

# Technical Datasheet

## Hi-Spec Paving Jointing Mortar



High Strength Hydraulic Bonding Jointing Mortar

### Description

A pourable cementitious joint mortar typically used for filling joints between concrete, stone and granite elements. The system is suitable for use on pedestrian or vehicular trafficked areas and complies with BS 7533. Hi-Spec Paving Jointing Mortar is based on non-reactive aggregates and low alkaline, shrinkage compensated Portland Cements with selected admixtures.

Hi-Spec Paving Jointing Mortar has been formulated to comply with the requirements of EN 1504: Part 3 Class R4.

### Advantages

- Single pack system
- Non-shrink
- Very high early compressive & flexural strengths
- Pour applied
- Dual purpose; for joint-filling & slurry-priming
- Excellent bond strength to a variety of materials
- Suitable for pedestrian & carriageway surfacing
- Tolerant to freeze/thaw cycles
- Excellent flowability & placement characteristics
- Standard Grey colour & also available in Charcoal

### Technical Information

Water addition	3.5 to 4.0 litres per 25 kg bag
Typical density	2150 - 2300kg/m <sup>3</sup>
Vehicular trafficking times (guidance only)	Summer >15°C 1-2 days Winter >5°C 3-5 days
Cure before stress	24 hours
Suitable joint width	6 mm - 100 mm
Yield	13 litres (0.013 m <sup>3</sup> )

<b>CE</b>	
Nufins, Kingston House, 3 Walton Road, Pattinson North, District 15, Washington, Tyne & Wear. NE38 8QA 13	
EN 1504-3 Concrete repair product for structural repair	
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

### Priming

It is not necessary to prime the sides of elements. However, porous elements should be dampened down with clean water immediately prior to joint filling. Ensure the sides of elements are free from contamination.

May be used as a slurry primer tack coat for substrates and the underside of paving elements.



## Technical properties of Hi-Spec Paving Jointing Mortar

Properties	Standard	Performance Requirement	Declared Value
Appearance			Grey powder
Chloride-ion content	EN 1015-17	≤0.05 %	<0.05 %
Aggregate size			Max. 2 mm
Joint width - minimum - maximum			6 mm 100 mm
Working time			45-60 minutes
Hardening time			4-18 hours
Density			2150-2300 kg/m <sup>3</sup>
Temperature for application			5°C to 35°C
Compressive strength @ 20°C	EN 12190	≥45 MPa	30 MPa @ 24 hours >50 MPa @ 7 days >60 MPa @ 28 days
Modulus of elasticity In compression	EN 13412	≥20 GPa	20 GPa
Flexural strength	BS 6319-3		7.0 MPa
Modulus of elasticity In Flexure	BS 6319-3		20 GPa
Tensile strength	BS 6319-7		4.0 MPa
Adhesion - concrete	EN 1542	≥2.0 MPa	≥3.0 MPa
Adhesion after freeze/thaw (50 cycles with salt)	EN 13687-1	≥2.0 MPa	≥2.0 MPa
Adhesion after thunder showers (30 cycles)	EN 13687-2	≥2.0 MPa	≥2.0 MPa
Adhesion after dry cycling (30 cycles)	EN 13687-4	≥2.0 MPa	≥2.0 MPa
Skid resistance	EN 13036-4		Class 1
Carbonation resistance	EN 13295	$d_k \leq \text{ref. concrete}$	Passes
Capillary absorption	EN 13057	$\leq 0.5 \text{ kg/m}^2 \cdot \text{h}^{0.5}$	$\leq 0.5 \text{ kg/m}^2 \cdot \text{h}^{0.5}$
Cracking tendency	Coutinho ring test		No cracking after 180 days
Heat Resistance			Tolerates steam cleaning

## Mixing

Mixing may be undertaken with a forced action, pan type paddle mixer or drill and paddle, to ensure thorough mixing without 'balling'. Part mixing of bags is not recommended.

The contents of each bag of Hi-Spec Paving Jointing Mortar requires mixing with clean water only. The mixer drum is to be clean and free from the remains of previous mixes. Wet the inside of mixer drum and drain off excess water.

Measure out the appropriate quantity of water into a suitable container and add 2/3 of the mixing water into the drum. With the mixer rotating add the full contents of the bag and allow to mix for one minute. Add all or part of the remainder of the water and allow to mix for up to a further 2 minutes depending on the type of mixer used. Pour mix into a suitable container and allow to de-air for up to 2 minutes.

For use as a slurry primer tack coat, the mixing water addition is approximately 4 litres per bag.

## Application Instructions

Joints should be filled within 24 hours of laying the paving elements to minimise the risk of dirt contaminating the joints. Pour directly into joints from a suitable container, watering can or other type of applicator with appropriate nozzle.

For pour-applied application over the paved surfacing, move the mortar into joints use a squeegee. Care must be taken to remove material from set surfaces as soon as possible before hardening.

After joints have been filled, wet mortar may be removed from the paved surface with a mechanical sponge belt cleaner, or by making repeated passes using clean water and squeegee. Alternatively leave jointing mortar to harden and remove later by vacuum grit blasting.

## Cleaning

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

## Packaging

Hi-Spec Paving Jointing Mortar is supplied in 25kg bags (Yield approximately 13 litres or 0.013 m<sup>3</sup> per bag).

Estimating guide:

Total area x lin mtr joint run per m<sup>2</sup> x joint width x joint depth

## 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 application is at 5°C or below please contact Nufins technical department for advice. Materials should not be installed when temperature is at 3°C or below on a falling scale, without frost protection measures.

Excessive water additions will reduce strengths and can cause segregation within the mix which may limit the flow.

## 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.