Newton 508 eco

8 mm Recycled HDPE Cavity Drain Membrane

Revision: 1 - 28 July 2026
Code: M2E

INTRODUCTION

Newton 508 eco is a high-quality 8 mm cavity drain waterproofing membrane manufactured from 100% recycled post-industrial recycled HDPE - the first cavity drain membrane ever to be engineered from this material. Because it is post-industrial instead of post-consumer, the raw material is verifiable, reliable, and exceptionally consistent. Consequently, through advanced recycling technology we have created a translucent membrane that delivers a sustainable alternative to virgin HDPE membranes without compromising performance.

Newton 508 eco is installed within the Newton CDM System, our internally applied Type C cavity drain waterproofing system, which also includes drainage and pumping components. It is suitable for the waterproofing of earth-retained walls, vaulted soffits and floors.

Newton 508 eco is inert, rot-proof, and resistant to roots, fungal and bacterial attack, and a wide range of chemicals. At end of life, the membrane can be recycled through our award-winning Recycling Service, returning the material to high-grade polymer feedstock and completing a true closed-loop cycle.

Newton 508 Eco has been independently tested and proven to provide an effective barrier to radon gas and can therefore be used as part of the patented Newton PAC-500 combined waterproofing and radon gas protection system..



KEY BENEFITS

- Manufactured from post-industrial recycled HDPE using verified recycled polymer feedstock.
- Translucent appearance assists visual inspection during installation.
- Suitable for use to walls, vaulted soffits and floors as part of the Newton CDM Type C waterproofing system. Does not require extensive and damaging preparation to the wall surface
- Fast and clean installation
- Provides an 8 mm cavity for the control and drainage of water ingress
- Waterproof to DIN EN 1928:2000-07 related testing
- Resistant to fungal and bacterial attack
- Root resistant and rot proof
- Resistant to a wide range of chemicals

TYPICAL APPLICATIONS

Newton 508 eco is used as a wall and floor membrane as part of the Newton CDM Type C waterproofing system.

Typical applications include:

- Earth-retained basement walls
- Below-ground retaining walls
- Vaulted soffits
- Basement floors
- Refurbished waterproofing
- New-build below-ground waterproofing
- Internal cavity drain waterproofing systems designed in accordance with BS 8102:2022

COLOUR

Translucent

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TECHNICAL DATA

Features	Result	Units	Test Standard
Material	Recycled HDPE		
Colour	Translucent		
Density	700	g/m²	DIN EN 12127
Width	2.07	m	
Length	20	m	
Area	41.4	m²	
Height	8.0	mm	
Dimple quantity	1150	pcs/m²	
Air gap between dimples	5.5	l/m²	
Compressive strength, temporary	280	kN/m²/kPa	DIN EN ISO 25619-2
Resistance to water penetration	Waterproof		DIN EN 1928:2000-07
Drainage capacity, i-1	3.6	l/(m·s)	EN ISO 12958
Service temperature range	-40 to + 80	°C	
CE certification	Yes		EN ISO 13252

Installed Performance	Result	Units	Test Standard
Compressive strength - Temporary	280	kPa	EN 25619-2
Compressive strength - Permanent	7	kPa	EN 25619-1
Compressive strength - Permanent - load transferred through a C16 screed[1]*	800	kPa	EN 25619-1
Thermal conductivity[1]	0.461	W/mK	EN 12667
Water vapour resistance – S_d value[1]	>604	m	BS EN 1931
Water vapour 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	Not tested - F**		BS EN 13501-1
Chemical resistance – Excellent[1]	100	%	EN 14030
Oxidation resistance – Excellent[1]	100	%	EN ISO 13438
Radon gas resistance - Membrane	3.1×10^{-12}	m²/s	K124/02/95
Radon gas resistance - Joints	1.8×10^{-12}	m²/s	K124/02/95
Resistance to liquid hydrocarbons[1]	Passed		EN 16140:2011
Resistance to fungal and bacterial attack	Resistant		
Rot resistance	Rot proof		

[1] EN ISO 25619-1 test data obtained from Newton 508R. Newton 508 eco is manufactured to the same design and dimensions using the same production process and is expected to provide equivalent performance.

*Screeds placed above non-bonded materials such as sheet HDPE membranes are categorised as floating screeds within BS 8204 & BS 13318 and require a section thickness of 65 mm or more for sand and cement, or 35–40 mm for proprietary liquid screeds. Check load capability with proprietary liquid screed supplier. Further information is included within the Protection Of The Membrane and Compressive Load sections on page 4.

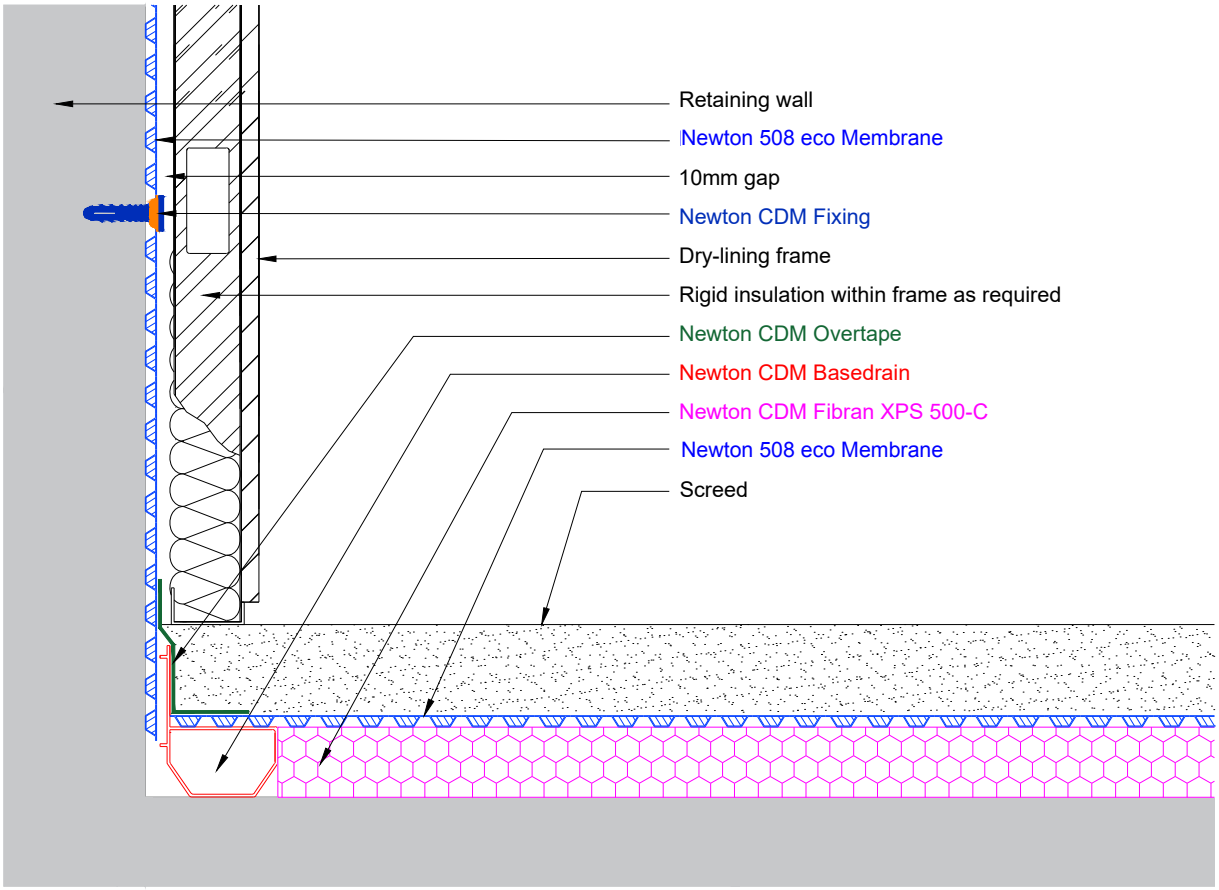
The above data is based on manufacturer supplied information and, even where stated as tested to recognised standards, should be treated as indicative. Site conditions, system design, installation quality and protection of the membrane may affect installed performance.

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TYPICAL DETAIL



SUSTAINABILITY

Newton 508 eco is manufactured from recycled HDPE. The recycled polymer is sourced from a verified and reliable source, providing improved traceability and consistency of supply.

The product has been developed to reduce reliance on virgin polymer while maintaining the durability and practical performance required of an 8 mm cavity drain membrane.

Newton 508 eco should be considered where a project requires a Type C cavity drain waterproofing system and where reduced virgin plastic content is a project objective.

SUITABLE SUBSTRATE - WALLS

- Concrete
- Brick
- Concrete block
- ICF, when used with suitable longer Newton CDM fixings

SUITABLE SUBSTRATE - SOFFITS

- Concrete - To fall
- Brick - Arched or vaulted soffits

ANCILLARY PRODUCTS

Please refer to the Newton CDM Installation Manual

SUITABLE SUBSTRATE - FLOORS

- Concrete raft or slab
- Newton Fibran XPS 500-C closed cell extruded polystyrene insulation, where used as a drainage spacer below the floor membrane
- Slab/raft in combination with Newton 508 eco Floor

TRAINING AND COMPETENCY OF THE USER

Newton 508 eco is part of the CDM System, our Type C, internal waterproofing system.

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

Newton recommends that the CDM System is installed by Newton Specialist Contractors who are trained by Newton in the correct design and installation of the system.

INSTALLATION INSTRUCTIONS

Please refer to the Newton CDM Installation Manual. Newton 508 eco should be installed as part of the Newton CDM System by contractors experienced in the design and installation of Type C cavity drain waterproofing systems.

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LIFE EXPECTANCY

When specified, installed and protected in accordance with this Data Sheet, the Newton CDM Installation Manual and current Newton guidance, and when fully and permanently isolated from UV light, physical damage and wear, Newton 508 eco has a service life suitable for use within the design life of the structure.

SPECIALIST TOOLS REQUIRED

- High quality SDS drill and drill bits
- Heat gun
- Rotating laser level, recommended but not required
- Suitable cutting tools
- Suitable roller for jointing tapes, where required

PRODUCT WARRANTY

Newton 508 eco is supplied with a Newton product warranty of 30 years.

When specified, installed and protected in accordance with this Data Sheet, the Newton CDM Installation Manual and current Newton guidance, Newton 508 eco has a service life suitable for use within the design life of the structure, provided that the membrane is fully and permanently protected from UV light, physical damage, wear and fire.

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.

STORAGE

Recommended storage conditions:

- Store rolls upright
- Store in dry conditions
- Store at temperatures between 5°C and 25°C.
- Protect from direct sunlight
- Protect from prolonged UV exposure
- Do not store where the membrane may be physically damaged
- Do not store close to heat sources

APPLICATION ABOVE INSULATION SPACER

Where the membrane is installed above a spacer of 50 mm insulation, ensure that the insulation has been confirmed as suitable for use below the floor membrane.

Fibran XPS 500-C has been tested for use as the CDM BaseDrain spacer below the floor membrane. Loading data can be found in the Fibran XPS 500-C Data Sheet. Where designed loadings are high, contact Newton Waterproofing for further advice.

COMPRESSIVE LOADING

Newton 508 eco has a temporary compressive strength of 280 kPa, tested in relation to DIN EN ISO 25619-2.

Long-term compressive strength values to EN ISO 25619-1: Performance data is derived from independent testing undertaken on Newton 508R. Newton 508 eco is manufactured using the same stud geometry, dimensions and production process and incorporates a greater polymer mass per m^2. Equivalent performance is therefore expected.

Screeds placed above non-bonded materials such as sheet HDPE membranes are categorised as floating screeds within BS 8204 and BS 13318. Sand and cement floating screeds should be a minimum of 65 mm thick. Proprietary liquid screeds may be suitable at reduced thicknesses, typically 35 mm to 40 mm, subject to the screed manufacturer's confirmation.

Where high imposed loads are expected, contact Newton Waterproofing for project-specific advice.

PROTECTION OF THE MEMBRANE

Newton 508 eco should always be protected by suitable internal surface finishes.

Protection methods to walls and vaulted soffits include:

- Floor supported dry-lining frame and plasterboard
- Timber battens fixed into Newton MultiPlugs as a support for plasterboard or timber sheeting
- Other suitable internal lining systems that do not damage or restrict the membrane drainage cavity

Protection methods to floors include:

- Floating screeds to BS 8204 and BS 13318
- T&G chipboard
- Timber floor supported by a fixed lattice of timber supports
- Insulation with screed or T&G chipboard above
- Underfloor heating tray with screed above

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FIRE RATING

Unless independently tested and classified, Newton 508 eco should be treated as Euroclass F.

The membrane must always be protected from fire by suitable internal finishes, as would be the case with plastic-based insulation and other combustible concealed construction products.

Newton Waterproofing Systems can supply fire-resistant membranes that are tested and classified to a fire rating of B-s2,d0. Contact the Newton Technical Team for further information.

PACKAGING

Code - M2E

Roll size - 2.07 m x 20 m

Roll area - 41.4 m^2

HEALTH & SAFETY

Use the product only as stated within Newton application guides, the Newton CDM Installation Manual and current Newton technical literature.

The product should be cut using appropriate tools and installed using normal site safety procedures. Wear suitable PPE as required by the site risk assessment and method statement.

LIMITATIONS

- Newton 508 eco is not a standalone waterproofing product and has no capability to resist water pressure by itself. It must be used as part of a Type C cavity drain waterproofing system that safely collects and removes water from the structure.
- Newton 508 eco should not be stated as a radon barrier unless independent radon testing has been completed and published.
- Newton 508 eco should not be stated as a hydrocarbon barrier unless independent hydrocarbon resistance testing has been completed and published.
- Newton 508 eco should not be stated as suitable for the Newton PAC-500 system unless specifically tested and approved for that system.
- Newton 508 eco should not be represented as covered by BBA Certificate 94/3010 unless formal confirmation has been received that the certificate covers this product.
- Do not apply to flat soffits unless the soffit is at least 400 mm narrower than the membrane to be used and only where installed by very experienced contractors.
- When installing the Newton CDM System to floors, all concrete rafts and slabs should first be flood tested to confirm that they are flat and level. Any irregularities should be made good by planing, grinding or by the use of a suitable levelling compound. The Newton CDM System is a professional-fit waterproofing system and should be designed and installed by those trained and competent in structural waterproofing.
- Protect the membrane from prolonged UV exposure.

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CE 22	JN NEWTON WATERPROOFING	Newton Waterproofing Systems Newton House 17-19 Sovereign Way Tonbridge Kent TN9 1RH	M2E BS EN 13967:2012 Waterproofing sheet for damp proof sheets, type V

Essential characteristics to DIN EN 13967:2012	Test Standard	Result	Unit of measure
Water tightness, 60 kPa; 24h	EN 1928	Waterproof	
Compressive strength	EN ISO 25619-2	280	kN/m^2
Tear resistance	DIN EN 12310-1	MD - npd CMD - npd	
Tensile strength	DIN EN ISO 10319	MD - npd CMD - npd	kN/m
Elongation	DIN EN ISO 10319	MD - npd CMD - npd	%
Compressive creep (resistance to static load)	EN 13967 Annex B	npd	
Impact resistance	EN 12691	npd	
Durability against ageing	EN 1296 / EN 1928	npd	
Durability against chemicals	EN 1926 / EN 1928	npd	
Fire resistance	EN 13501-1	F	
Hazardous substance	Less than limited by national regulations.		National regulations valid in EU member states.

Applicable regulatory requirements should be verified in the country where the product is placed on the market.

Newton Waterproofing Systems reserve the right to update product literature at any time. Please always refer to our website for the latest versions.

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