

Nupatch Bedding Mortar HA104

Rapid Setting Mortar for Bedding Ironwork

Description


A pre-packed shrinkage compensated, fibre reinforced, polymer modified cementitious bedding mortar characterised by its rapid strength gain which enables work to be carried out with the minimum of disruption. Ideally suited for the bedding and raising of manhole frames, fixing of street furniture and as a general purpose rapid setting repair mortar. Nupatch Bedding Mortar HA104 has been designed to comply with the requirements of EN1504 Part 3 Class R4.

Advantages

- Complies with Highway Agencies specification HA104/09
- High early tensile strength development
- Rapid setting characteristics
- Low water/cement ratio
- Shrinkage compensated
- Polymer modified
- Fibre reinforced
- Excellent adhesion to dense concrete and steel
- Simple to use, only requires the addition of clean water
- Excellent workability and finishing properties
- May be used down to 0°C
- Resistant to freeze/thaw cycle
- Low chromate (Cr (VI) <2ppm)
- Manufactured under BSI QA Scheme, ISO 9001, EN29001

Applications

- Rapid installation of chamber tops and gully tops
- Bedding and raising of manhole frames
- Fixing of street furniture
- Rapid setting of posts, railings, lamp standards, etc.
- High strength repair mortar
- Bedding for copings

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EN 1504-3 Concrete repair product for structural repair PCC Mortar (based on polymer modified hydraulic cement)	
Compressive strength	Class R4 (>45 MPa)
Chloride ion content	≤0.05 %
Adhesive bond strength	>2.0 MPa
Adhesion after freeze/thaw (50 cycles with salt)	>2.0 MPa
Elastic modulus	>20 GPa
Dangerous substances	Complies with 5.4

Technical Information

Water Addition	1.75-2.25 Litres per 25 kg pack
Density	2250 kg/m ³
Yield	Approx. 12 Litres per 25 kg pack
Maximum Aggregate Size	4mm

Temp	Usable life	Compressive Strength, MPa				
		2 Hour	3 Hour	1 Day	7 Day	28 Day
20°C	15 Mins	30	35	50	65	70

Tested in accordance with EN12190.



Technical properties of Nupatch Bedding Mortar HA104.

Properties	Standard	Performance Requirement	Declared Value
Appearance			Grey Powder
Mixing water			1.75-2.25 Litres per 25kg
Chloride-ion content	EN1015-17	≤ 0.05%	≤ 0.05%
Maximum aggregate size			4mm
Water/cement ratio			0.25 @2 Litres per 25kg
Cement content			>600kg/m ³
Layer minimum thickness			10mm
Density			Approx. 2250 kg/m ³
Working time		≥ 15 Minutes	15-20 Minutes
Temperature for application			5°C to 35°C
Compressive strength @ 2.0 Litres per Pack	EN 12190	≥ 30 MPa	30 MPa@ 2 Hour 35 MPa@ 3 Hour 50 MPa@ 24 Hour 65 MPa@ 7 Day
Tensile strength	EN12390-6	≥ 5.0 MPa@ 3 Hour	5.0 MPa@ 3 Hour
Flexural strength	BS6319-3		13 MPa
Modulus of elasticity, in flexure	BS6319-3		>20 GPa
Modulus of elasticity, in compression	EN13412	≥ 20 GPa	> 20 GPa
Adhesion - Concrete	EN1542	≥ 2.0 MPa	> 2.0 MPa
Adhesion after freeze/thaw (50 cycles with salt)	EN13687-1	≥ 2.0 MPa	> 2.0 MPa
Adhesion after thunder shower (30 cycles)	EN13687-2	≥ 2.0 MPa	> 2.0 MPa
Adhesion after dry cycling (30 cycles)	EN13687-4	≥ 2.0 MPa	> 2.0 MPa
Skid resistance	EN13036-4		Class 1
Carbonation resistance	EN13295	$d_k \leq \text{ref. concrete}$	$d_k \leq \text{ref. concrete}$
Capillary absorption	EN13057	$\leq 0.5 \text{ kg/m}^2/\text{Hr}^{0.5}$	$\leq 0.5 \text{ kg/m}^2/\text{Hr}^{0.5}$
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.

1 N/mm² = 1 MPa

1 kN/mm² = 1 GPa

Surface Preparation

The substrate must be clean and sound, hence all grease, oil, dust and laitance must be removed by scarifying. The edges of the repair must be recessed at least 10mm. Thoroughly moisten surface but ensure no free water remains.

Mixing & Placement

Nupatch Bedding Mortar HA104 should be mixed using a forced action mixer. The mixing drum should be pre-wetted and any remaining water drained away. Add all of the water to the mixing drum and gradually add all of the powder component whilst the drum is turning. Continue mixing for a two minutes to produce a hydrated and cohesive mortar which is ready for immediate use.

Place the mixed mortar to the desired thickness, allowing for compaction and bed the component. Minimum bed thickness 10mm. Finish as required and clean all equipment immediately with water.

Packaging

Nupatch Bedding Mortar HA104 is available in 25kg units.

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

If applying at 5°C or below 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.