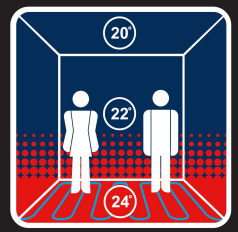
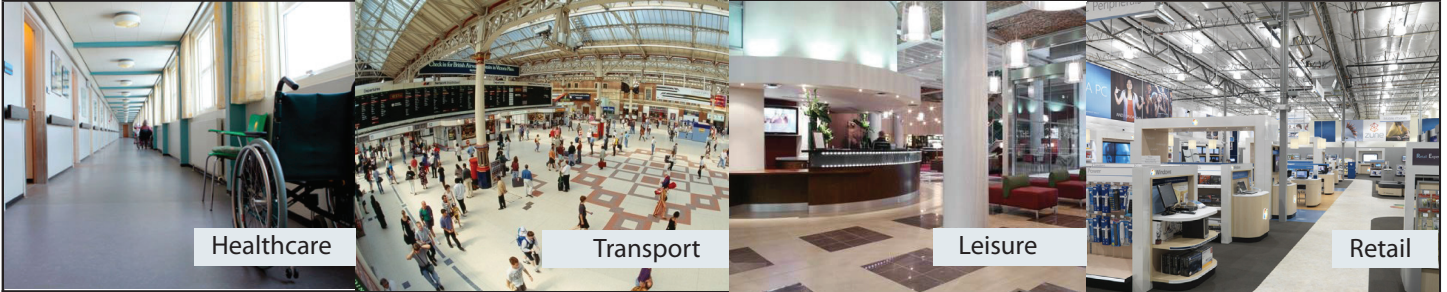


# Level IT Two

General Purpose Two Part Smoothing Underlayment  
Screed Classification: CT-C25-F6



GS UNDERFLOOR  
HEATING



## INFORMATION

Level IT Two is a general purpose, mid strength 2 part smoothing underlayment. Its exceptional flow characteristics make it a very easy smoothing underlayment to apply to a variety of subfloors in both commercial and domestic flooring projects. It consists of a powder, incorporating a blend of cements, along with graded fillers and additives and a pre-gauged protein free liquid polymer component. The two components are mixed to provide a free flowing smoothing underlayment for preparing a variety of internal subfloors prior to the installation of decorative floor coverings. It is a protein free formulation and is suitable for use in biologically sensitive areas.

Level IT Two is suitable for use over a wide variety of flooring substrates including sand/cement screeds, concrete, calcium sulphate screeds, flooring grade asphalt, porcelain, ceramic, quarry and terrazzo floors, epoxy Damp Proof Membranes, screwed and fixed 15mm and thicker flooring grade plywood. It is also ideal for applications onto heated screed and projects where radiant electrical Underfloor heating systems (on screeded, concrete or cement faced backer boards only) are utilised.

Level IT Two can be applied at depths between 2 and 12mm. For deeper sections up to a maximum of 30mm, it is necessary to bulk out with a suitable graded aggregate filler. This can drastically prolong curing times so allowances must be made accordingly.

It has a typical working time of 20 to 30 minutes and a walk on time of approximately 2.5 hours. A 3mm application of Level IT Two allows most floor coverings to be laid in as little as 12 hours (all based on good ambient conditions).

Level IT Two has a moisture tolerant formulation making it suitable for pre-smoothing of floors prior to applications of surface DPMS.

## SURFACE PREPARATION

All subfloors should be protected from moisture from the subground by use of an effective base Damp Proof Membrane. Please note older properties or buildings not initially intended for occupancy may not have a base DPM. Consult Ultra Floor Technical Services for further information. Moisture levels in the subfloor should be assessed in accordance with BS8203 and achieve a hygrometer reading of 75% RH or less. Where this is not attained, the use of an Ultra Floor surface damp proof membrane should be considered. The selection of DPM and number of coats will be subject to the nature of the subfloor (see relevant product technical datasheet).

The subfloor should be prepared to ensure a clean, sound, surface that is free from materials that may prevent adhesion. Concrete and sand/cement screed must have fully cured. Laitance and weak surface materials should be mechanically abraded. The area should be dust free prior to priming and application of Level IT Two.

## PRIMING

Ultra Floor recommends that subfloors should be primed prior to the application of Level IT Two.

**Absorbent Subfloors:** Priming with Ultra Floor Prime IT AR (typically diluted 3 parts water to 1 part primer) is recommended to control the curing profile, minimise formation of pinholes and give the optimum flow and handling characteristics. Allow primer to fully dry. In some circumstances such as where

## RECOMMENDED USES

General purpose two part smoothing underlayment, offering exceptional flow. Ideal for commercial or domestic flooring projects.

## FEATURES

- Versatile
- Ready to receive floor coverings after 12 hours
- Superior flow
- Moisture tolerant
- Low odour
- Protein free

2-12mm

Thickness



Open Time 20-30 mins



Set time 2.5 hrs



Internal Floors



textile floor covering or loose laid laminate flooring is to be installed then priming is not required.

When pre-smoothing rough, damp concrete or sand/cement screed prior to applying a surface DPM it is always advised to prime to ensure maximum strength build up of Level IT Two. Prime with Prime IT AR diluted 5 parts water to 1 part primer and allow to dry.

**Non Absorbent Subfloors:** Priming with Ultra Floor Prime IT N is required when applying Level IT Two onto non absorbent or very dense substrates such as flooring grade asphalt, quarry tiles, terrazzo and surface applied epoxy DPMs. Apply neat and allow primer to fully dry.

Specific priming requirements are needed for calcium sulphate/anhydrite/hemihydrate screeds.

**APPLICATION**

Shake the pre-gauged bottle of liquid prior to opening. Pour the entire contents of the liquid into an oversized bucket (20 litre or more capacity). Gradually add the powder whilst continually mixing using an electric drill fitted with a power whisk, suitable for use with cement materials. After completely adding the powder, continue mixing for a further 2 minutes, keeping the whisk below the surface of the product to minimise air entrainment, until a lump free creamy material is attained. If bulking out with a suitable graded aggregate add the aggregate slowly whilst continuing to mix for a further 2 minutes. A maximum of 12.5 Kg of aggregate per unit of Level IT Two is permissible. Level IT Two should only be mixed as single units. Do not add further liquid or water.

Pour onto the floor and spread with a smooth edged steel trowel. The product has exceptional flow characteristics. A spiked roller may be used to further improve the finish particularly between adjacent units of product. Only spike roll whilst the product is still in its fluid state, typically up to 10 minutes after application.

**SUBFLOOR PREPARATION: WHICH SUBSTRATE?**

NB: All ratios are water:primer.

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 floor covering surface.

**SUBSTRATES**

**Power floated concrete:** this should be treated as non-porous. Mechanically abrade (shotblast or scarify) to remove surface hardeners and expose the cement/aggregate. Apply Prime IT N neat in a thin uniform coating, allowing it to dry fully (usually 1-2 hours).

**Tamped or pan floated concrete:** These should be treated as porous, and any laitance or weak material should be mechanically removed to ensure a sound, dry and dust-free surface. Apply Prime IT AR diluted 3:1 with clean water and allow to dry fully (usually 1-2 hours).

**Sand/Cement Screeds:** These should be strong enough for an application of Level IT Two. Weak, friable or damaged screed should be uplifted and repaired. Apply Prime IT AR diluted 3:1 with clean water and allow to dry fully (usually 1-2 hours). Two-coat primer application may be required for very absorbent screeds.

**Existing smoothing compounds:** Level IT Two has low tension on curing and can be used over most intact cementitious smoothing compounds. Remove adhesive residues and treat as an absorbent floor. Apply Prime IT AR diluted 3:1 with clean water and allow to dry fully (usually 1-2 hours). Two-coat application may be required for very absorbent smoothing compounds.

**Terrazzo/Granolithic, Porcelain and Ceramic Tiles:** These must be securely bonded, and any surface treatment should be mechanically removed. A good mechanical key should be ensured by abrading the surface using a Surface Texturing & Grinding (STG) machine (a diamond disc is recommended). These subfloors can be treated as low porosity and primed using Prime IT N neat.

**Calcium Sulphate/Anhydrite/Hemihydrate Screeds:** See relevant manufacturers technical datasheet. A barrier primer application is required. If moisture readings are above 75%RH we do not recommend using a surface DPM. These screeds often incorporate warm water underfloor heating systems which can be used, along with dehumidifiers, to speed up the drying process. Screed manufacturer's normally suggest this can be conducted after 7 days minimum curing. 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 AR diluted 3:1 with clean water and allow to fully dry overnight. Apply a 2<sup>nd</sup> coat diluted 1:1 with clean water allowing it to dry to a clear film (usually 1-2 hours).

**Flooring Grade Asphalt:** New asphalt must be left for a minimum of 7 days and degreased to remove surface bloom. Existing asphalt should be assessed for cracks. If cracks are present they need to be repaired to give a continuous strong subfloor. The use of epoxy resins bulked out with sand is normally sufficient. Once prepared the asphalt must be primed. Apply Prime IT N neat in a thin uniform coating, allowing it to dry fully (usually 1-2 hours). Apply Level IT Two at nominal depths of 3 to 5mm.

**Plywood:** Plywood must be of flooring grade and mechanically fixed to a sound strong base. Level IT Two is only recommended for use with plywood of 15mm thickness and greater. Plywood must be sealed on the underside and along all edges to ensure moisture absorption from beneath is kept minimal. For thinner flooring grade plywood subfloors contact Ultra Floor's technical department. Plywood absorbency differs depending on the nature of the surface veneer. Normally a dilute coat of Prime IT AR (3 :1 with clean water) is recommended. For dense veneers of very low absorbency apply Prime IT N neat in a thin uniform coating. Allow primer coats to fully dry.

**Adhesive Residues:** Use Level IT Bond smoothing underlayment, provided adhesive is moisture tolerant and is a thin firmly bonded film (see Level IT Bond datasheet).

**Painted Subfloors:** Ultra Floor cannot guarantee the bond of the paint to the subfloor and recommend consideration be made to removal of the paint as the first option. Carry out a test area to ensure compatibility. Lightly abrade the paint. Ensure all paint is firmly bonded. The paint must then be primed with Ultra Floor Prime IT N neat in a thin uniform coating, allowing it to dry fully (usually 1-2 hours).

**Pre-smoothing:** Level IT Two can be used to on cementitious subfloors with residual moisture >75%RH to pre-smooth prior to applying an Ultra Floor Epoxy DPM. Prepare the subfloor to leave a lightly textured dust free surface. Either prime with Ultra Floor Prime IT AR diluted 3:1 with clean water and allow to fully dry OR lightly dampen with clean water, allowing the surface to matt off. This will reduce pinholing.

NOTE: Pre-smoothing of subfloors where there is an absence of a base DPM can be carried out provided there is no risk of hydrostatic pressure and all previous materials have been removed to leave the cementitious base. If in any doubt always apply the DPM directly to the original subfloor

**Ultra Floor Surface DPM:** These are considered as non absorbent substrates. Applications should be carried out within 36 hours of DPM application (see DPM IT datasheets). The DPM must then be primed with Ultra Floor Prime IT N neat in a thin uniform coating, allowing it to dry fully (usually 1-2 hours).

**Radiant electrical UnderFloor Heating system:** Level IT Two can be used over electrical UFH systems where the cables are fixed to a sound strong mechanical fixed cement faced backer board. Apply Prime IT AR diluted 3:1 with clean water and allow to dry fully (usually 1-2 hours). It may also be used where electrical UFH is used over cementitious or calcium sulphate subfloors. Priming should be as per the substrate. In all cases Level IT Two must be applied at a thickness of 5mm above the cables for resilient, textile and timber applications and a minimum of 3mm for application of stone, ceramic or porcelain products.

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

**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. Avoid strong draughts and direct sunlight during curing. Level IT Two is ready to receive light foot trafficking normally after 2 to 3 hours, based on 3mm thickness.

How much material?		
Applied Thickness	Coverage Per Unit approx	Consumption Per 100m <sup>2</sup> Area
2-3mm	5.0m <sup>2</sup>	20 units
5mm	2.5m <sup>2</sup>	40 units
12mm	1.1m <sup>2</sup>	90 units
30 mm	0.6m <sup>2</sup>	162 units + 81 x 12.5kg aggregate

Coverage is for guidance only based on a smooth, non absorbent subfloor. Substrate texture and absorbency can affect consumption variations.

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**TECHNICAL DATA**

Specification	
BS EN 13813:2002 Screed Classification	CT-C25-F6
Application thickness:	2-12mm
Working time @ 20°C	20-30mins
Walk on hardness time @ 20°C	2.5 hours
Ready to received floor coverings (base on 3mm application)	12 hours
Compressive Strength (N/mm <sup>2</sup> ): (to BS EN 13892-2)	1 Day: 15 7 Days: 20 28 Days: 25
Flexural Strength (N/mm <sup>2</sup> ): (to BS EN 13892-2)	1 Day: 3 7 Days: 4 28 Days: 5
Packaging:	20kg bags/4litre bottle

All figures above are based on tests carried out under quality controlled environments. Actual results attained will be subject to site conditions and allowances should be made accordingly.

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

**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 thoroughly cleaned in water to remove excess materials immediately after use.

**STORAGE**

**Powder:** Store in a dry place at temperatures between 5°C and 30°C. If stored correctly and used within 6 months of the date shown on the bag, the reducing agent activity will be maintained and this product will contain, when mixed with Level IT Two liquid, no more than 0.0002% (2 ppm) soluble Chromium (VI) of the total dry weight of the cement. Shelf life in correctly sealed bags is 6 months. Note: the use of this product after the end of the declared storage period may increase the risk of an allergic reaction.

**Liquid:** A minimum of 12 months when stored between 5°C and 30°C. Level IT Two liquid should be kept out of direct sunlight and should be stored at temperatures above 5°C at all times. If allowed to freeze, Ultra Floor cannot guarantee product performance.

**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 [www.ultra-floor.co.uk](http://www.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 [www.ultra-floor.co.uk](http://www.ultra-floor.co.uk).



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