



# ULTRACEM

Fibre modified cement binder

## TECHNICAL DATASHEET

- Fast Drying
- High strength
- Shrinkage Compensated
- Internal and External applications
- BS 8204-1 compliance
- Fibre reinforced

### INFORMATION

UltraCem is a fibre modified cement binder which, when mixed with graded aggregates and water, can produce a rapid drying high strength screed ready to receive floor finishes such as ceramic/natural stone tiles, wood, lino, carpet etc. between 24hrs and 4 days. UltraCem can be used to form screeds that are bonded, unbonded or floating and suitable for use with underfloor heating. UltraCem formulated screed meets the requirements of BS8204-1.

### USES

- Can accept light foot traffic after 12 hours and receive floor coverings after 24 hours.
- For highly trafficked areas such as hospitals, shopping centres, warehouses and airports etc.
- Rapid reinstatement where early trafficking or overlay is required.
- Suitable for underfloor heating systems.
- Suitable for internal and external use.
- Compatible with thin cementitious systems such as Ultrafloor levellers and thin resin coatings.
- Patching and repairing
- Suitable for use where BRE screed test category A or B is required.

### MIXING

UltraCem, aggregates and water can be mixed using mechanical mixers such as, concrete pan mixer, forced action mixer, screw mixer or pressurized screed pump.

Where it is not possible to use a mechanical mixer and mixing by hand is required, it is recommended to thoroughly dry mix the UltraCem with the aggregates. Then adding water in small increments whilst mixing until a "damp earth" mix is achieved, typically 5 minutes. The screed should hold together when formed into a ball.

### RECOMMENDED MIX DESIGN

RATIO IS 8:1 aggregate:UltraCem

UltraCem binder	250 kg/m <sup>3</sup>
0/8 mm aggregate	1750 kg/m <sup>3</sup>
Water	100 kg/m <sup>3</sup>

*Note: Water addition may vary depending on moisture content of the aggregate being used.*

### APPLICATION

All correctly prepared substrates are suitable for receiving an UltraCem modified screed. All screeds should be installed using good concrete practice e.g. incorporating expansion joints where required, day joints and steel rods where required.

For unbonded screeds (minimum of 35mm thick) Isolate the substrate with a polyethylene sheet or similar. For rising damp provide a suitable waterproof membrane. The mix must be spread, tamped and levelled as soon as possible ( must be within hour of mixing). When floated, should provide a closed smooth surface without bleeding.

For floating screeds (minimum of 55mm thick) the screed is applied as above for unbonded screeds. Where underfloor heating pipes are present, there should be a minimum of 25 mm of screed above the pipes. The underfloor heating may be commissioned after 4 days.

For bonded screeds (minimum of 10mm thick) the substrate must be dry, sound and solid, free from cracks, dust, loose material, oil, paint, wax and traces of gypsum. Apply Ultrascapc Proprime slurry primer onto the substrate and apply the UltraCem modified screed whilst the primer is still wet e.g. wet on wet. If the primer dries out it needs to be re-applied.

The UltraCem modified screed is applied in the same way normal screed is applied.

### PRECAUTIONS

- Do NOT mix UltraCem with other cements or binders
- Do NOT dry mix with aggregate and leave
- DO NOT overwater UltraCem screed
- DO NOT add water or re-agitate the screed once setting has started
- DO NOT use fine sand only – use aggregate grading as in BS EN 13139 (0/8)
- USE the UltraCem screed as soon as it is mixed.

### CURING AND DRYING

All curing and drying times are based on good site conditions i.e. an air temperature of 20°C, air humidity of 65% RH and good ventilation. Sites that are cold, humid or damp or in areas where the airflow is poor, will prolong drying and curing times, so allowances should be made accordingly. Applications to non-absorbent substrates and at thicker application depths will take longer to dry.

### COVERAGE

Consumption varies depending on thickness of the screed and the dosage of UltraCem. For doses of 250 kg of UltraCem per m<sup>2</sup> of aggregate consumption is 2.5 kg/m<sup>2</sup>/cm of thickness

### CLEANING

Tools should be thoroughly cleaned in water to remove excess materials immediately after use.

### STORAGE

Store in a dry place at temperatures between 5°C and 35°C.

### SHELF LIFE

If stored correctly and used within 8 months of the date shown on the bag, the reducing agent activity will be maintained and this product will contain, when mixed with UltraFloor UltraCem, no more than 0.002% (2 ppm) soluble Chromium (VI) of the total dry weight of the cement. Shelf life in correctly sealed bags is 8 months. Please note: the use of this product after the end of the declared storage period may increase the risk of an allergic reaction.



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TECHNICAL DATA	
Application temperature (°C)	5 to 35
Density of mix (kg/m <sup>3</sup> )	2100
Pot life of mix (minutes)	60
Light foot traffic (hour)	12
Application of ceramic tiles (days)	1
Application of natural stone (days)	2
Application of vinyl and wood (days)	4
Application of leveler (days)	1 to 4 depending on depth.

It is advisable to conduct moisture testing prior to laying overlays.

STRENGTH PROPERTIES BS EN 13892 WITH ULTRACEM(8:1 RATIO).		
TIME (days)	Compressive Strength(N/mm <sup>2</sup> )	Flexural Strength (N/mm <sup>2</sup> )
1	> 8	> 3
4	> 14	> 4
7	> 20	> 5
28	> 30	> 6

#### HEALTH, SAFETY AND ENVIRONMENTAL

Please ensure that appropriate PPE is used when preparing, mixing and applying products. Always wash your hands before consuming food and make sure that materials are kept safely out of reach of children and animals. Please dispose of packaging and waste responsibly and in accordance with local authority requirements. A full material datasheet relating to this product is available from instarmac.co.uk.

#### QUALITY ASSURANCE

All products are manufactured in a plant whose quality management system is certified/registered as being in conformity with BS EN ISO 9001, ISO 14001, and OHSAS 18001. Our products are guaranteed against defective materials and manufacture and will be replaced or money refunded if the goods do not comply with our promotional literature. We cannot however accept responsibility arising from the application or use of our products because we have no direct or continuous control over where and how products are used. All products are sold subject to our conditions of sales, copies of which may be obtained upon request.

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