

Nupatch Bedding Mortar

Rapid Setting & High Strength Mortar

Description


A pre-packed, shrinkage compensated, cementitious mortar characterised by its rapid strength gain which enables work to be carried out with minimum disruption. Ideally suited for bedding and raising of manhole frames, fixing of street furniture or for use as a general purpose rapid setting repair mortar. Nupatch Bedding Mortar has been designed to comply with the requirements of EN 1504 Part 3 Class R4.

Advantages

- Rapid setting characteristics
- Low water/cement ratio
- Shrinkage compensated
- Excellent adhesion to dense concrete & steel
- Simple to use, only requires the addition of clean water
- Excellent workability & finishing properties
- May be used down to 5°C
- Resistant to freeze/thaw cycle
- Free from chloride additives
- Low chromate (Cr VI <2ppm)
- Manufactured under BSI QA Scheme ISO 9001, EN 29001
- Complies with HD27/15 Chapter 3 part 11
- Complies with EN 1504 Part 3 Class R4

Applications

- Bedding & raising of manhole frames
- Fixing of street furniture
- Rapid setting of posts, railings, lamp standards, etc.
- General purpose high strength repair mortar
- Bedding for copings

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EN 1504-3 Concrete repair product for structural repair CC Mortar (based on hydraulic cement)	
Compressive strength	Class R4 (≥45 MPa)
Chloride ion content	≤0.05 %
Adhesive bond strength	≥2.0 MPa
Adhesion after freeze/thaw	≥2.0 MPa
Elastic modulus	≥20 GPa
Reaction to fire	Class A1
Dangerous substances	Complies with 5.4

Technical Information

Water addition	2.2-2.85 litres per 25 kg pack
Density	2350 kg/m ³
Yield	Approx. 12 litres per 25 kg pack
Maximum aggregate size	4mm

Water addition	Usable life (mins)	Compressive Strength MPa @ 20°C					
		1 hr	2 hr	4 hr	1 day	7 day	28 day
2.2 Litre stiff mortar	10	15	32	41	51	73	84
2.5 Litre mobile mortar	12	13	24	32	41	61	72
2.85 Litre pourable	15	-	17	23	32	55	68



Technical properties of Nupatch Bedding Mortar.

Properties	Standard	Performance Requirement	Declared Value
Appearance			Grey powder
Mixing water			2.2 - 2.85 litres per 25 kg
Chloride-ion content	EN 1015-17	≤0.05 %	≤0.05 %
Maximum aggregate size			4 mm
Water/cement ratio			0.36
Cement content			>600 kg/m ³
Layer thickness; min / max			10mm to 50mm
Density			Approximately 2350 kg/m ³
Working time			10-15 minutes
Application temperature			5°C to 35°C
Compressive strength 2.5 litres per pack @ 20°C	EN 12190	≥45 MPa	13 MPa @ 1 hour 24 MPa @ 2 hours 32 MPa @ 4 hours 41 MPa @ 24 hours 61 MPa @ 7 days 72 MPa @ 28 days
Tensile strength	EN 12390-6		>3.0 MPa
Flexural strength	BS 6319-3		10 MPa
Modulus of elasticity In flexure	BS 6319-3		>20 GPa
Modulus of elasticity In compression	EN 13412	≥20 GPa	≥20 GPa
Adhesion to concrete	EN 1542	≥2.0 MPa	≥2.0 MPa
Adhesion after freeze/thaw	EN 13687-1	≥2.0 MPa	≥2.0 MPa
Adhesion after thunder shower	EN 13687-2	≥2.0 MPa	≥2.0 MPa
Adhesion after dry cycling	EN 13687-4	≥2.0 MPa	≥2.0 MPa
Skid resistance	EN 13036-4		Class 1
Carbonation resistance	EN 13295	$d_k \leq \text{ref. concrete}$	$d_k \leq \text{ref. concrete}$
Capillary absorption	EN 13057	≤0.5 kg/m ² .h ^{0.5}	≤0.5 kg/m ² .h ^{0.5}
Cracking tendency	Coutinho Ring Test		No cracking after 180 days

Technical data shown are statistical results and do not correspond to guaranteed minima.

Tolerances are those described in appropriate performance standards.

All testing was conducted at 20°C under laboratory conditions, unless otherwise stated.

1 N/mm² = 1 MPa

1 kN/mm² = 1 GPa

Surface Preparation

Substrates must be clean and sound, hence all grease, oil, dust, loose material and laitance must be removed by broom, vacuum or by scarifying.

When used as a repair mortar, the perimeter edges of defects must be recessed to 10mm minimum.

Thoroughly saturate surfaces with clean water and remove free standing water.

Mixing & Placement

Nupatch Bedding Mortar should be mixed mechanically with clean water in a forced action mixer. Prior to mixing, wet out the mixer drum and discard water. Repeat regularly, at breaks and meal times.

Add the required amount of water to the mixing drum and then gradually add all of the powder component to the rotating mixer drum. Continue mixing for two minutes to produce a fully hydrated cohesive or pourable mortar; this should be installed immediately.

Work quickly to place the mixed mortar at the desired thickness, allowing for compaction and position the component.

Minimum bed thickness or repair depth is 10mm. For depths >50mm, please contact our technical department.

Cleaning

Mixing equipment and tools should be cleaned regularly through the day to avoid product build up, using clean water.

Curing

For defect repairs, normal curing procedures should be employed immediately after finishing and precautions taken to avoid frost attack. UV degradable resin based curing membranes should not be used if a subsequent surface coating is to be installed.

Packaging

Nupatch Bedding Mortar is available in 25kg bags (yield approximately 12 litres).

Storage

The shelf life is 6 months when stored unopened in dry, normal conditions and away from direct sunlight. Protect from frost.

Health & Safety

Product Safety Data Sheets (SDS) are available from Nufins. SDS sheets are provided to help customers satisfy their safe handling, use and disposal needs as well as assist with any conformance requirements made locally by health and safety regulations.

SDS are continually updated to provide the latest information to our customers. We therefore recommend contacting our head office to obtain the most recent and accurate SDS before handling and using any product.

Limitations

For applications below 5°C please contact Nufins technical department for advice.

Disclaimer

The information contained herein is to the best of our knowledge true and accurate and is given in good faith but without warranty. The user will be deemed to have satisfied themselves independently as to the suitability of our products for their own particular purpose. In no event shall Nufins be liable for consequential or incidental damages.

Users must always refer to the most recent issue of the Technical Datasheets, copies of which will be supplied on request.

Technical Support

Through our technical department and laboratories we can offer a comprehensive service to specifiers and contractors. Technical contacts are available to provide further information and arrange demonstrations.