

SURFACE REPAIR GUIDE

HOW TO MIX BACK FILL TROWELABLE CONCRETE

OVERVIEW:

A how to guide on mixing HardMaster W610 back fill trowelable concrete. Including mix instructions and water

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 W610
- Concrete Float
- Water

2. Mixing Instructions And Water Ratios

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

Mix each 25kg unit with 2.3 - 2.8 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 half the powder to the water. Then add another quarter of powder and mix again, before adding the final quarter and mix well, adding the rest of the water if required. The product should be mixed for 2-3 minutes until a smooth, and mortar like consistency is achieved.

Due to the rapid setting nature of HardMaster W610 Flowable Concrete, 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 90 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. The below figures are derived from laboratory testing at 20°C and at a WSR of 0.11.

Water Addition	2.5 - 2.8 litres / 25kg
Yield	12.2 litres / 25kg
Workability	5 - 10 minutes
Set Time	< 20 minutes
Shrinkage	Less than 0.001%
Density	2250 - 2300kg/m ³
Compressive Strength	
After 1 Hour	15 N/mm ²
After 90 Minutes	20 N/mm ²
After 2 Hours	23 N/mm ²
After 1 Day	31 N/mm ²
After 7 Days	42 N/mm ²
After 28 Days	50 N/mm ²

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 W610 should be mixed using a rubber OX Pro Rubber Blade Mixing Paddle coupled with a twin handled mixing unit.



5. Application of HardMaster Bedding Mortars

Trowel HardMaster W610 into the desired area, distribute evenly and then using a concrete float to smooth and compact the concrete mixture.

HardMaster W610 Trowelable Concrete should be applied at a thickness of 30mm – 250mm in a single pass. If thicker sections are required, this can be achieved using the layer-on-layer method.

HardMaster W610 should be placed on the pre-wetted application area without delay after mixing. When backfilling around carriageway ironwork or completing patch repairs ensure the material is tamped down and well compacted as soon as possible after placing. HardMaster W610 can be placed at a thickness of 30mm – 250mm in a single pass. If thicker sections are required, this can be achieved using the layer-on-layer method.

HardMaster W610 should be placed on the pre-wetted application area without delay after mixing. When backfilling around carriageway ironwork or completing patch repairs ensure the material is tamped down and well compacted as soon as possible after placing. HardMaster W610 should be used to encase the flange of any ironwork and then be brought to a height 40-50mm below the required surface of the carriageway or footpath. HardMaster W610 can be finished by floating using a trowel or similar. Once the HardMaster W610 has reached initial set, the reinstatement process can then be continued.

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.

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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