



# HARDMASTER™ W610

## RAPID STRENGTH TROWELABLE CONCRETE



### HIGH STRENGTH BACKFILL CONCRETE:

Magma HardMaster W610 rapid strength concrete is a high-performance and rapid set trowelable backfill concrete designed to complement the HardMaster range of bedding mortars. HardMaster W610 can be opened to traffic just 90 minutes after being mixed and placed. It's rapid set and early strength reduce construction and road closure times, making it ideal for both planned and emergency repairs. Typical applications include the backfill of carriageway ironwork, post and barrier erection. HardMaster W610 has been independently tested by a UKAS Laboratory for the compliance to Department of Transport HD 27/04 Design Manual for Roads and Bridges Vol 7 Sec 2 Clause 3.11.

### PRODUCT FEATURES:

- Can open to traffic in 90 minutes
- Smooth trowelable consistency
- Preblended, one component product - just add water and mix

### CUSTOMER BENEFITS:

- Minimum downtime
- Reduced defects
- Easy to use

### COLOURS AVAILABLE:



Grey



### RECOMMENDED USE:



Utilities



Car Parks



Highways



Facilities

### APPLICATION METHOD:



Trowel

**PREPARATION OF SUB-BASE:**

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 concrete, however any standing water should be removed.

**MIXING INSTRUCTIONS:**

For best results **HardMaster W610** should be mixed using a **Meon OX Pro Rubber Blade Mixing Paddle** coupled with a twin handled mixing unit. 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 the powder to the water. The product should be mixed for 2-3 minutes until a smooth, homogenous concrete consistency is achieved. Due to the rapid setting nature of **HardMaster W610**, 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.

**APPLICATION:**

**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 **Magma BituSeal**, bitumen edge sealer to seal any vertical edges, then apply and compact **Magma PatchMaster H570** or even better results with no compaction use **Magma PermaFyx L273/L274** to the finished level of the ironwork. **Magma ThermaBand R172** 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.

**AFTERCARE AND MAINTENANCE:**

Tools and equipment can easily be cleaned using water and should be carried out as soon as possible after application.

**TECHNICAL:**

PERFORMANCE DATA	
Water Addition (per 25kg)	2.3 - 2.8 litres
Workability	5 - 10 minutes
Set Time	< 20 minutes
Shrinkage	Less than 0.001%
Density	2250 - 2300 kg/m <sup>3</sup>
Yield (per 25kg)	12.2 litres
COMPRESSIVE STRENGTH	
1 hours	15 N/mm <sup>2</sup>
90 minutes	20 N/mm <sup>2</sup>
2 hours	23 N/mm <sup>2</sup>
1 day	31 N/mm <sup>2</sup>
7 days	42 N/mm <sup>2</sup>
28 days	50 N/mm <sup>2</sup>
The above figures are derived from laboratory testing at 20°C and 65% relative humidity	

**DESIGN MANUAL FOR ROADS & BRIDGES - Vol 7 Sec 2:**

The department of Transport HD 27/04 Clause 3.11 Mortars for bedding ironwork may be trafficked when the strength is expected to be 20N/mm. For rapid construction, this should be achieved within 2 hours.

**QUALITY CONTROL:**

Tested and packaged to quality control procedure in accordance with **BS EN ISO 9001**.

**STORAGE CONDITIONS:**

Storage area should be cool and dry, protected from direct sunlight and extremes of temperature - i.e. between 5 & 20°C.

**SHELF LIFE:**

12 months when stored under cover, in original unopened containers, in accordance with Storage Condition guidelines listed above. Avoid exposure to water, frost or heat - high temperatures and high humidity will lead to a reduced shelf life.

**SIZES AVAILABLE:**

25kg bags.

**HEALTH AND SAFETY:**

Health and safety advice, which must be followed, can be found on the Material Safety Data Sheet. Users are advised to wear face mask, goggles, gloves and overalls when handling, mixing and applying cementitious products.

These products contain cement and have an alkaline reaction with moisture/water. Therefore protect hands and eyes. In case of contact with eyes consult a doctor. Familiarise yourself with the material safety data sheets before using this product. If you need a copy please call our technical team on **023 9220 0606**.