

# Technical information

## ULTIBED MORTAR

45



### DESCRIPTION

Ultibed Mortar 45 is an ultra-high performance, rapid set and rapid strength bedding mortar which can be opened to traffic just 45 minutes after being mixed and placed. The one component blend of cements, additives and graded aggregates is available in both 25kg water resistant plastic bags or tubs and only requires the addition of water on site.

Ultibed Mortar 45 complies with Highways England HD 27/15 Design Manual for Roads and Bridges Vol 7 Sec 2 Clause 3.11.

### USES

Ultibed Mortar 45 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 bedding of inspection chamber frames/covers, gully grates, stanchion posts, kerb stones, setts and other street furniture installations.

Ultibed Mortar 45 is compatible for use with concrete, brick and stone substrates.

### SPECIAL PROPERTIES

- Ready to receive traffic after just 45 minutes
- Early strength gain
- Easy to use - just add water and mix
- Available in 25kg water resistant bags and tubs
- Excellent bond strength without the use of a primer
- Shrinkage compensated
- High final strength
- Smooth trowelable consistency

### PREPARATION

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 mortar.

All substrates should be pre-wetted with water prior to the application of the mortar, however any standing water should be removed.

### MIXING INSTRUCTIONS

For best results Ultibed Mortar 45 should be mixed using a mechanical mixer such as a forced-action high shear mixer or a slow-speed drill and paddle mixer. Alternatively, the product can be mixed by hand using a shovel.

Mix each 25kg unit with 2.5 - 3.0 litres of cool, clean water. 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, homogeneous mortar consistency is achieved.

Due to the rapid setting nature of Ultibed Mortar 45, only ever mix a quantity of material that can be used and placed within 5 minutes of the end of mixing.

Never remix or add extra water to extend the working time of the material.

### APPLICATION INSTRUCTIONS

Ultibed Mortar 45 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.

Ultibed Mortar 45 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 – Ultibed Concrete or Ultibed Flowing Concrete can be mixed and placed.

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

## PERFORMANCE DATA

Water Addition (per 25kg)	2.5 to 3.0 litres
Workability	5-10 minutes
Set Time	< 20 minutes
Shrinkage	Less than 0.001%
Density	2250-2300kg/m <sup>3</sup>
Yield	12.2 litres

	Compressive	Flexural
45 minutes	20.0 N/mm <sup>2</sup>	4.5 N/mm <sup>2</sup>
4 hours	25.0 N/mm <sup>2</sup>	6.5 N/mm <sup>2</sup>
1 day	45.0 N/mm <sup>2</sup>	7.5 N/mm <sup>2</sup>
7 days	60.0 N/mm <sup>2</sup>	8.0 N/mm <sup>2</sup>
28 days	75.0 N/mm <sup>2</sup>	8.5 N/mm <sup>2</sup>

The above figures are derived from laboratory testing at 20°C and at a WSR of 0.12.

## CLEAN UP

Tools and equipment can be cleaned easily with water. Cleaning of tools and equipment should be carried out as soon as is practicable well away from the application area.

## PACKAGING AND STORAGE

Ultibed Mortar 45 is available in nominal 25kg plastic bags or tubs, palletised and shrink wrapped.

Palletised Ultibed Mortar 45 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. Shelf life is 12 months' subject to temperature and humidity.

Individual bags of Ultibed Mortar 45 should be stored in sealed original packaging in a dry location at temperatures between 5°C and 30°C. Avoid exposure to water, frost or heat - high temperatures and high humidity will lead to a reduced shelf life.

## QUALITY CONTROL

All Tarmac products are factory blended, tested and packaged to quality control procedures in accordance with BS EN ISO 9001.

## 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.

Contains Portland Cement. Contains Chromium (VI), which may produce an allergic reaction. Clothing contaminated by wet cement should be removed immediately and washed before reuse. R38 - Irritating to skin. R41 - Risk to serious damage to eyes. S26 - In case of contact with eyes, rinse immediately with water and seek medical advice. S37/39 - Wear suitable gloves and eye/face protection. S2 - Keep out of reach of children.

## INFORMATION, PRICES & ORDERING

For technical information, pricing and to place orders contact our Sales Office on the following:

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Visit our website: [www.tarmac.com](http://www.tarmac.com)

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# Product Data Sheet