



HARDMASTER™ W615

RAPID STRENGTH FLOWABLE CONCRETE



HIGH STRENGTH BACKFILL CONCRETE:

Magma HardMaster W615 is a high performance rapid set and rapid strength flowable backfill concrete which is designed to complement the HardMaster range of bedding mortars, and can be opened to traffic just 90 minutes after being mixed and placed. It is perfect for any application that requires high early strength gain and a quick return to service time. It's rapid set and high early strength development help 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 and is compatible for use with concrete, brick and stone substrates. HardMaster W615 complies with Department of Transport HD 27/04 Design Manual for Roads and Bridges Vol 7 Sec 2 Clause 3.11.

PRODUCT FEATURES:

- Excellent bond strength
- High final strength
- Flowable and self-compacting

CUSTOMER BENEFITS:

- Reduction in defect costs and material waste
- Easy to use, pre-blended, one component product
- No hot works or specialist equipment required
- Early strength gain, ready to receive traffic after just 90 minutes

COLOURS AVAILABLE:



Grey



RECOMMENDED USE:



Utilities



Car Parks



Highways



Facilities

APPLICATION METHOD:



Flowable

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 W615** should be mixed using a steel **Meon OX Pro 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 mortar consistency is achieved. Due to the rapid setting nature of **HardMaster W615** 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.

APPLICATION:

HardMaster W615 Flowable 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 W615** Flowable Concrete should be placed on the prewetted application area without delay after mixing. When backfilling around carriageway ironwork or completing patch repairs guide the material into the desired location using a trowel.

Due to the flowing nature of the product good compaction should be easily achieved. **HardMaster W615** Flowable Concrete should be used to encase the flange of any ironwork and then be brought to a height 40mm below the required surface of the carriageway of footpath. **HardMaster W615** Flowable Concrete can be finished by floating using a trowel or similar. Once the product 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 ³
Yield (per 25kg)	12.0 litres
COMPRESSIVE STRENGTH	
1 hours	8.0 N/mm ²
90 minutes	20 N/mm ²
2 hours	22 N/mm ²
1 day	31 N/mm ²
7 days	42 N/mm ²
28 days	50 N/mm ²
The above figures are derived from laboratory testing at 20°C and 65% relative humidity	

QUALITY CONTROL:

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

STORAGE CONDITIONS:

Palletised **HardMaster W615** Flowable Concrete should be stored in cool dry areas clear of the ground sheeted or under cover and stacked not more than two pallets high. The product should be used on a first in - first out basis. Individual bags of **HardMaster W615** should be stored in sealed original packaging in a dry location at temperatures between 5°C and 25°C. Avoid exposure to water, frost or heat - high temperatures and high humidity will lead to a reduced shelf life.

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**.