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Level IT TOP

Heavy Duty, Abrasive Resistant Surface Finish
Screed Classification: CT-C40-F7-AR0.5



INFORMATION

Ultra Floor 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.

USES

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 is suitable for use in heavily trafficked areas such as warehouses, storage areas, corridors and factory units. It is ready to receive fork lift traffic after as little as 36 hours. For projects where the visual aspects of the floor are important it must be noted that we cannot guarantee colour consistency in the product due to variables in raw materials and in application methods. 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 Ultra Floor 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.

SUBFLOOR PREPARATION: ASSESSMENT

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 Ultra Floor 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. The subfloor should be clean, dry and sound and have a minimum compressive strength of 30N/mm². The area should also be dust free prior to any primer application.

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 translucent colour. All dilution ratios are water:primer.

RECOMMENDED USES

Can be used as a finished wear surface in highly trafficked areas in industrial, commercial or domestic applications. Level IT TOP is suitable for applications of resin coatings. It is ideal for use with Ultra Floor Level IT BASE where deeper sections of floor build up are required.

FEATURES

- Finished wear surface
- Pump or trowel applied
- Suitable for underfloor heating systems
- Contains recycled material
- Slip resistant
- Forklift traffic: 36 hours
- Moisture tolerant



- 5-15mm**
Thickness
- Working time
30-40mins
- Foot traffic
2-3 Hrs
- Internal Floors



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Drying times are for guidance only and will be subject to subfloor absorbency, temperature, building humidity and airflow. Level IT TOP applications must be made within 36 hours of the primer curing.

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 15°C. 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 Prime IT MSP diluted 3:1 with clean water and allow to dry fully (time subject to site conditions, typically overnight). Apply a further application of Prime IT MSP diluted 1:1 with water. Allow to dry.

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 Prime IT MSP diluted 3:1 with clean water and allow to dry fully (time subject to site conditions, typically overnight). Apply a further application of Prime IT MSP diluted 1:1 with water. Allow to dry.

Screed Subfloors

Cementitious screeds and Industrial Floors: The absorbency of these floors/screeds can vary significantly, this is to be assessed by personnel on site. Apply a coat of primer diluted 5 parts water to 1 part primer. Allow to completely dry. Apply a second coat diluted 3 parts water to 1 part primer and allow to completely dry before applying further materials. **Note: on very absorbent substrates, a third coat may be required diluted 3 parts water to 1 part primer.**

Calcium Sulphate/Anhydrite/Hemihydrate Screeds: These screeds must be confirmed dry, below 75%RH when tested in accordance with BS 8203, and have a compressive strength of greater than 30N/mm². 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 Prime IT MSP diluted 3:1 with clean water and allow to fully dry overnight. Apply a second coat diluted 1:1 with clean water allowing it to dry to a clear film (usually 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 Prime IT MSP diluted 3:1 with clean water and allow to dry fully (time subject to site conditions, typically overnight). Apply a further application of Prime IT MSP diluted 1:1 with water. Allow to dry.

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.

LEVEL IT TOP APPLICATION

Conditions

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 5.5 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. We recommend the logging of flow test results, site conditions, batch numbers and pump equipment for future reference, a template for which is available from www.ultra-floor.co.uk.

When using an Ultra Floor flow tube of capacity 200ml then a flow rate of 260 to 290 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

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.

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.

**In accordance with FeRFA Guidance Note 8: "Guide to flowable and trowel applied polymer screeds as underlayments for resin floor finishes" it is necessary for the substrate to have achieved a compressive strength of 25N/mm² before applying resin coatings. 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.*

Ultra Floor 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,

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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 (approx)	Consumption Per 100m ² Area
5mm	3.1m ²	33 bags
10mm	1.5m ²	67 bags
15mm	1m ²	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.

As with all raw materials, colour variation may occur. Please note that this does not affect the consistency or characteristics of the product.

TECHNICAL DATA

Specification	
BS EN 13813:2002 Screed Classification	CT-C40-F7-AR0.5
Application thickness:	5-15mm
Working time @ 20°C	30-40mins
Walk on hardness time @ 20°C	2-3 hours
Ready to receive forklift traffic	36 hours
Ready to receive resin coating	24 hours (15mm@20°C)
Compressive Strength (N/mm ²): (to BS EN 13892-2)	1 Day: 25 7 Days: 35 28 Days: 41
Flexural Strength (N/mm ²): (to BS EN 13892-2)	1 Day: 5 7 Days: 6 28 Days: 7
Abrasion resistance (to BS EN 13813:2002) Slip resistance (to BS 8204: Part 1: 2003) Impact hardness (BRE Screed Test)	AR 0.5 PTV60 Dry / PTV 46 Wet 0.8mm (High Impact Resistance)
Flow properties using a 200ml capacity Ultra Floor flow tube (48mm int diameter, 106mm height)	260-290mm

All figures above are based on tests carried out under quality controlled environments using Levell T TOP with the correct water ratios. Actual results attained will be subject to site conditions and allowances should be made accordingly.

BS EN13813:2002

References to BS EN13813:2002 confirms the minimum compressive and flexural strengths that the product will attain when tested to the standard.

The information contained within this product technical datasheet is given in good faith, based on our knowledge and experience and is offered to help select and use the most appropriate product. However, Ultra Floor cannot control site conditions or workmanship and cannot accept liability due to inappropriate use. If there are any concerns we advise that a trial area be carried out to ensure the performance of the materials under specific circumstances.

It is the responsibility of both the supplier and the end user to ensure the products are safely stored in a suitable environment to prevent damage and deterioration, including during transportation and placement on site.

CLEANING

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

STORAGE

Store in a dry place between 5-30°C. When stored correctly and used within 6 months of the date shown on the bag, the reducing agent activity will be maintained and the product will contain, when mixed with water, no more than 0.0002% (2 ppm) soluble Chromium (VI) of the total dry weight of the cement. Note: The use of this product after the end of the 6 month storage period may increase risk of an allergic reaction.

QUALITY ASSURANCE

All products are manufactured in a plant, the quality management system of which is certified/registered as conforming with BS EN ISO 9001, ISO 14001 and OHSAS 18001. Ultra Floor products are guaranteed against defective materials and manufacture and will be replaced or money refunded if the goods do not comply with our claims. 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 our products are used. All Ultra Floor products are sold subject to our Terms & Conditions of Sale which are available from ultra-floor.co.uk.

HEALTH AND SAFETY

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 out of the reach of children and animals. Please dispose of packaging and waste appropriately. A full MSDS for all our products is available from ultra-floor.co.uk.



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UltraFloor 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. All products are sold subject to our conditions of sale, copies of which may be obtained on request.

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