



# Level



# BOND

RAPID DRYING  
ALL PURPOSE SMOOTHING UNDERLAYMENT

A rapid drying, high performance smoothing underlayment

Classification: CT-C16-F4

## TECHNICAL DATASHEET

- Foot traffic in as little as 90 minutes
- Ready to receive bonded floor coverings after 4 hours
- Priming not required\*
- Use over most common subfloors, including old adhesive residues
- Moisture tolerant
- UFH compatible
- Low odour
- Protein free



**20<sup>K</sup>G**  
**& 4.2L**

### INFORMATION

UltraFloor Level IT Bond is a rapid curing, high performance free flowing two-part smoothing underlayment. It consists of a powdered component incorporating a blend of high specification cements, graded fillers and additives and a pre-gauged high polymer content liquid component. UltraFloor Level IT Bond is suitable for depths between 2-12mm.

### USES

Specifically designed for use over a wide variety of subfloors including: concrete, sand & cement, calcium sulphate/anhydrite/hemihydrate screeds, existing cementitious underlayments, damp proof membranes, surface electrical radiant heating systems, flooring grade plywood, rigid steel, flooring grade asphalt, porcelain, ceramic, quarry or terrazzo floors and moisture tolerant adhesive residues. Decorative floor coverings can be applied to the internal subfloors in as little as 4 hours after the application of UltraFloor Level IT Bond. Its protein free formulation means it is ideal for use in biologically sensitive areas.

A moisture tolerant formulation makes it suitable for the pre-smoothing of floors prior to the application of surface damp proof membranes (DPM) and moisture vapour suppressants (MVS). Due to its excellent adhesion characteristics it can be used on most common substrates without the need to prime.

### SUBFLOOR PREPARATION

All surfaces must be dry and in a sound and stable condition free from contaminants that may prevent adhesion such as dust, oils, grease, surface laitance, water soluble adhesive residues and weak smoothing underlayments etc. Smooth dense surfaces can be roughened by mechanical scabbling to enhance the key. Subfloors should be tested in accordance with BS8203 to ensure a moisture reading of less than 75% RH is achieved. Where this has not been attained or where there is uncertainty that the subfloor design incorporates a Damp Proof Course (DPC) then UltraFloor DPM IT or UltraFloor Suppress IT must be applied (see relevant UltraFloor product technical datasheet).

UltraFloor recommend consultation with subfloor preparation equipment suppliers to ensure correct equipment for the substrates is selected. All substrates must be at a minimum temperature of 5°C before, during and after application of the primer to ensure film forming and bonding is achieved.

### \*PRIMING

**Absorbent Subfloors (concrete, sand & cement, plywood etc):** Priming is not required for the purpose of adhesion.

NOTE: To ensure a pinhole free surface is attained priming can be carried out using UltraFloor Prime IT Multi-surface Primer (MSP), where this is not important such as applications of textiles or loose lay laminate flooring, priming may be omitted. Subfloors must be sound, stable, free from dust, grease and all debris. Any remaining residues should be firmly bonded, hard and not soluble to water. Specific priming requirements are needed for calcium sulphate/anhydrite/hemihydrate screeds (see Substrate section - Calcium Sulphate/Anhydrite/Hemihydrate Screeds).

**Non-absorbent Subfloors (epoxy resin damp proof membranes, moisture tolerant adhesive residues, flooring grade asphalt, porcelain, ceramic, quarry and terrazzo floors, steel mezzanine decks, access panels etc):** Priming is not required for the purpose of adhesion, it is also not required with applications to UltraFloor DPM IT or UltraFloor Suppress IT as long as UltraFloor Level IT Bond is applied within 12 hours of application and it is traffickable.

### MIXING

Shake the pre-gauged bottle of liquid prior to opening. Pour the entire contents of the liquid into an oversized bucket (20 litres 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. UltraFloor Level IT Bond should only be mixed as single units. Do not add further liquid or water.

### APPLICATION

Pour onto the floor and spread with a smooth edge steel trowel. UltraFloor Level IT Bond 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.



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#### SUBSTRATES

**\*Calcium Sulphate/Anhydrite/Hemihydrate Screeds:** Mechanically remove any laitance and provide a sound, clean, dry and dust-free surface. The relative humidity within the subfloor must read below 75% RH prior to the application of a barrier primer (damp proof membranes and moisture vapour suppressants are not recommended). These types of screeds often incorporate warm water underfloor heating systems (see relevant manufacturers' technical datasheet) which can be used, along with dehumidifiers, to speed up the drying process. Manufacturers normally suggest this can be conducted after 7 days minimum curing. Apply UltraFloor 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 pink 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.

**Non-flexing Steel Floors (e.g. mezzanine decks):** Mechanically abrade using a suitable mechanical machine (STG or shot blast) or a wire brush to give an abraded shiny corrosion free surface and remove all excess traces of metal.

**Flooring Grade Plywood:** UltraFloor Level IT Bond is suitable for use over many plywood substrates provided the plywood is mechanically fixed and of suitable thickness. Normally plywood that has been in-situ for many years will be stable and suitable for application. Newly installed flooring grade plywood (e.g. SP101) must be mechanically fixed to a sound strong base.

**Patching prior to Plywood Overlays:** Sound stable subfloors including T and G floor boards that are to be overlaid with flooring grade plywood may first be smoothed or patch filled with UltraFloor Level IT Bond.

**Pre-smoothing of Subfloors:** Where there is an absence of a DPC pre-smoothing 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, please apply UltraFloor DPM IT (see relevant UltraFloor product technical datasheet) directly to the original subfloor. Pre-smoothing is not suitable over old adhesive residues.

**Surface DPM and MVS:** These are considered as non-absorbent substrates. Applications should be carried out within 12 hours of UltraFloor DPM IT and/or UltraFloor Suppress IT application (see relevant UltraFloor product technical datasheets).

**Radiant Electrical Underfloor Heating Systems:** Cables must be secured to a sound strong mechanically fixed cement faced backer board. It may also be used where electrical underfloor heating is used over cementitious or calcium sulphate subfloors (see calcium sulphate screed section). In all cases UltraFloor Level IT Bond 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.

TECHNICAL DATA	
Specification	BS EN 13813:2002
Screed Classification	CT-C16-F4
Working time at 20°C	15-20 mins
Walk on hardness time at 20°C	90-120 mins
Ready to receive floor coverings	4 hours (based on 3mm application)
Compressive Strength (N/mm <sup>2</sup> ): (to BS EN 13892-2)	1 Day: 8.5 7 Days: 14 28 Days: 20
Flexural Strength (N/mm <sup>2</sup> ): (to BS EN 13892-2)	1 Day: 2 7 Days: 3 28 Days: 5
Packaging:	20kg bag/4.2 litre bottle

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

#### 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.

NOTE: Avoid strong drafts and direct sunlight during curing. UltraFloor Level IT Bond is ready to receive light foot trafficking normally after 90 to 120 minutes, based on 3mm thick application. Floor coverings can be bonded in as little as 4 hours.

COVERAGE RATES		
Applied Thickness	Coverage Per Unit	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

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.

#### 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.

Liquid: To be kept out of direct sunlight and should be stored at temperatures above 5°C at all times. If allowed to freeze, UltraFloor cannot guarantee product performance.

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## 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 Level IT Bond 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 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.

Liquid: A minimum of 12 months when stored between 5°C and 30°C.

## SITE CONDITIONS

The drying characteristics of cementitious smoothing underlayments are directly influenced by ambient air and floor temperatures. Cement within the smoothing underlayment cures through a process of hydration using moisture. Extreme site conditions can affect this process i.e. below 5°C and above 30°C.

Ideal ambient air and floor temperatures for application are between 10°C and 22°C. These temperatures should be maintained throughout application and curing periods. Outside of these temperatures consideration should be given to the following guidelines for good practice. Floor temperatures will be slower to respond to ambient air temperature so should be considered in advance.

High humidity and low temperature prolongs evaporation of moisture from the freshly applied smoothing underlayment and therefore extends drying times. This may ultimately delay installation of floor coverings. In such conditions planned heating (not gas heating) may be required before, during and after application of the product in order to promote ideal site conditions. Heat should be directed into the air not direct to the floor creating hot spots. Good ventilation without direct drafts will also assist removal of moisture in the air from the building. Failure to adopt such practices in such adverse site conditions may result in damp patches, slow drying and potential surface bleed within the curing smoothing underlayment.

Low humidity and high temperature conditions will speed up drying by fast removal of moisture from freshly applied smoothing underlayment. Such conditions may cause rapid loss of moisture, required for the curing process, leading to irregular structure and strength build up. Such tensions within the drying smoothing underlayment could leave hairline surface defects. Under such conditions, smoothing underlayments should be protected from direct sunlight and drafts across its surface. Good air flow within the build without causing drafts is essential to reduce high temperature build up.

## 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](http://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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