

# NUCEM H.B. BEDDING MORTAR

## High Strength Cementitious Hydraulic-Bonding Mortar

### Description

Nucem H.B. Bedding Mortar is a high strength, cementitious, hydraulic-bonding mortar. Typical uses include bedding of concrete, stone and granite elements. The system is suitable for use on pedestrian or vehicular trafficked areas and complies with Highways Agency Specification for Highway Works Clause 1700.

Nucem H.B. Bedding Mortar is based on non-reactive aggregate, low alkaline, shrinkage compensated Portland Cements with selected admixtures. The material is polymer-modified, fibre-reinforced and provides good adhesion when used with an acrylic or epoxy-bonding coat.

### Advantages

- Polymer modified.
- Low Modulus of Elasticity in flexure.
- Controlled mixing and application.
- Non-shrink.
- Suitable for pedestrian and carriageway use.
- Maximises adhesion and compatibility.

### Technical Information

Modulus of Elasticity	14 KN/mm <sup>2</sup> BS6319 Pt 3
Bond Strength BS 1881 Pt 207	
Clause 8 1992	2.5 N/mm <sup>2</sup>
Compressive Strength BS 1881 Pt 116	
1 day	15 N/mm <sup>2</sup>
7 days	33 N/mm <sup>2</sup>
28 days	41 N/mm <sup>2</sup>
Shrinkage (Coutinho Ring Test)	Specimen did not crack
Density	1800 - 1900 kg/m <sup>3</sup>
Yield per 22.64 Kg Composite Pack	13 litres (0.013 m <sup>3</sup> )
Freeze/Thaw Resistance	Good to Excellent
Application Temperature Range	5°C - 35°C
Cure Before Stress (Foot Traffic)	24 hours
Minimum Bed Thickness	>25mm (detailed by specification)

Typical strengths shown for material laboratory tested at 20°C with full amount of gauging liquid

### Surface Preparation

All substrates should be sound, stable, clean and free from laitence, oil and grease. Preferably, new concrete slabs should be at least 28 days old, shrinkage is more likely to occur in younger concrete. The use of spray applied curing membranes to concrete slabs should be avoided. If a spray applied curing system has been used, forming a film coating, this should be mechanically removed.

### Priming

Concrete substrates should be thoroughly wetted 2 hours prior to placement of mortar and any excess water removed before priming with Nucem Emulsion Primer. We recommend that new asphalt or macadam is conditioned then primed with Nucem Primer or a slurry of Nucem Joint Grout. For undersides of paving elements, wetting down with clean water or priming with Nucem Emulsion Primer or Nucem Joint Grout slurry, will increase bond especially when using lower gauging liquid additions.

### Mixing

It is recommended that a Cretangle or other forced action pan mixer is used for mixing Nucem H.B. Bedding Mortar to ensure that the material is thoroughly mixed and fully hydrated. Wet out and discard water from the mixing drum prior to use or when the drum is dry. Pour approximately ¾ of the gauging liquid provided into the rotating drum and gradually add the entire amount of powder and aggregate. Add all or part of the remaining gauging liquid to obtain a wet mix or semi-wet mix. Do not add extra gauging liquid or water. Mixing time 1-3 minutes. Multiple bag mixing is permissible.

## **Application Instructions**

The mixed mortar may be placed onto the primed substrate the spread evenly and levelled to the desired depth with a steel or plastic float. Allow depth tolerance for compaction by setts, ensuring that the material is laid without voids. Excessive compaction is not necessary. Do not allow mixed mortar to stand longer than 45 minutes before placing onto the substrate. Primed pavers and setts may be placed onto the mortar bed while the mortar remains wet and mobile under force. After use and at break times clean tools and equipment immediately with clean water.

N.B. For application as a thin bed mortar 5-30mm contact Nufins Technical Department.

## **Storage**

Nucem H.B. Bedding Mortar and Nucem Primer should be stored in dry, frost free conditions. Shelf life 6 months for unopened packs when stored correctly. Nucem Emulsion Primer may be stored at moderate temperatures, protected from frost.

## **Packaging**

Nucem H.B. Bedding Mortar is available in 22.64 kg bags (yield 13 litres approximately).

Nucem Emulsion Primer is available in 5 and 25 litre units (coverage 3 - 5 m<sup>2</sup> per litre).

Nucem Primer is available in 0.5 and 1 kg units (coverage 3-5 m<sup>2</sup>).

## **Health & Safety**

Nucem H.B. Bedding Mortar does not present any undue hazard and is non-toxic. However, as it is alkaline, gloves should be worn and any material should be washed from the skin and eyes with clean water before it dries.

Nucem Emulsion Primer does not present and undue hazard, however, normal hygiene should be observed and any material should be washed from the skin with clean water before it dries.

## **Limitations**

For a wet mix, if the bedding mortar surface is allowed to dry too long before placing setts, the surface will have to be re-worked to ensure that a good bond is achieved. Do not apply water to the surface of the mortar. Do not add less than 2.25 kgs of gauging liquid per pack of powder. We do not recommend the use of a dry mix, too little addition of gauging liquid may lead to desiccation and a weak mortar. Do not allow the primer on pavers or setts to dry before placing. Protect newly laid areas from frost and extreme weather. Contact Nufins Technical Department for application below 5°C.

## **Technical Support**

Through our technical department and laboratories we can offer a comprehensive service to specifiers and contractors.

Technical representatives are available throughout the UK to provide further information and arrange demonstrations.



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