



# Level



# TOP

HEAVY DUTY  
ABRASIVE RESISTANT SURFACE FINISH

For use as a finished wearing course

Classification: CT-C25-F6-AR0.5

## TECHNICAL DATASHEET

- Finished wear surface
- Pump or trowel applied
- Suitable for UFH systems
- Contains recycled material
- Forklift traffic: after 36 hours
- Moisture tolerant



### INFORMATION

UltraFloor Level IT TOP is a polymer rich, high strength, single part, cementitious smoothing underlayment incorporating recycled raw materials. It has exceptional abrasion resistance and is designed for use as a finished wear surface in both industrial and commercial applications. Its early strength development formulation also makes it ideal for overcoating with resin coatings.

When mixed with clean cold water, Level IT TOP is a product that can be trowel or pump applied, to smooth and level, sound and strong internal subfloors where a finished wear surface is required. It has extremely high abrasion resistance and is suitable for use in heavily trafficked areas such as warehouses, storage areas, corridors and factory units. It is ready to receive forklift traffic after as little as 36 hours. Level IT TOP can be overcoated with resin coatings and sealers in situations where an aesthetic finish is required and where Level IT TOP needs protection from chemicals, oils and other liquid ingress or if an improved slip resistance is required.

Level IT TOP has a protein free formulation so may be used in biologically sensitive areas, it can be applied to most cementitious subfloors including those incorporating fully commissioned warm water underfloor heating systems. It may also be used over fully cured and dry calcium sulphate screeds. Level IT Top is ideal for use in conjunction with UltraFloor Level IT BASE (see relevant technical datasheet) where product application exceeds 15mm. Level IT TOP should be applied at a minimum application thickness of 5mm and can be applied up to maximum 15mm.

NOTE: When used as a surface finish in domestic or design feature installations, it should be noted that consistency of colour cannot be guaranteed due to variations in mixing and application methods.

### SURFACE PREPARATION

Level IT TOP has a moisture tolerant formulation and can be applied to cementitious subfloors where there is an absence of a base DPM, provided there is no risk of hydrostatic pressure from the subground. If Level IT TOP is to receive a resin coating then the product must be protected from rising moisture including residual construction moisture by the application of UltraFloor DPM IT Rapid Curing Primer Membrane to the subfloor (see relevant technical datasheet). Any surface laitance, adhesive residue, paints, previous smoothing underlayments and any other materials which will hinder Level IT TOP's bond with the subfloor should be mechanically removed. BS8204-3 recommends a minimum surface tensile strength of 0.8N/mm<sup>2</sup> for concrete bases to receive wearing or levelling screeds. For heavy duty locations, or where a subsequent resin coating may be applied, the minimum surface tensile strength should be 1.5N/mm<sup>2</sup>. The area should also be dust free prior to any primer application.

### LEVEL IT TOP APPLICATION

Level IT TOP should not be applied on projects unless it can be guaranteed that subfloor and air temperatures do not drop below 6°C during application and throughout curing (normally 7 days minimum). The use of radiant heaters is recommended to attain ideal application temperatures. Do not use fuel burning space heaters. Light ventilation is recommended, particularly in enclosed areas. Avoid strong draughts as this can cause localised rapid drying and may result in surface crazing.

Level IT TOP can be applied both by hand mixing of individual units or by continuous pumping. Do not use warm water as this will reduce the products working time and may result in shrinkage.

For hand mixing application: Pour 4.25 litres of clean cold water into a clean oversized bucket (20+ Ltrs), and then gradually add the powder whilst mixing continually with an electric drill with power whisk. When all powder is added mix for a further 2 mins, keeping the whisk below the surface (to minimise air entrapment), until a lump free creamy material is attained. The product can then be poured onto the floor and, using a smooth steel

trowel, spread out to the desired application depth. A spiked roller can be used whilst the product is still fluid to minimise air entrapment and "marry" wet edges together to give a uniform finish.

For pump application: Follow pump manufacturer's recommended set up guidelines. Ensure the correct water ratio is used by carrying out a flow tube test at the beginning of the project and at regular intervals throughout (ideally once per pallet) to check that ideal flow is being maintained. When using an UltraFloor flow tube of capacity 200ml then a flow rate of 250 to 280 mm is acceptable.

When using other flow tubes we recommend that a single unit be mixed by hand as above and the flow rate of the mixed unit be assessed with the specific flow tube. For large projects it is recommended that the area be sectioned off into manageable sized bays where a wet edge can be maintained throughout the pumping process.

For joints: All joints within the subfloor that are designed for movement MUST be followed through to the surface of the Level IT TOP. It is recommended that subfloor joints should be marked out prior to applying Level IT TOP and re-established by disc cutting after 24-48 hours. It is also recommended that a movement joint also be incorporated at all perimeters, columns and at door threshold to ensure building movement does not result in the Level IT TOP cracking.

### TECHNICAL DATA

Screed Classification	BS EN 13813:2002 CT-C25-F6 AR0.5
Application Thickness:	5-15mm
Working time at 20°C	30-40mins
Walk on hardness time at 20°C	2-3 hours
Ready to receive forklift traffic Ready to receive resin coating	36 hours 24 hours (15mm @20°C)
Compressive Strength (N/mm <sup>2</sup> ): (to BS EN 13892-2)	1 Day: 15 7 Days: 21 28 Days: 25
Flexural Strength (N/mm <sup>2</sup> ): (to BS EN 13892-2)	1 Day: 3.5 7 Days: 5 28 Days: 6
Abrasion resistance (to BS EN 13813:2002) Slip resistance (to BS 8204: Part 1: 2003) Impact hardness (BRE Screed Test)	AR0.5 PTV60 Dry/PTV 46 Wet 0.8mm (High Impact Resistance)



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All figures in above table are based on tests carried out under a quality controlled environment, using Level IT TOP with the correct water ratios. Actual results attained will be subject to site conditions and allowances should be made accordingly.

#### SUBFLOOR PREPARATION: PRIMING SUMMARY

As Level IT TOP is designed as a finished wear surface it is important that correct and thorough priming and preparation takes place to ensure no pinholing or blemishes are present in the finish cured surface. Ultra Floor Prime IT Multi-surface primer (MSP) applications should be in a thin uniform coating avoiding pooling and puddling of primer. The dry film should be a pink colour. All dilution ratios are water:primer.

#### SUBFLOOR PREPARATION: WHICH SUBSTRATE?

Level IT TOP can be applied to strong sound cementitious substrates and also to fully cured, dry calcium sulphate screeds. It can also be used in conjunction with Ultra Floor Level IT BASE for thicker depth applications (see relevant technical datasheet).

NOTE: Where warm water UFH (Underfloor Heating) systems are incorporated, they must have been fully commissioned and brought up to their maximum temperature, and ideally switched off 48 hours before application. In the absence of other heat sources, the UFH may be set to 'cutback' position to achieve an air temperature of 15oC. Any expansion or movement joints must be carried through to the finished floor surface.

#### Concrete subfloors

Power floated concrete should be fully opened up to expose the cement/ aggregate matrix. This may be achieved by shotblasting or mechanically scarifying. Consult a subfloor preparation specialist for suitable equipment and methods.

Apply UltraFloor Prime IT MSP diluted 3:1 with clean water and allow to dry fully (1-2 hours). Apply a second coat diluted 1:1 with clean water allowing it to dry to a pink film (1-2 hours) before applying further materials. Tamped or pan floated concrete should be treated as porous. Any laitance or weak material should be mechanically removed to ensure a sound, dry and dust-free surface. Apply UltraFloor Prime IT MSP diluted 3:1 with clean water and allow to dry fully (1-2 hours). Apply a second coat diluted 1:1 with clean water allowing it to dry to a pink film (1-2 hours) before applying further materials.

#### Screed Subfloors

Cementitious screeds and Industrial Floors: These should be strong enough for an application of Level IT BASE (see subfloor assessment above). The absorbency of these floors/screeds can vary significantly, this is to be assessed by personnel on site. Apply UltraFloor Prime IT MSP diluted 3:1 with clean water and allow to dry fully (1-2 hours). Apply a second coat diluted 1:1 with clean water allowing it to dry to a pink film (1-2 hours) before applying further materials.

Calcium Sulphate/Anhydrite/Hemihydrate Screeds: These screeds must be confirmed dry, below 75%RH when tested in accordance with BS 8203, and be strong enough (see subfloor assessment above). Level IT TOP applications must not exceed 10mm.

Mechanically remove any laitance or weak material to leave a clean, dry and dust-free surface. We recommend an STG machine with suitable mesh grinding disc of 60-100 grade grit. Apply UltraFloor Prime IT MSP diluted 3:1 with clean water and allow to dry fully (1-2 hours). Apply a second coat diluted 1:1 with clean water allowing it to dry to a pink film (1-2 hours).

#### Level IT BASE

Allow Level IT BASE to cure to give a sound strong surface. Typically applications of Level IT BASE up to 15mm can be overlaid after 24 hours.

Apply UltraFloor Prime IT MSP diluted 3:1 with clean water and allow to dry fully (1-2 hours). Apply a second coat diluted 1:1 with clean water allowing it to dry to a pink film (1-2 hours).

#### Ultra Floor DPM IT Rapid Curing Primer Membrane

Where subfloors have significant moisture levels and/or resin coatings are to be applied it is recommended that the subfloor be treated to suppress moisture using Ultra Floor DPM IT Rapid Curing Primer Membrane (see datasheet). The second coat of DPM IT should be sand blinded whilst still tacky with dry quartz silica sand (graded 1-2mm). Rate of broadcast should be approximately 2.75sqm/kg. Allow DPM IT to fully cure before brushing away excess sand and applying Level IT TOP.

NOTE: For small domestic applications such as garage floors the DPM IT may be primed with Ultra Floor Prime IT MSP, applied neat in a thin uniform coating, and allow to dry.

For any other scenarios please call Ultra Floor Technical Services for advice.

#### CURING AND DRYING

All curing and drying times are based on a 5mm application of Level IT TOP in good ambient conditions of 20°C, 65% air humidity and good ventilation. Cold, humid or damp sites, or those with poor airflow, will prolong curing and drying times, so make adequate allowances for such. Drying times are only relevant to the application of Level IT TOP (applications of Level IT BASE or underlying subfloors must be considered separately). Level IT TOP is ready to receive foot traffic after 2 to 3 hours and forklift traffic after 36 hours. Level IT TOP can receive a resin coating after 24 hours\* at 15mm.

Where a subsequent resin coating is to be applied, the minimum surface tensile strength should be 1.5N/mm<sup>2</sup>. Due to site variations and conditions it is the responsibility of the resin coating applicator to determine that the Level IT TOP has achieved this strength. It is also recommended that the substrate be tested for moisture before applying resin coatings. Typically a moisture content of 5% or lower is required. Consult

coating manufacturers' technical datasheet.

UltraFloor cannot test all resin coatings on the market and therefore advise that, where possible, consultation with the manufacturers and applications of sample areas be carried out. Normally a minimum of a light sanding of the Level IT TOP followed by vacuuming is required prior to the application of a resin coating.

#### SURFACE SEALER

While Level IT TOP is a resilient material designed to accept vehicular traffic, it will need to be surface protected against staining from spillages such as oils, greases and any other penetrating or surface contaminant. Therefore, if aesthetics are of importance, then the cured product should be protected by the application of a surface floor sealer or coating suitable for use over cementitious floors.

#### How much material?

Applied Thickness	Coverage Per Unit	Consumption Per 100m <sup>2</sup> Area
5mm	3.m <sup>2</sup>	33 bags
10mm	1.5m <sup>2</sup>	67 bags
15mm	1.0m <sup>2</sup>	100 bags

Coverage rates are based on 5.5 litre water addition and will vary according to the condition of the substrate. Coverage is for guidance only based on a smooth, non absorbent subfloor. Substrate texture and absorbency can affect consumption variations.

#### CLEANING

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

#### STORAGE

Store in a dry place between 5-30°C. High temperatures and high humidity will lead to a reduced shelf life. Avoid Frost. NOTE: The use of this product after the end of the declared storage period may increase risk of an allergic reaction.

#### 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.

#### HEALTH, SAFETY AND ENVIRONMENTAL

Please ensure that appropriate PPE is used when preparing, mixing and applying products. Always wash 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 safety data sheet 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 projects are used. All products are sold subject to our conditions of sales, copies of which may be obtained upon request.

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