



Level



SMOOTH

HIGH PERFORMANCE
FINE FLOW SMOOTHING UNDERLAYMENT

Fine Flow Smoothing Underlayment for Sheet Vinyl, LVT, Linoleum and Rubber

TECHNICAL DATASHEET

- Foot traffic in 2-3 hours
- Ready to receive floor coverings after 12 hours
- Extremely smooth finish
- Superior flow
- Ideal for large flooring projects
- Pump or trowel applied
- UFH compatible
- Low odour
- Protein free



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INFORMATION

UltraFloor Level IT Smooth is a high strength, single part, cementitious smoothing underlayment, incorporating a blend of specially graded fillers, fine cements and polymers. It can be applied between thicknesses of 2-30mm and has a 2-3 hour set time (in good ambient conditions).

USES

When mixed with clean cold water, UltraFloor Level IT Smooth is a product that can be trowel or pump applied, to smooth and level uneven, sound and strong internal floors to prepare them for the application of decorative floorcoverings. Its protein free formulation means it is ideal for use in biologically sensitive areas. It can be used on a variety of subfloors, and is suitable for use where warm water underfloor heating is incorporated.

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 Smooth.

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 Smooth onto non-absorbent or dense substrates. Apply one coat neat and allow to fully dry.

MIXING & APPLICATION

For trowel/hand application mix in a clean bucket using clean cold water, do not use warm water as it will greatly reduce the product's working time and may result in shrinkage. Pour 4.8 litres of water into an oversized bucket (20+ litres), and then 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. Do not add further water.

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

For pump application follow the pump manufacturer's recommended set up guidelines. Ensure the correct water ratio is used by carrying out a flow ring test at the beginning of the project and at regular intervals throughout (ideally once per pallet) to check that ideal flow is being maintained.

Flow properties using a 200ml capacity flow tube (48mm internal diameter, 106mm height) - flow spread 270-300mm. We recommend the logging of flow test results, site conditions, batch numbers and pump equipment.

SUBSTRATES

Power Floated Concrete: Should be treated as non-porous. Mechanically abrade (shotblast or scarify) to remove surface hardeners and expose the



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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 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 Smooth. 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 Smooth 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 Smooth.

Terrazzo/Granolithic 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 UltraFloor Prime IT MSP neat.

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).

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).

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	
Screed Classification	BS EN 13813:2002 CT-C35-F6
Application Thickness:	2-30mm
Working time at 20°C	20-30 mins
Walk on hardness time at 20°C	2-3 hours
Ready to receive floor coverings	12 hours (based on 3mm application)
Compressive Strength (N/mm ²): (to BS EN 13892-2)	1 Day: 20 7 Days: 29 28 Days: 35
Flexural Strength (N/mm ²): (to BS EN 13892-2)	1 Day: 3 7 Days: 4 28 Days: 6
Packaging:	20kg bag

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 Smooth is ready to receive light foot traffic normally after 2-3 hours based on a 3mm thick application.

COVERAGE RATES		
Applied Thickness	Coverage Per Unit	Consumption Per 100m ² Area
2mm	6.6m ²	15 bags
6mm	2.21m ²	45 bags
12mm	1.11m ²	90 bags
30mm	0.44m ²	226 bags

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

Store in a dry place at temperatures between 5°C and 30°C. Avoid frost.

SHELF LIFE

Shelf life in correctly sealed bags is 8 months.

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

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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 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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