

CDM 503

3mm Cavity Drain Membrane

Revision: 2.0 - 3rd October 2022
Code: M5

INTRODUCTION

Newton CDM 503 is a high quality cavity drain waterproofing membrane, for use within the Newton CDM System, our internally applied waterproofing system that also includes drainage and pumping systems.

CDM 503 is suitable for waterproofing earth retained walls and vaulted soffits and floors. It is guaranteed against deterioration for 30 years, with a life expectancy of the design life of the building (DIN 9001:2000), and supported by BBA Agrément Certificate 22/6357.

CDM 503 is inert and non-polluting to drinking water, highly resistant to water, alkalines, saline solutions and organic acids, and not affected by minerals and hydrocarbons. It is also rot-proof, and resistant to bacteria, fungi and small organisms.



KEY BENEFITS

- Does not require extensive and damaging preparation to the wall surface
- Speed of installation
- Capable of delivering an environment to all levels within a Grade 3 environment to BS 8102:2022
- 3mm deep for applications where space is tight

TYPICAL APPLICATIONS

Walls, floors, vaults, and tunnels as part of the Newton CDM System for below ground waterproofing applications.

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

PRODUCT WARRANTY

Newton CDM 503 is supplied with a product warranty of 30 years, and has a life expectancy of at least 100 years (DIN 9001:2000). Please note that this is not a guarantee. The waterproofing guarantee is provided by the specialist waterproofing contractor.

SPECIALIST TOOLS REQUIRED

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

STORAGE

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

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TECHNICAL DATA

Features	Result	Units	Test Standards
Material	HDPE		
Unit weight	0.5	kg/m ²	
Sheet thickness	0.6	mm	
Stud height	3	mm	
Colour	White		
Water tightness @ 60 kPa; 24h	Pass		EN 1928
Working temperature	-50 to +80	°C	
Softening temperature	126	°C	
Tensile strength MD	416	N	BS 12311-2
Tensile strength CD	488	N	BS 12311-2
Resistance to static loading	> 20	kg	BS 12730
Compressive strength	250	kN	BS EN ISO 25619-2
Reaction to fire	Class F*		BS EN 13501-1
Type of application	Type V		
Life expectancy		Lifetime of structure	

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

* Newton Waterproofing Systems can provide fire-resistant membranes that are tested and classified to a fire rating of B-s2.d0. Get in touch directly for more information.

COLOUR

White.

PACKAGING

Newton CDM 503 - Code M5 - 2m x 20m

TRAINING AND COMPETENCY OF THE USER

Newton CDM 503 is a constituent part of the Newton CDM System, our Type C, internal waterproofing system.

Newton CDM 503 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. This is also a requirement of the BBA Certificate.

LIFE EXPECTANCY

When specified, installed and protected in accordance with the Data Sheet and Installation Manual, and fully and permanently isolated from UV light, physical damage or wearing, and only to those substrates confirmed within, CDM 503 has a service life that is equal to the design life of the structure.

STORAGE

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

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 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](#).

APPLICATION ABOVE INSULATION SPACER

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

Newton Fibran XPS 500-C has been tested for use as the Basedrain spacer below the floor membrane. Loading data can be found on page 2 of the Newton [Fibran XPS 500-C](#) data sheet.

Where designed loadings too high, please contact Newton Waterproofing for further advice.

INSTALLATION INSTRUCTIONS

Please refer to the [Newton CDM Installation Manual](#).

HEALTH & SAFETY

Use product only as stated within the Application Guides. Read the CDM System Installation Manual before use.

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ANCILLARY PRODUCTS

Please refer to the [Newton CDM Installation Manual](#).

PROTECTION OF THE MEMBRANE

The membrane should always be protected by suitable surface finishes.

Protection methods to walls and vaulted soffits include:

- Floor supported dry-lining frame and plasterboard
- Timber battens fixed into Newton CDM 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: Newton CDM 503 is Fire Rated to Euroclass F, the same as plastic based insulation. As such, the membrane must always be protected from fire by surface finishes, as would be the case with insulation.


Newton Waterproofing Systems can also provide fire-resistant membranes that are tested and classified to a fire rating of B-s2.d0. Get in touch with the Newton Technical Team directly for more information.

LIMITATIONS

- Do not apply to flat soffits unless the soffit is at least 400 mm narrower than the membrane to be used and then only by very experienced contractors
- When installing the Newton CDM System to floors, all concrete rafts and slabs should first be flood tested to ensure that they are flat and level. Deviation from the slab height at the point where the drainage channel is adjacent to the sump chamber (the datum point) may not be more than -5mm at any point between the datum and the furthest point on the floor to which the waterproofing system extends. Equally, deviation from the datum may be up to +15mm as long as this is at the furthest point from the datum. Any irregularities should be made good by planing, grinding or by the use of a suitable levelling compound such as [Ardex Arditex NA](#) (available from Newton Waterproofing Systems).
- Newton CDM 503 is not a standalone product and has no capability to withstand water pressure. It must be used as part of a Type C cavity drain waterproofing system that safely removes water from the building
- The Newton CDM System, of which Newton CDM 503 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


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		M5 BS EN 13967:2012 + A1:2017 Waterproofing sheet for damp proof sheets, type V	
Essential characteristics to BS EN 13967:2012 + A1:2017	Test Standard	Result	Unit of measure
Water tightness, 60 kPa; 24h	EN 1928	Pass	
Resistance to tearing	EN 12310-1	MD - npd CMD - npd	
Elongation (5%)	EN 12311-2	MD - npd CMD - npd	
Compressive creep (resistance to static load)	EN 13967 Annex B	npd	
Impact resistance	EN 12691-2 Method A	npd	
Durability against ageing	EN 1296 / EN 1928	npd	
Durability against chemicals	EN 1926 / EN 1928	npd	
Fire resistance	EN 13501-1:2007 + A1:2009	E	
Joint tensile shear resistance	EN 12317-2		
Compressive strength	BS EN ISO 25619-2	250	kN

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Impact resistance	EN 12691-2 Method A	npd	
Durability against ageing	EN 1296 / EN 1928	npd	
Durability against chemicals	EN 1926 / EN 1928	npd	
Fire resistance	EN 13501-1:2007 + A1:2009	E	
Joint tensile shear resistance	EN 12317-2	npd	
Compressive strength	BS EN ISO 25619-2	250	kN

Newton Waterproofing Systems and Newton Systems
reserve the right to update product literature at any time. Please always refer to our [website](#) for the latest versions.