



Level *it* BASE

HEAVY DUTY
DEEP FILL SMOOTHING UNDERLAYMENT

For building depth of up to 50mm

Classification: CT-C25-F6

TECHNICAL DATASHEET

- Builds depth of up to 50mm
- Pump or trowel applied
- Suitable for underfloor heating systems
- Contains recycled material
- Moisture tolerant



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INFORMATION

UltraFloor Level IT BASE is a rapid setting and hardening, high strength, single part, cementitious smoothing underlayment incorporating recycled raw materials. Level IT BASE may be mixed up and applied as single units and is especially suited to larger projects where it is ideal for pumping applications and can be applied up to depths of 50mm. Level IT BASE is suitable for use in industrial, commercial and domestic flooring installations.

USES

When mixed with clean cold water, Level IT BASE is a product that can be trowel or pump applied, to smooth and level, sound and strong internal subfloors prior to applications of Level IT TOP (see relevant technical datasheet) where a wearing surface is required, and prior to applications of Ultra Floor smoothing underlayments when a finished decorative floor covering is being installed. In some applications Level IT BASE can be used as the finished floor prior to the application of a high build resin coating (consult Ultra Floor technical department).

It is a protein free formulation so maybe used in biologically sensitive areas and 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 BASE should be applied at a minimum application thickness of 5mm and can be applied up to a maximum of 50mm.

SUBFLOOR PREPARATION: ASSESSMENT

Level IT BASE 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 systems incorporating Level IT BASE are to receive resin coatings or floor coverings 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, existing smoothing underlayments and any other materials which will hinder Level IT BASE's bond with the subfloor should be mechanically removed. The subfloor should be clean, dry and sound. BS8204-3 recommends a minimum surface tensile strength of 0.8N/mm² 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/mm². The area should also be dust free prior to any primer application.

SUBFLOOR PREPARATION: PRIMING SUMMARY

Subfloors should always be primed prior to applications of Level IT BASE with Prime IT Multi-surface primer (MSP). This will enhance the application characteristics and improve the adhesion between Level IT BASE and the substrate.

Prime IT 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.

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

SUBFLOOR PREPARATION: WHICH SUBSTRATE?

Level IT Base 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 TOP where a finished wearing surface is required (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 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).

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).

Screed subfloors:

Sand/Cement Screeds: These should be strong enough for an application of Level IT BASE (see subfloor assessment above). Weak, friable or damaged screed should be uplifted and repaired. 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).

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 BASE 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).

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 UltraFloor DPM IT Primer Membrane (see relevant technical datasheet).

NOTE: For small domestic applications such as garage floors the DPM IT may be primed with 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 BASE APPLICATION

Conditions

Level IT BASE should not be applied on projects unless it can be guaranteed that subfloor and air temperatures



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do not drop below 6°C during application and throughout curing (nominally 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 BASE 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 the 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. When applying at thicker sections a long handled float or dapple bar is preferred. 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. The depth of spike must be a minimum of 30% longer than the application depth of product otherwise it will not be able to rotate in the product. This is particularly important in deeper applications (15mm+).

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 ultra-floor.co.uk.

When using an Ultra Floor 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.

JOINTS

All joints within the subfloor that are designed for movement MUST be followed through to the surface of the flooring system. It is recommended that subfloor joints should be marked out prior to applying Level IT BASE and re-established by disc cutting after 24 -48 hours.

It is also recommended that a movement joint be incorporated at all perimeters and at door threshold to ensure building movement does not result in the Level IT BASE cracking.

CURING AND DRYING

All curing and drying times are based on applications of Level IT BASE 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.

Level IT BASE is ready to receive foot traffic after 2 to 3 hours and applications of Level IT TOP after 24 hours.

Level IT BASE is ready to receive floor finishes after 24 hours (on applications between 5 and 15mm), 48 hours (on applications between 15 and 30mm) and 72 hours (on applications between 30 and 50mm).

It is also recommended that the substrate be tested for moisture before applying floor finishes. Typically a moisture content of 5% or lower is required.

How much material?		
Applied Thickness	Coverage Per Unit	Consumption Per 100m ² Area
5mm	3.0m ²	33 bags
15mm	1.0m ²	100 bags
20mm	0.75m ²	133 bags
50mm	0.3m ²	333 bags

Coverage rates are based on 4.25 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.

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TECHNICAL DATA	
Screed Classification	BS EN 13813:2002 CT-C25-F6
Application Thickness:	5-50mm
Working time at 20°C	30-40 mins
Walk on hardness time at 20°C	2-3 hours
Ready to receive floor coverings	24 hours (5-15mm) 48 hours (15-30mm) 72 hours (30-50mm)
Compressive Strength (N/mm ²): (to BS EN 13892-2)	1 Day: 15.5 7 Days: 21.4 28 Days: 25.5
Flexural Strength (N/mm ²): (to BS EN 13892-2)	1 Day: 3.5 7 Days: 5 28 Days: 6
Flow properties using a 200ml capacity Ultra Floor flow tube (48mm in diameter, 106mm height)	250-280mm
Packaging:	25kg bag

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

CLEANING

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

STORAGE

Store in a dry place between 5-30°C. When stored correctly and used within 8 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 8 month storage period may increase 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 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.

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 ISO 45001. 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.

