SURFACE REPAIR GUIDE

HOW TO APPLY BEDDING MORTAR FOR IRONWORKS INSTALLATION

OVERVIEW:

A how to guide on mixing HardMaster Bedding Mortars. Including mix instructions and water ratio amounts.

1. Prepare The Area

The area should be prepared to the correct specification for the application. All application substrates must be sound, clean and free from dust, dirt, debris, oil, grease and other contaminants. Proper surface preparation is vital to ensure the successful application and durable performance of the concrete. All substrates should be pre-wetted with water prior to the application of the mortar, however any standing water should be removed.

Required Materials

- Twin Handled Mixing Unit
- Mixing Paddle
- HardMaster Bedding Mortar Options:
  - HardMaster W660 – 60 minute setting time
  - HardMaster W690 – 90 minute setting time
  - HardMaster W668 – Fibre Reinforced and 60 minute setting time
- Trowel
- Water

2. Mixing Instructions And Water Ratios

Please note: water is added first then the concrete mix is added to the water.

For best results HardMaster bedding mortars, should be mixed using a steel Meon OX Pro Mixing Paddle coupled with a twin handled mixing unit.

Mix each 25kg unit with 2.5 – 3.0 litres of clean water (which complies with BS EN 1008 – water for concrete). Pre-measure the required volume of water into a clean mixing vessel and steadily add the powder to the water. The product should be mixed for 2-3 minutes until a smooth mortar consistency is achieved.

Due to the rapid setting nature of HardMaster W660 Bedding Mortar, only ever mix a quantity of material that can be used and placed within 5 minutes of the end of mixing.

DO NOT re-mix or add extra water to extend the working time of the material.

NOTE: Water consumption can be impacted by calcium content i.e. in different soft water and hard water areas.

3. Technical Performance Data

Concrete continues to harden over time, the HardMaster range is developed to set quickly (within 60 minutes it can be opened to traffic), yet have an extended workability time up to 10 minutes and then set extremely quickly and continue to do harden over time. Technical Data @ 20°C and 65% relative air humidity. Below is the Technical Performance for HardMaster W668.

Water Addition	2.5 - 3.0 litres / 25kg
Yield	12.2 litres / 25kg
Workability	5 - 10 minutes
Set Time	< 20 minutes
Shrinkage	Less than 0.001%
Density	2250 - 2300kg/m³
Compressive Strength	
After 45 Mins	20 N/mm²
After 4 Hours	25 N/mm²
After 1 Day	45 N/mm²
After 7 Days	60 N/mm²
After 28 Days	75 N/mm²
Flexural Strength (after 28 days)	8.5 N/mm²

4. Mix The Concrete Mix

Using a powered mixer and mixing paddle for 2-3 minutes. Secure the bucket when using the powered mixer so the bucket doesn't tip over. The mix will be heavy and we would recommend using a powered mixer like a Collomix in this video we use a cordless version. For best results HardMaster Bedding Mortars should be mixed using a steel Meon OX Pro Mixing Paddle coupled with a twin handled mixing unit.

5. Application of HardMaster Bedding Mortars

HardMaster W668 Fibre Reinforced Bedding Mortar should be applied at a thickness of 10mm – 100mm in a single pass. If thicker sections are required, this can be achieved using the layer-on-layer method.

HardMaster W668 FR Bedding Mortar should be placed on the pre-wetted application area without delay after mixing.

Apply an even bed thickness to the whole application area ensuring a nominal 5-10mm excess thickness is present to allow for bedding of the frame. Lift the frame in to position (using suitable lifting equipment as necessary) and lower the frame onto the still malleable mortar. Care should be taken to avoid creating air voids under the frame at this stage. The frame should then be tamped down to the correct height, ensuring the top of the frame sits level to surface of the road. Point up the inner and outer exposed surfaces ensuring all voids are filled.

Once the bedding mortar has reached initial set, the backfill concrete – HardMaster W610 trowelable or HardMaster W615 Flowable can be mixed and placed. Recommended ambient application temperature is 5°C to 25°C.

For optimum results, use Meon BituSeal, bitumen edge sealer to seal any vertical edges, then apply and compact Meon PatchMaster to the finished level of the ironwork. Meon ThermaBand can then be applied to the surface joints to prevent future cracking. (See corresponding TDS Sheets for more information).

Recommended ambient application temperature is 5°C to 25°C.

6. Clean Off The Tools

Clean off the tools, paddles and floats using water. Discarding any waste water according to your waste disposal guidelines.

REMEMBER!
DO NOT re-mix or add extra water to extend the working time of the material. As it will compromise the integrity of the concrete.

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