

HydroCoat 1 Render

Waterproof Single-Coat Cementitious Render

Version: 1.0 - 19 August 2024
Code: HC-R-25

INTRODUCTION

[Newton HydroCoat 1 Render](#) is a pre-bagged, single-component, fibre-reinforced and polymer modified cementitious mortar which cures rapidly to produce a high-performance, waterproof and fair-faced render. It can be quickly applied as a one-coat render on vertical and overhead surfaces by trowel or spray.

Newton HydroCoat 1 Render is a component of the Newton HydroCoat 1 System and in most cases this product will be used with Newton HydroCoat 1 Screed to provide a full, internal, Type A, waterproofing system.

APPLICATION METHOD



PACKAGING



COVERAGE



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PACKAGING & STORAGE

Packaging size: 25 kg - Single Component

Storage & shelf life: HydroCoat 1 Render should be stored at room temperature (min 10°C and max 38°C), kept dry and out of direct sunlight. If these conditions are maintained and the product packaging is unopened, then a shelf-life of up to 12 months can be expected.

MIXING & APPLICATION RATE

| Application | Coverage | Powder | Water |
|---------------------------|---------------------|--------|---------------------------------|
| Waterproof render - 10 mm | 1.47 m ² | 25 kg | 2.7 - 3.0 litres of clean water |

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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 HydroCoat 1 web landing page on your mobile device.

[Web page for Newton HydroCoat 1 System](#)

QR Code for Newton
HydroCoat 1 Render
Web Landing Page



TECHNICAL DATA

| Features | Result | Units |
|---|-----------------|------------------------|
| Form – Single Component | Powder | |
| Colour | Grey | |
| Mixed Density – At 0.10 water : powder ratio | 1.9 | kg/litre |
| Pack size | 25 | kg |
| Shelf life | 12 | Months |
| Yield per 25 kg pack | 13.15 | Litres |
| Coverage per 25 kg pack at 10 mm thickness | 1.45 | m ² |
| Application rate – Waterproofing Render | 1.725 | Kg/mm/m ² / |
| Application rate – 10 mm Waterproofing Render | 17.25 | Kg/m ² |
| Application thickness – HydroCoat 1 System | 10 | mm |
| Minimum application thickness – as render | 5 | mm |
| Water requirement – per 25 kg of powder | 2.7 – 3.0 | Litres |
| Resting period before application | Use immediately | |
| Pot life / working life at 20°C | 30 | Minutes |
| Application temperature | +5 to +35 | °C |
| Service temperature | -20 to +70 | °C |
| Odour | None | |
| VOC Content | None | |

CURING

| | 5°C | 10°C | 15°C | 20°C | 25°C | Units |
|-------------------------------|------|------|------|------|------|-------|
| To not be adulterated by rain | 4-7 | 4-5 | 3-4 | 2-3 | 1-3 | Hours |
| Ready for further coat | 4.8 | 4-6 | 3-6 | 2-5 | 2-4 | Hours |
| Initial set | 8-10 | 7.9 | 6.8 | 5-7 | 4.6 | Hours |
| Fully cured | 28 | 28 | 28 | 28 | 28 | Days |

CURED PERFORMANCE

| Features | Result | Units | Testing Method |
|---------------------------------------|-------------------------------------|-------|----------------|
| Colour | Grey | | |
| Render Thickness - HydroCoat 1 System | 10 | mm | |
| Compressive Strength @ 20°C | As concrete applied to | | |
| Requirement to EN 998-1: ≥ 6 | 1 day 10 7 days 25 28 days 35 | MPa | EN 1015-11 |

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| Features | Result | Units | Testing Method |
|--|------------------------|--|----------------|
| Adhesion After Weathering Cycles: Strong substrate ≥ 2.0 MPa Weak substrate: ≥ 0.4 MPa | 1.9 – 2.1 0.4 – 0.5 | MPa | EN 1015-21 |
| Water Absorption Requirement to EN 998-1: ≤ 0.2 | 0 | kg/(m ² .h ^{0.5}) | EN 1015-18 |
| Water permeability co-efficient Requirement to EN 998-1: $\leq 1/\leq 10$ | 0.89/7.64 | (μ) | EN 1015-19 |
| Waterproofing performance – positive and negative side | 7 | bar | DIN 1048-1 |
| Reaction to Fire | A2 – s1, d0 | | EN 13501-1 |

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

ACCREDITATIONS & APPROVALS

HydroCoat 1 Render is CE marked to confirm confirmed performance to the requirements of BS EN 998-1: 2010. Please see CE Label and label on page 7, or the product Declaration of Performance for further information.

SUSTAINABILITY

Newton HydroCoat 1 Render is manufactured in the UK using sustainable, zero-emissions manufacturing processes to produce a water-based product with ultra-low VOC levels and minimal odour that meets the most stringent environmental objectives. HydroCoat 1 Render can be applied in enclosed environments with absolutely no disruption to other trades, and daily routines can continue as normal to keep downtime to an absolute minimum.

The zero-emissions production facility is powered by renewable energy and makes extensive use of harvested rainwater, ensuring that the long-term environmental impact is minimised.

TYPICAL APPLICATIONS

Suitable for surface protection systems principles 2.2, 5.1, 6.1, 8.2 as defined in BS EN 1504-2.

Negative Water Pressure:

- Internal waterproofing of retaining walls, slabs and rafts of basement, foundations, tunnels, tanks and lift-pits

Positive Water Pressure:

- Retaining and curtain walls
- Water tanks, swimming pools, irrigation canals, concrete pipes, tunnels and culverts and manholes

KEY BENEFITS

- Waterproof - 10mm thickness resists 7 bar positive or negative pressure
- Simply mixed with clean water, no need for primers
- Thixotropic nature allows fast and easy application
- Cost-effective one-coat application
- Polymer modified for excellent adhesion and long-term durability in exposed external applications
- Low-cost application, 5-50mm applied in a single coat
- High tensile strength, impact strength and crack resistance
- High diffusion resistance to acid gases & chloride ions
- Easily overcoated with specialist membranes to provide further protection and aesthetic quality
- Pre-packaged material requiring mixing with clean water to give an easily trowelable mortar, which achieves a wide range of application thicknesses from a single product
- Conforms to the requirements of BS 8102:2022, providing the optimum 'Grade 3' completely dry environment
- High bond strength exceeds tensile strength of concrete, ensuring monolithic performance
- Part-bags can be mixed

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CAUTIONS & LIMITATIONS

- Application at temperatures between +5°C and +35°C.
- Avoid application where there is a risk of freezing within 24 hours.
- Avoid application to open areas during very dry and windy conditions. If unavoidable, utilise extreme curing methods that include spraying to dampen and cover with wet/hessian and protect with plastic sheeting.
- Do not add powder and water to already mixed and used mixes.
- Use protective glasses and gloves during application.
- DO NOT WET OUT OR PRIME between layers.
- If the mortar thickens, remix but DO NOT ADD EXTRA WATER.

COLD WEATHER WORKING

- $\geq 3^{\circ}\text{C}$ on a rising thermometer
- $\geq 5^{\circ}\text{C}$ on a falling thermometer

HOT WEATHER WORKING

- Store material in cool conditions to maximise working life
- Shade applied material from strong sunlight
- If possible, avoid extreme temperatures by working at night

LIFE EXPECTANCY

Because the high bond strength exceeds the tensile strength of the substrate, ensuring monolithic performance, life expectancy is equal to the substrate the product is applied to.

PRODUCT WARRANTY

Newton HydroCoat 1 Render 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. The waterproofing guarantee is provided by the specialist waterproofing contractor who installs the waterproofing system.

SUITABLE SUBSTRATE

- Concrete with a minimum compressive strength of 20 MPa.
- Structural masonry/mortar

SUITABLE SURFACES

Walls, floors, & soffits.

METHOD OF APPLICATION

Trowel.

HydroCoat 1 Render can be delivered to the wall using a suitable peristaltic pump with air-compressor support but will need to be trowelled to the correct layer thickness and finish. Please contact your local Newton Sales Office for further information.

SPECIALIST TOOLS REQUIRED

Mixing equipment is needed. Please see the Mixing section on page 6 for the products supplied for Newton Waterproofing.

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ANCILLARY PRODUCTS

- Substrate repair: [Newton HydroCoat 203-RM](#)
- Active leak sealing: [Newton HydroCoat 313-WP](#)
- Smoothing fillet: [Newton HydroCoat 203-RM](#)
- Priming & smoothing coat: [Newton HydroCoat LiquaBond](#)
- Curing: [Newton HydroCoat 905-CM](#)
- Bag-rubbing: [Newton HydroCoat 105 1K](#)

TRAINING & COMPETENCY OF USER

HydroCoat 1 Render should be used 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, which in most cases will require further waterproofing products so as to achieve the required habitable grade as defined by BS 8102:2022.

HEALTH & SAFETY

HydroCoat 1 Render 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.

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](#).

CONSTRUCTION

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

SURFACE PREPARATION

CONCRETE

All concrete to be treated with HydroCoat 1 Render must be clean and have an open capillary system. Remove laitance, loose material, dust, dirt, oil, grease, general grime and contaminants by high pressure jet washing, grit blasting or scabbling or by chemical etching. Please contact your local Newton Sales Office for further information on chemical etching products.

Spalled concrete should be removed back to good concrete and repaired flush with HydroCoat 203-RM. If the reinforcing steel is exposed, abrade back to clean steel and coat with a suitable treatment to prevent the steel from further corrosion. Please speak to your local Newton sales office for further information and sales of suitable products.

Please Note - When carrying out repairs in new construction, it is not necessary to fully expose any reinforcing bars.

Honeycombed concrete should be removed back to good concrete and filled flush with HydroCoat 203-RM. Holes and indentations in the concrete should be cut out to a depth of at least 20mm and repaired flush with HydroCoat 203-RM HydroCoat 203-RM repair mortar.

Cracks over 0.3mm should be cut out to a depth of at least 20mm and filled flush with HydroCoat 203- RM.

Leaking non-structural cracks should be cut out to a depth of at least 20mm and plug with HydroCoat 313-WP. Structural cracks should be repaired by specialists.

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STRUCTURAL MASONRY/MORTAR

Joints should be flush pointed. If they are not, re-point or apply a smoothing coat of sand/cement render with HydroCoat LiguaBond mixed into the gauging water at 1:2.

Porous block walls should be filled by bag-rubbing with sand/cement.

Existing walls of block or brick will require wall surface preparation such as jet washing, grit blasting, needle gunning or scabbling to ensure all surface containments are removed and that a good 'key' is achieved. Remove snots.

GENERALLY

- Smooth surfaces should be roughened
- Where there is evidence of fungus or mould growth, a suitable fungicide should be used prior to application

WETTING

The prepared substrate should be thoroughly soaked with clean water until uniformly saturated without any standing water. Apply Newton HydroCoat 1 Render quickly and before the substrate has had chance the dry. On dry and windy days, re-wet the substrate as needed.

PRIMING

Priming is normally not required. Substrate with very high or very low porosity can be primed with Newton HydroCoat LiguaBond.

MIXING

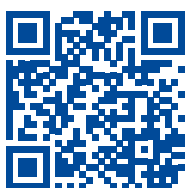
Newton Waterproofing supply the full range of [Collomix Mixing Equipment](#) that includes Hand Mixers, Stirrers, Mixing Stands, Buckets, Transport Carts and the Mixer Clean mixing bucket.

HydroCoat 1 Render can be mixed with the DLX (preferred) and KR stirrers, matched to the Xo 1 or Xo 4 Hand Mixers which are suitable for quantities of up to 65 litres. For larger quantities the MKD dual action stirrer is matched to the Xo 55 duo Hand-Mixer. HydroCoat 1 Render should be mechanically mixed using a forced action pan mixer or in a clean drum using a slow speed drill and paddle.

A normal concrete mixer is NOT suitable.

For normal applications, use between 2.7 – 3.0 litres of clean water per 25kg bag, depending on desired consistency. Mix for approximately 2-3 minutes, entraining as little air as possible. Use without delay.

Please scan the QR Code with your mobile device to link to an instruction video on mixing Newton products.



APPLICATION

HydroCoat 1 Render should be applied in layers not exceeding 50mm thickness using a rendering or spray technique to remove entrapped air. If necessary, support with shuttering to allow for compaction if working to reveals, etc. Care must be taken to ensure that an initial 5-10mm thickness of mortar is well placed and adhered before building up to larger depths.

For repairs which require multi-layer applications, ensure that previous layers are well keyed and stable, but not fully set before proceeding (typically 2-6 hours). Final profiling of a high quality is easily achieved with a steel float after allowing the surface to stabilise.

DO NOT WET OUT OR PRIME between layers.

Remove trowel marks using a devil float, steel float or damp sponge once the surface has stabilised. Work in one direction to avoid fibres wicking.

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CURING & PROTECTION

HydroCoat 1 Render requires controlled curing.

Where practical, cover the application with Newton HydroCoat curing Membrane, or moist hessian and plastic sheeting during the 3-day curing period. During the curing period the HydroCoat 1 Render must be protected from frost, rain and standing water.

FINISHING

Remove proud fibres by sanding prior to the application of a coating.

Can be overcoated with coloured coatings to give a coloured, aesthetic finish or finished with lime-based plasters/renders such as:

- Limelite High Impact Finishing Plaster
- Limelite Whitewall One Coat

Finishes and coatings should not be applied until the HydroCoat 1 Render has achieved 25 MPa = 7 days.

Limelite plasters can be decorated 24 hours after application of Limelite High Impact Finishing Plaster. Paints used must be breathable, such as mineral based or water-based paints. Wallpaper and tiling is not recommended due to the non-porous nature of the finish. However, if wallpaper or tiling is used the moisture content of the plaster must be checked and deemed suitable by the supplier of the decorative finishes before application.



POT LIFE & FURTHER USE

Pot life is 20 - 40 minutes at 20°C. Product must be used before it starts to go off/over thicken. Do not add water to a drying mix.

CLEANING

Clean all tools and equipment with water after use.

CE LABEL

|  |  | Newton Waterproofing Systems Newton House 17-19 Sovereign Way Tonbridge Kent TN9 1RH | HC-R-25 EN 998-1:2010 One Coat Render |
|---|---|--|---|
| Essential Characteristics | Declared Performance | Test Standard | Harmonised Technical Standard |
| Dry Bulk Density | 1900-1950 kg.m ³ | EN 1015-10 | EN 998-1:2010 |
| Compressive Strength | CSIV: ≥ 6MPa | EN 1015-11 | |
| Adhesion after Weathering Cycles | > 2.0MPa FP B/C Strong Substrate > 0.4MPa FP C Weak substrate | EN 1015-21 | |
| Capillary absorption | W2: ≤ 0.2kg.m ⁻² .min ^{-0.5} | EN 1015-18 | |
| Water permeability on relevant substrates after weathering | ≤ 1ml.cm ⁻² .48h ⁻¹ | EN 1015-21 | |
| Water Vapour permeability coefficient | μ < 15 | EN 1015-19 | |
| Reaction to Fire | Euroclass A2-s1, d0 | EN 1015-1 | |

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