Level it TWO HIGH FLOW

TWO COMPONENT SMOOTHING UNDERLAYMENT

High Flow Two Component Smoothing Underlayment

Classification: CT-C20-F5

TECHNICAL DATASHEET

- Foot traffic in as little as 2.5 hours
- Ready to receive floor coverings after 8 hours
- Use over most common subfloors
- UFH compatible
- Low odour
- Protein free

20KG & 4.0L

INFORMATION
UltraFloor Level IT Two is a mid-strength smoothing underlayment. A two-component system consisting of a powered blend of cements, graded fillers and additives, and a pre-gauged polymer liquid. UltraFloor Level IT Two 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 and surface electrical radiant heating systems.

Decorative permeable floor coverings such as open backed carpets can be applied to the internal subfloors in as little as 8 hours after the application of UltraFloor Level IT Two. Impervious floor coverings such as sheet vinyl and tiles can be applied after 10 hours.

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).

Its protein free formulation means that it can be used in biologicallly sensitive areas.

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 must 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 should be achieved. Where this has not been attained or where there is uncertainty that the subfloor design incorporates a 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
UltraFloor recommend that subfloors should be primed prior to the application of UltraFloor Level IT Two.

Absorbent Subfloors (concrete, sand & cement and existing smoothing underlayments): Prime with UltraFloor Prime IT Multi-surface Primer (MSP) typically diluted 3 parts water, 1 part primer and allow to fully dry. Apply a second coat diluted 1:1 with clean water allowing it to dry to a pink film (1-2 hours). On highly porous substrates a third coat may be required diluted at 1:1 and allow to fully dry.

NOTE: To ensure a pinhole free surface is attained priming can be carried out using UltraFloor Prime IT MSP. Specific priming requirements are needed for calcium sulphate/anhydrite/hemihydrate screeds (see Substrate section - Calcium Sulphate/Anhydrite/Hemihydrate Screeds).

Non-absorbent Subfloors (power floated concrete, epoxy resin and damp proof membranes): Priming with UltraFloor Prime IT MSP is required when applying UltraFloor Level IT Two onto non-absorbent or dense substrates. Apply one coat neat and allow to fully dry.

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 Two 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 Two 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 (immediately due to the limited workability and rapid setting nature).

SUBSTRATES
Power Floated Concrete: Should be treated as non-porous. Mechanically abrade (shotblast or scarify) to remove surface hardeners and expose the cement/aggregate. Apply UltraFloor Prime IT MSP 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

ULTRA FLOOR Level it TWO HIGH FLOW

TWO COMPONENT SMOOTHING UNDERLAYMENT

High Flow Two Component Smoothing Underlayment

Classification: CT-C20-F5

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

Sand/Cement Screeds: These should be strong enough for an application of UltraFloor Level IT Two. 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 (usually 1-2 hours). Two-coat primer application may be required for very absorbent screeds.

Existing Smoothing Underlayments: UltraFloor Level IT Two can be used over most intact cementitious cement underlayments. Remove adhesive residues and treat as an absorbent floor. 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).

NOTE: Application is only suitable on subfloors that are in equivalent strength to UltraFloor Level IT Two.

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 or 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).

Pre-smoothing: UltraFloor Level IT Two can be used to on cementitious subfloors with residual moisture >75%RH to pre-smooth prior to applying an UltraFloor epoxy DPM. Prepare the subfloor to leave a lightly textured dust free surface. Either prime with UltraFloor Prime IT MSP 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.

Surface DPM and MVS: These are considered as non-absorbent substrates. Applications should be carried out within 12 hours of Ultra Floor 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 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.

Warm Water Underfloor Heating Systems (UFH): Where UFH 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.

TECHNICAL DATA	
Specification	BS EN 13813:2002
Screed Classification	CT-C20-F5
Working time at 20°C	20-30 mins
Walk on hardness time at 20°C	2.5 hours
Ready to receive floor coverings (based on 3mm application)	8 hours
Compressive Strength (N/mm²): (to BS EN 13892-2)	1 Day: 12.0 7 Days: 14.0 28 Days: 20.0
Flexural Strength (N/mm²): (to BS EN 13892-2)	1 Day: 3.0 7 Days: 3.5 28 Days: 5.0
Packaging:	20kg bag/4 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 Two is ready to receive light foot traffic normally after 2.5 hours based on a 3mm thick application.

COVERAGE RATES		
Applied Thickness	Coverage Per Unit	Consumption Per 100m² Area
2mm	6.0m²	17 units
5mm	2.4m²	42 units
10mm	1.2m²	84 units
30mm	0.52m²	192 units + 81 x 10kg aggregate

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.

Instarmac Group plc
Danny Morson Way, Birch Coppice Business Park
Dordon, Tamworth, Staffordshire B78 1SE
Tel: +44 (0)1827 254400 Fax: +44 (0)1827 285386
Enquiries: email@instarmac.co.uk Orders: orders@instarmac.co.uk Visit instarmac.co.uk

Member of FeRFA

Vers 13.06.2019 Information correct at time of print.
Please ensure that this is the current and relevant product technical datasheet by referring to our company website, instarmac.co.uk. Product development and improvement is an ongoing process.

An INSTARMAC Brand

ULTRA FLOOR Level it TWO HIGH FLOW

TWO COMPONENT SMOOTHING UNDERLAYMENT

High Flow Two Component Smoothing Underlayment

Classification: CT-C20-F5

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 Two liquid, no more that 0.002% (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 your 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 datasheet 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 IS0 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.

Instarmac Group plc
Danny Morson Way, Birch Coppice Business Park
Dordon, Tamworth, Staffordshire B78 1SE
Tel: +44 (0)1827 254400 Fax: +44 (0)1827 285386
Enquiries: email@instarmac.co.uk Orders: orders@instarmac.co.uk Visit instarmac.co.uk

Member of FeRFA

Vers 13.06.2019 Information correct at time of print.
Please ensure that this is the current and relevant product technical datasheet by referring to our company website, instarmac.co.uk. Product development and improvement is an ongoing process.

An INSTARMAC® Brand