

# Technical information

## ULTIBED FLOWING CONCRETE



### DESCRIPTION

Ultibed Flowing Concrete is a high performance rapid set and rapid strength flowable concrete which is designed to complement the Ultibed range of bedding mortars. Ultibed Flowing Concrete can be opened to traffic just 90 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 Flowing Concrete has been independently tested by a UKAS Laboratory for the compliance to Highways England HD 27/15 Design Manual for Roads and Bridges Vol 7 Sec 2 Clause 3.11.

### USES

Ultibed Flowing Concrete is perfect for any application that requires high early strength gain and a quick return to service time.

It's rapid set and 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.

Ultibed Flowing Concrete is compatible for use with concrete, brick and stone substrates.

### SPECIAL PROPERTIES

- Ready to receive traffic after just 90 minutes
- High early strength gain
- Easy to use, pre-blended, one component product – just add water and mix
- Flowable and self-compacting
- Available in 25kg water resistant bag or tub
- Excellent bond strength

- Shrinkage compensated
- High final strength

### 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 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 Ultibed Flowable Concrete 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 2.3 – 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, homogeneous flowable concrete consistency is achieved.

Due to the rapid setting nature of Ultibed Flowable Concrete, 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 Flowable Concrete 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.

Ultibed Flowable Concrete should be poured on the pre-wetted 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. Ultibed Flowing 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 or footpath. Ultibed Flowing Concrete can be finished by floating using a trowel or similar.

Once the Ultibed Flowing Concrete has reached initial set, the reinstatement process can continue by applying Ultipatch Edgemaster to the vertical edges of the reinstatement.

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

## PERFORMANCE DATA

Water Addition (per 25kg)	2.3 to 2.8 litres
Workability	5-10 minutes
Set Time	<20 minutes
Shrinkage	Less than 0.001%
Density	2200-2300kg/m <sup>3</sup>
Yield (per 25kg)	12.0 litres

	Compressive
1 hour	8.0 N/mm <sup>2</sup>
90 minute	20.0 N/mm <sup>2</sup>
2 hour	22.0 N/mm <sup>2</sup>
1 day	31.0 N/mm <sup>2</sup>
7 day	42.0 N/mm <sup>2</sup>
28 day	50.0 N/mm <sup>2</sup>

The above figures are derived from laboratory testing at 20°C and at a WSR of 0.11.

### 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<sup>2</sup>. For rapid construction, this should be achieved within 2 hours.

## CLEAN UP

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

## QUALITY CONTROL

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

## PACKAGING & STORAGE

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

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

Individual bags of Ultibed Flowing Concrete 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.

## 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:

Telephone: 03444 630 046

Email: [specialistproducts@tarmacbp.co.uk](mailto:specialistproducts@tarmacbp.co.uk)

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

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# Product Data Sheet