of ground gases and moisture. For below-ground wall applications, waterproofing must first be provided by a suitable waterproofing system, with Liquid Gas Membrane subsequently applied as the gas, radon and damp-proof barrier
- Pre-screed preparation, providing a resilient base layer over damaged or porous floors prior to the application of cementitious or latex-based self-levelling screeds
- Moisture barrier on masonry substrates, suitable for use on brick, block work, or stone to limit water vapour transmission
- Liquid-applied alternative to sheet membranes, offering a seamless solution for damp and gas control where detailing or access limitations make sheet systems impractical
- Internal waterproofing layer beneath tile systems in wet rooms, bathrooms, kitchens, and other intermittently wet areas

CAUTIONS & LIMITATIONS

- Substrate moisture – While the product can be applied to damp surfaces, standing or pooled water must be removed prior to application
- Application thickness – Do not exceed the specified coverage rates. Excessive build-up may result in cracking, extended drying times, or surface defects
- Weather conditions – Avoid application if rain is expected before the membrane has fully cured, as this may adversely affect performance
- U.V. exposure – Although the membrane has some UV resistance, extended exposure without a protective layer (e.g. screed, flooring, or other coverings) may compromise long-term durability
- Timber flooring – Direct bonding of wood flooring to the membrane is not recommended. A suitable screed should be laid over the cured coating before timber installation
- Spray application – For spray use, consult technical support for guidance on appropriate equipment, pressures, and technique
- Substrate compatibility – Always perform a small test application on non-standard or previously treated surfaces to confirm adhesion and compatibility
- Important note – This technical guidance is based on current knowledge and practical experience. However, as conditions and application methods vary, no guarantee is offered regarding suitability for any specific project. End users are advised to verify product suitability through appropriate preparation, testing, and adherence to application instructions
- Although the cured membrane has demonstrated resistance to 2 bar water pressure during internal laboratory testing, this testing was not undertaken to a recognised waterproofing standard and should not be interpreted as evidence that the product is suitable as a standalone Type A waterproofing system. Where hydrostatic water pressure is present, suitable waterproofing protection must be provided separately. For internal applications to below-ground structures, a Newton HydroCoat Type A waterproofing system should be installed first, with Liquid Gas Membrane applied to the waterproofing barrier where gas protection is required

LIFE EXPECTANCY & PRODUCT WARRANTY

When applied in accordance with this Technical Data Sheet and protected within the building structure, the cured membrane is designed to provide long-term service life consistent with the surrounding construction.

Newton Liquid Gas Membrane is supplied with a product warranty that confirms its suitability and fitness for purpose for the uses confirmed within this data sheet. Defective product will be replaced under the terms of the warranty. Please note that the warranty is not an installation guarantee.

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STORAGE AND SHELF LIFE

- Store in a dry, well-ventilated area at temperatures between 5°C and 30°C
- Keep the container tightly closed when not in use to prevent moisture ingress or contamination
- Protect from frost, direct sunlight, and sources of heat
- Do not allow the product to freeze – this will destroy the emulsion base
- When stored correctly in original, unopened packaging, the product remains usable for up to 12 months from the date of manufacture
- Once opened, use within 1 month and ensure the container is resealed air-tight between uses to prevent skinning or thickening.
- Discard the product if thickening, phase separation, or an unusual odour is observed, as these may indicate degradation.
- Stir thoroughly before each use. If the product does not regain a smooth, uniform consistency, dispose of it in line with local waste disposal regulations.

SUITABLE SUBSTRATES

- Concrete (floors and walls)
- Cement screeds
- Brickwork
- Blockwork
- Stone

SUITABLE SURFACES

Walls, floors, and ceilings.

METHOD OF APPLICATION

- Brush
- Roller
- Airless spray

ANCILLARY PRODUCTS

- Substrate repair: Newton HydroCoat 203-RM
- Active leak sealing: Newton HydroCoat 313-WP
- Smoothing fillet: Newton HydroCoat 203-RM
- Priming: Newton HydroCoat LiquaBond
- Bag-rubbing: Newton HydroCoat 105 1K

TRAINING & COMPETENCY OF USER

Liquid Gas Membrane should be specified and used by those with an understanding of gas protection and waterproofing design. The membrane is intended to provide protection against gas, radon, vapour and damp-proofing. Where waterproofing protection is required, the membrane should be incorporated within a coordinated waterproofing strategy designed in accordance with BS 8102:2022.

REGULATORY

All components are REACH (Reg. (EC) No 1907/2006) registered or suitably exempt. The product does not contain any Substances of Very High Concern (SVHC).

TOXICITY AND SAFETY

Product is classified as non-hazardous according to the CLP Regulation (Reg. (EC) No 1272/2008). Refer to the Product Safety Data Sheet for recommended safety precautions.

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CONSTRUCTION

The construction should conform with current Building Regulations, British Standards and relevant Codes of Practice.

PREPARATION

Proper preparation of the substrate is critical to ensure long-term performance and adhesion of the liquid-applied membrane.

Surface Preparation:

- All surfaces must be sound, stable, and free from contamination. A smooth, brushed, or trowelled finish is recommended
- Remove all loose or friable material, laitance, dust, oil, grease, coatings, paint, surface water, and other contaminants
- Masonry surfaces should be flush-pointed, and any cracks or defects should be repaired before application
- New concrete or screeds should be sufficiently cured and dimensionally stable prior to application

Organic growth:

- If mould, algae, moss, or other biological growth is present, pre-treat the surface with a suitable fungicidal wash following the manufacturer's instructions
- Allow the treated area to dry completely and remove any residues before proceeding

Priming:

Sound, Stable Surfaces

- Priming is generally not required on clean, dense, and well-prepared substrates. However, dampening the surface with clean water (without leaving standing water) can aid adhesion in some cases

Weak, Porous, or Dusty Surfaces

On substrates that are friable or exhibit surface dusting, one of the following priming methods is recommended:

Option 1- Diluted Product:

- Sweep or vacuum the surface thoroughly. Additional mechanical preparation such as light scabbling may be required
- Prime using a diluted version of this product (75% product to 25% clean water by weight)
- Apply at a rate of approximately 3–4 m^2 per kg
- Work the primer well into the surface using a stiff-bristled brush or broom to ensure full penetration
- Allow the primer coat to dry fully before applying the undiluted product as normal (refer to Application section) Example Dilution Guide:1 kg product → add 250 ml water5 kg product → add 1.25 litres water

Option 2 - HydroCoat Liquabond

- Mechanically clean and prepare the surface as above
- Mix Newton LiquaBond with water at a ratio of 1:1
- Apply primer at 4–5 m^2 per litre
- Once the primer becomes tacky (typically after ~20 minutes), apply Liquid Gas Membrane as normal (refer to Application section).

Note: A single diluted primer coat is typically sufficient for porous or marginal surfaces. In cases of highly friable or dusty substrates, a second primer coat may be necessary for optimal bonding

APPLICATION

Before application, stir the product thoroughly to ensure a uniform consistency. Apply using a brush or roller in two coats to achieve full performance.

Environmental Conditions:

- Recommended application temperature: 5°C to 30°C
- Do not apply if rain is forecast before the membrane has fully dried

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Screed Applications Over the Product:

- While the membrane is still tacky, lightly broadcast fine, washed sharp sand or kiln-dried graded quartz into the surface
- If the membrane has fully cured before screeding, apply a fresh primer coat and install the screed while the primer remains tacky

Coverage & Film Thickness:

- Each coat should be applied at approximately 0.7 kg/m² per coat
- A two-coat application at this rate achieves a minimum dry film thickness (DFT) of 0.6 mm (equivalent to ~1.1 mm wet film), in line with CP102:1973 guidance
- Additional material may be required where the membrane is used as its own primer on weak or porous surfaces

APPLICATION GUIDELINES

- Apply the first coat and allow it to become touch dry—typically within 1 hour depending on ambient conditions
- Apply the second coat at 90° to the first to promote uniform coverage
- Apply the second coat within 24 hours of the first. If exceeded, re-prime with a thin coat before proceeding
- Do not over-apply. Excessively thick layers may result in surface cracking due to uneven drying
- Use a wet film gauge during application to monitor film build and ensure correct thickness, especially where gas resistance is critical

Spray Application:

- Suitable for application using airless spray equipment
- For guidance on nozzle size, pump pressure, and setup, contact technical support to ensure optimal application

PAINTING OVER

Painting directly over Liquid Gas Membrane with a standard acrylic or vinyl emulsion is not suitable. The membrane's non-porous finish does not provide the mechanical key required for successful paint adhesion.

To achieve a paint-ready surface, we recommend a three-coat application system:

Coats 1 & 2 – Standard Membrane Application

Apply the membrane as normal to achieve the specified nameplate vapour protection. Total coverage: approximately 1.4 kg/m².

Coat 3 – Key Coat (Sand-Loaded Adhesion Layer)

Apply a thinner final coat incorporating kiln-dried sand (0.5–1 mm grain size) to create a textured surface suitable for emulsion paints.

- Application rate: 0.35–0.40 kg/m²

  This lighter loading ensures the sand particles remain proud of the surface rather than becoming submerged in the film.
- Sand mix ratio: 1:1 by weight (e.g., 1 kg sand : 1 kg membrane product)

  This typically produces a sandpaper-like finish that provides an effective mechanical key for paint adhesion.

Verification

We recommend carrying out a small trial area to confirm the mix remains easily brushable for the installation team and gives the desired texture.

CLEANING

Tools & equipment:

- Rinse tools and equipment promptly after use with clean water, before the product begins to set
- For partially dried material, warm water combined with a mild detergent may assist in removal
- Avoid allowing the product to cure on tools, as fully dried material is difficult to remove and may require mechanical means

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Spills & waste disposal:

In the event of a spill, contain immediately and absorb using cloths, paper towels, or a suitable inert material such as sand

- Clean the affected surface with water to eliminate any remaining residue
- Dispose of collected waste and used cleaning materials in accordance with applicable local waste disposal regulations

HEALTH & SAFETY

The product should only be used as directed. We always recommend that the Safety Data Sheet (SDS) is carefully read prior to application of the material. Our recommendations for protective equipment should be strictly adhered to for your personal protection. The SDS is available upon request from Newton Waterproofing Systems or online via our website.

As with all chemical products, avoid contact with food, skin, eyes and mouth during usage and storage. During the application, use work clothes, protective gloves, goggles and mask in accordance with the occupational and worker health regulations. Consult a doctor if accidentally swallowed. In case of contact with skin, rinse with water. Keep out of reach of children.

CE LABEL

CE 25	JN NEWTON WATERPROOFING	Newton Waterproofing Systems Newton House 17-19 Sovereign Way Tonbridge Kent TN9 1RH	LGM-15 EN 1504–2 : 2004 Liquid Gas Membrane
Essential Characteristics	Declared Performance	Test Standard	Harmonised Technical Standard
Water Vapour Permeability	Class III	EN ISO 7783	EN 1504-2:2004
Adhesion Strength	≥ 1.0 MPa	EN 1542	
Static Crack Bridging Ability	Class A5	EN 1062-7	
Permeability to CO_2	sd>50 m	EN 1602-6	
Reaction to Fire	NPD		
Dangerous Substances	Complies with 5.3		