HydroCoat 1 Screed 2K

Self-Levelling Cementitious Coating & Wearing Screed

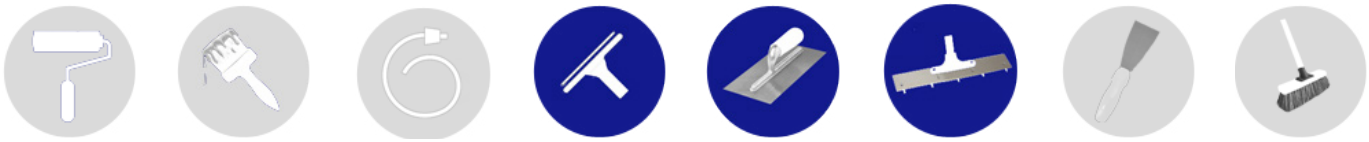
Version: 1.0 - 19 August 2024
Code: HC-S-30

INTRODUCTION

HydroCoat 1 Screed 2K is an epoxy and polymer modified cementitious screed for levelling and waterproofing concrete substrates. It exhibits a degree of flow to enable ease of application by pouring or pumping techniques to give an even finish with a slightly dimpled texture. HydroCoat 1 Screed 2K also rapidly hardens to form a durable surface which resists abrasion and trafficking. The cured product may also be overcoated with resin coatings and screeds typically within 4-24 hours.

Newton HydroCoat 1 Screed 2K is a component of the Newton HydroCoat 1 System and in most cases this product will be used with Newton HydroCoat 1 Render to provide a full, internal, Type A, waterproofing system.

APPLICATION



PACKAGING

Composite packs
Part A liquid
Part B powder

COVERAGE

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PACKAGING & STORAGE

Packaging size: 30 kg – Two Component - Part A liquid and Part B powder.

Storage & shelf life: HydroCoat 1 Screed 2K 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.

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Opening Hours:
Monday to Thursday 8:00am - 5:30pm
Friday 8:00am - 5:00pm

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MIXING & APPLICATION RATE

Application	Coverage	Part B - Powder	Part A - Liquid
Waterproof screed - 10 mm	1.47 m^2	Fully mixed with Part A	Fully mixed with Part B

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 Screed

Web page for Newton HydroCoat 1 System

QR Code for Newton HydroCoat 1 Web Landing Page

TECHNICAL DATA

Features	Result	Units
Form – Two Component	Part A – Liquid Part B - Powder	
Colour	Grey	
Mixed Density	2.0	kg/litre
Pack size	30	kg
Shelf life	12	Months
Yield per 30 kg pack	15	Litres
Coverage per 30 kg pack at 10 mm thickness	1.5	m^2
Application thickness – HydroCoat 1 System	10	mm
Application thickness – levelling screed – non-wearing	0-60	mm
Application thickness – waterproofing and wearing screed – 3mm over high points	3 - 60	mm
Resting period before application	Use immediately	mm
Pot life / working life at 20^{O}C	30	Minutes
Application temperature	+5 to +35	°C
Service temperature	-20 to +70	°C
Finishing time – after placing	10	Minutes
Odour	None	
VOC Content	None	

CURING

	5^{O}C	10^{O}C	15^{O}C	20^{O}C	25^{O}C	Units
To not be adulterated by rain	4-7	4-5	3-4	2-3	1-3	Hours
Ready for temporary traffic/protection boards	6-8	6-8	4-6	4-6	4-6	Hours
Initial set	100-200	90-120	75-100	75-90	60-80	Minutes
Fully cured	28	28	28	28	28	Days

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CURED PERFORMANCE

Features	Result	Units	Testing Method
Colour	Grey		
Screed thickness - HydroCoat 1 System	10	mm	
Compressive Strength @ 20°C Requirement to EN 1504-2: ≥ 35 4 hours 1 day 7 days 28 days	 4-10 10-20 30-35 40-50	MPa	EN 1015-11
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 - tested at 10 bar	3.44 x 10^{-14}	m/sec	DIN 1045
Waterproofing performance – positive and negative side	10	bar	DIN 1048-1
Water Vapour Permeability – Class I	<5	m	EN 1504-2
Thermal Compatibility	> 2.0	MPa	EN13687-1
Coefficient of Thermal Expansion	≤30 x 10^{-6}	K^{-1}	EN 1504-2
Capillary Absorption - Class III	0.1	kg.m^{-2}.h$^{-0.5}$	EN 1504-2
Flexural Strength @ 20oC. 1 day 28 days	 5 12	MPa	BS 4551
Adhesive strength. Concrete Asphalt (substrate failure)	 5 >2	MPA	BS 1881 Part 207
Abrasion Resistance Category for Very High Abrasion	AR1		BS 8204 Part 2
Reaction to Fire	A2 – s1, d0		EN 13501-1

ACCREDITATIONS & APPROVALS

HydroCoat 1 Screed 2K is and 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 Screed 2K 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 Screed 2K 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

- As the screed element of the Newton HydroCoat 1 waterproofing system
- Levelling and waterproofing of tamped or uneven concrete floors, or floors with no waterproofing membrane below to provide resistance to abrasion and trafficking such as:
    - Basements
    - Garage floors
    - Warehouses
    - Car-parks

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KEY BENEFITS

- Pre-packaged material mixed on site to give a mortar which can be rapidly applied by trowel or squeegee
- Suitable for use on both level and sloping substrates
- Applied in a thickness range typically from 3 - 60mm
- Applied to damp or saturated substrates, without risk of osmotic blistering in subsequent resin finishes
- Rapid hardening, hydrating to give high early strength with low moisture and minimal overcoat times
- Water-based product, cures without the release of hazardous solvents. Equipment is cleaned with water
- Dense matrix offers low permeability to water, even at 10 bar positive and negative pressure
- Forms a highly abrasion resistant wearing screed

CAUTIONS & LIMITATIONS

- Application at temperatures between +5˚ C and +35˚ C
- Use protective glasses and gloves during application.
- Concrete should have a minimum strength of 20MPa
- When applied as a wearing screed, a minimum thickness of 3mm must be achieved over high spots

COLD WEATHER WORKING

- ≥3°C on a rising thermometer
- ≥5°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 Screed 2K 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.

SUITABLE SURFACES

- Concrete floors

METHOD OF APPLICATION

- Trowel, Squegee or Pin Leveller
- HydroCoat 1 Screed 2K should be poured or pumped onto the prepared surface and spread to the required thickness with a trowel, squeegee or pin leveller

SPECIALIST TOOLS REQUIRED

Mixing equipment is needed. Please see the Mixing section on page 6 for the products supplied by 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: Newton HydroCoat Primer
- Curing: Newton HydroCoat Curing Membrane

TRAINING & COMPETENCY OF USER

HydroCoat 1 Screed 2K 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 Screed 2K 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

All concrete receiving HydroCoat 1 Screed 2K 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.

Areas still exhibiting signs of oil, grease, etc, must be treated with a proprietary degreasant. In instances of heavy contamination, it may be necessary to use hot compressed air equipment, flame spalling or steam cleaning techniques.

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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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 & PRIMING

The prepared substrate should be thoroughly soaked with clean water until uniformly saturated without any standing water. To prevent out-gassing, the substrate should be sealed with Newton HydroCoat Primer at a typical coverage rate of 5m^2/litre. Allow to become transparent, typically 1-3 hours, dependent upon climatic conditions, before proceeding to place the screed. Do not over-prime, ensuring that any excess primer is removed. The correct application will leave a green tinge to the surface of the concrete.

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 Screed 2K 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 Screed 2K should be mechanically mixed using a forced action pan mixer or in a clean drum using a slow speed drill and paddle.

It is important to ensure that a continuous supply of mixed material is available for laying. Shake Part A (liquid) and pour into a suitable mixing vessel. Slowly add the Part B (powder) and mix for a minimum of 5 minutes until homogeneous. The modules must be mechanically mixed using a drill and paddle specially designed to entrap as little air as possible. On larger contracts, multiple packs can be mixed at once. To maximise the working life, the Part A (liquid) should be stored in cool conditions or chilled in cold water. Bottles of liquid and bags of powder are not to be split.

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

APPLICATION

HydroCoat 1 Screed 2K should be poured or pumped onto the prepared surface and spread to the required thickness with a trowel, squeegee or pin leveller. Recommended minimum thickness of 10mm in waterproofing applications. When applying as a wearing screed, ensure a minimum thickness of 3mm is achieved over the high spots.

Immediately once levelled, lightly roll the top surface with a spiked roller to remove entrapped air. This produces a slightly dimpled finish and must be completed within the working life of the material and no later than 10 minutes after placing.

Allow to cure for a minimum of 4 hours before subjecting the application to light foot traffic.

CURING & PROTECTION

HydroCoat 1 Screed 2K requires controlled curing.

Normal procedures relating to curing of cementitious products should be strictly adhered to. The surface must be protected from strong sunlight, drying winds and high air movements to prevent skinning during placing and rapid drying out in the plastic state. Cure using HydroCoat Curing Membrane, taking care to avoid overspray onto surfaces yet to be treated.

Allow to cure overnight before overcoating.

POT LIFE & FURTHER USE

Pot life is 30 minutes at 20ºC. 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.

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CE LABEL

CE 22	JN NEWTON WATERPROOFING	Newton Waterproofing Systems Newton House 17-19 Sovereign Way Tonbridge Kent TN9 1RH	HCS BS EN 13813:2002 Self-Levelling Cementitious Coating & Wearing Screed

Essential Characteristics	Declared Performance	Test Standard	Harmonised Technical Standard
Reaction to Fire	Euroclass $A2_{FL}$-S1	BS EN 13501-1	BS EN 13813:2002
Release of Corrosive substances (Cementitious Screed)	CT	BS EN 13813	
Permeability to Water Vapour	S_D <5m(Class I: Permeable to water vapour)	BS EN ISO 7783-2	
Water Permeability	w <0.1 $kg.m^{-2}.h^{-0.5}$(Class III)	BS EN 1062-3	
Compressive Strength	C40	BS EN 12190	
Flexural Strength	F10	BS EN 12190	
Abrasion Resistance	AR1	BS EN 13892-4	
Adhesive Bond	≥2.0 MPa	BS EN 1542	

Any specification/advice provided is only valid if used with products supplied by John Newton and Company Ltd (trading as Newton Waterproofing Systems). Newton Waterproofing Systems reserve the right to update product literature at any time. Please always refer to our website for the latest versions.