

## Fast Set (High Strength Gain) Concrete

### Information

**Ultracrete FTC** is a high strength gain fast set concrete, which will accommodate small and large repairs from 10 –150mm in depth. **Ultracrete FTC** is ideal for reinstatements to car parks, airports, warehouses and bridge deck repairs and can be open to foot traffic in as little as 4 hours.

### Technical

The **Ultracrete FTC** range is supplied in both 4mm and 10mm aggregate grades formulated using a blend of special cements and approved admixtures.

They do not contain metallic aluminium, iron or carbon and are chloride free, therefore eliminating the problems of corrosion and staining. **Ultracrete FTC** complies with the Highways Agency Specification for Highway Works clause 1704.6 Control of Alkali Silica Reaction.

### Preparation

Apply **Ultracrete FTC** to a sound, clean, uncontaminated, dust free surface. Concrete should be roughened to provide a good key. Metal surfaces must have rust and scale removed and be free from oil, grease and paint. The repair should be disc cut to provide a straight vertical edge and must be at least a minimum depth of 10mm.

### Priming

Before commencing the priming operation remove any dust by vacuum or brush. The concrete/masonry surface should then be thoroughly soaked with water.

Ensure any surplus water is removed before priming with **Ultracrete SP**. Mix components as per instructions and scrub well into substrate. Do not allow the primer slurry to dry out.

**Note:** Cool temperatures retard, warm temperatures accelerate.

### Mixing

Add the minimum prescribed amount of clean water to a free fall mixer or mixing vessel and slowly add the entire contents of the bag. Mix for 3 minutes, the final mixed material should be a firm concrete consistency.

#### **Ultracrete FTC 4mm:**

add 2.5 to 2.76 ltrs. of clean water.

#### **Ultracrete FTC 10mm:**

add 2.0 to 2.5 ltrs. of clean water.

**Please Note:** It is vital that products are not over watered. If over watered the product will not reach correct strengths, which will lead to an increased risk of cracking. When adding water start with the minimum amount and only add more to achieve the ideal consistency.

**Do not part mix.**



### Features & Benefits

**Ultracrete FTC** is available in 4mm and 10mm aggregate fast setting concretes to accommodate small and large volume repairs.

**Ultracrete FTC Floor patch** (4mm grade) to accommodate depths from 10mm to 50mm.

**Ultracrete FTC Floor patch** (10mm grade) accommodate depths from 40mm – 150mm.

- Available in 4mm and 10mm sized aggregate.
- High early strengths.
- Initial set 4mm = 1hour, 10mm = 50 minutes.
- Economical to use, with a proven track record.
- Can be opened to foot traffic after 4 hours – dependant upon temperature.
- Conforms to clause 1704.6 Control of Alkali Silica reaction.
- Manufactured under Quality Management System BS EN ISO 9001:2000.

### Recommended Applications

Rapid installation of patch repairs to, car-parks, airports, warehouses and bridge deck repairs.

### Related Products

**Ultracrete SP Prime** Slurry Primer.

**Ultracrete AR Prime** Acrylic Primer/Curing Agent.

## Placing

The mixed material should be applied firmly onto the primed surface to ensure positive adhesion, paying particular attention to edges and thin sections. The surface may be closed using a steel float, or trowel.

## Curing

**Ultracrete FTC** should be cured using **Ultracrete AR** sprayed liberally over the surface, immediately after finishing.

## Cleaning

Use supplied solvent for cleaning the tools and equipment after use.

## Health & Safety

This product contains cement which, when mixed with water is alkaline and may cause skin irritation. Operatives should wear protective clothing and work in well-ventilated conditions.

If product enters the eyes, wash thoroughly with clean water. If discomfort continues seek medical advice. In common with all powder products, the material should be mixed carefully, avoiding the raising of dust.

## Physical Properties - Ultracrete FTC Floor patch (formerly known as Cemfloor FTC)

Test Carried Out	Test Age	FTC 4mm	FTC 10mm
<b>Compressive Strength</b> N/mm <sup>2</sup> BS 1881: Part 116: 1983	4 hours	13N/mm <sup>2</sup>	10N/mm <sup>2</sup>
	24 hours	17N/mm <sup>2</sup>	15N/mm <sup>2</sup>
	7 days	50N/mm <sup>2</sup>	35N/mm <sup>2</sup>
	28 days	64N/mm <sup>2</sup>	50N/mm <sup>2</sup>
<b>Flexural Strength</b> N/mm <sup>2</sup> BS 4551: 1980	7 days	3.4N/mm <sup>2</sup>	3.2N/mm <sup>2</sup>
	28 days	4.1N/mm <sup>2</sup>	4.0N/mm <sup>2</sup>
<b>Tensile Strength</b> N/mm <sup>2</sup> BS 6319: Part 7: 1985	7 days	2.6N/mm <sup>2</sup>	2.4N/mm <sup>2</sup>
	28 days	4.0N/mm <sup>2</sup>	4.0N/mm <sup>2</sup>
<b>Shrinkage/Expansion</b>		Negligible	
<b>Fresh Wet Density</b>		2.200kg/m <sup>3</sup>	
<b>Moisture Content</b> at 24Hrs 12mm Depth at 20°C		<4%	
<b>Working Time</b>		*20 minutes	
<b>Initial Hardness</b>		*1 hour	50* mins

\*Cold temperatures reduce strength gain warmer temperatures accelerate the process.

\*Depending on temperature, all tests carried out at 20°C.

## Product Selection

Repair Depth	Product
10mm – 50mm	Ultracrete FTC Floor patch 4mm
40mm – 150mm	Ultracrete FTC Floor patch 10mm

Large section repairs between 40 – 150mm it is advisable to use Cemfloor FTC 10mm. Always ensure minimum depths are maintained.

<b>Unit/Packaging</b>	<b>Ultracrete FTC (4mm)</b> is supplied in 25kg polythene lined bags. (Premixed) <b>Ultracrete FTC (10mm)</b> is supplied as a two component unit with an outer bag.
<b>Shelf Life</b>	This product must be stored in unopened bags, clear of the ground in cool dry conditions and protected from excessive drafts. Shelf life in correct conditions for sealed bags is 6 months. High temperatures and high humidity will lead to a reduced shelf life.
<b>Coverage</b>	One bag covers – 1m <sup>2</sup> at 12.5mm (Approximately).
<b>Yield</b>	<b>Ultracrete FTC</b> 4mm and 10mm = 12.5 Litres.
<b>Colour</b>	Grey.

For updated Material Safety Data information visit [www.instarmac.co.uk](http://www.instarmac.co.uk)

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