Profloor Technical Manual

PROFLOOR™
PROGRESSIVE FLOORING PRODUCTS

Contents

- ProFlex Ultra Adhesive
- VinyLay Eco Acrylic Adhesive
- ProFlex Ultra Gun Grade Adhesive
- FloorPrep Fastrack DPM, Moisture Vapour Suppressant
- FloorPrep Floor Binder, Surface Primer



PROFLOOR™
PROGRESSIVE FLOORING PRODUCTS

ProFlex Ultra Adhesive RETURN TO CONTENTS

OVERVIEW

ProFlex Ultra Adhesive represents the very latest development in Hybrid Polymer technology and has been formulated to give the highest levels of performance in terms of bond strength, resistance to stresses, curing speed and ease and cleanliness of use, available on the market today.
Designed specifically for use with the FloorPrep range of sub-floor preparation products, including FloorPrep Fastrack DPM and the FloorPrep Floor Binder; the overall package is simply the best performing, fastest curing, lowest hazard system around.

For full surface bonding of unfinished or pre-finished parquet, solid and engineered wood flooring to subfloors including concrete, chipboard, sand/cement screeds, fast setting screeds, anhydrite screeds, on pre-existing wood, ceramic tile, marble and marble tile flooring. Can be laid directly to bitumen/asphalt, provided that the subfloor is at least 30 years old.
ProFlex Ultra is a single-component adhesive that self-cures to form an elastic and non-shrinkable adhesive layer which is resistant to moisture and heat and is suitable for under-floor heating systems. Max board width for solid board is 230mm. No max width specified for engineered board.
The adhesive is specifically designed to allow for the seasonal movement of solid hardwood flooring.
The adhesive is suitable for all wood species according to the UNI EN 13556.

TECHNICAL

Base	MS Polymer
Consistency	Paste
Colour	Straw
Hazard Labelling	EC1Plus – very low emissions. Solvent, water and isocyanate free.
Coverage	1kg/m^2 approx. depending on subfloor and trowel notch size*
Curing/drying	Chemical self-curing – minimum of 12 hours for foot traffic, 24 hours before load bearing or sanding/finishing. Up to 7 days where two impervious substrates are in use.
Open/working time	Approx. 30 minutes at 21°C and 50% RH. Product is tack-free after 60 mins.
Cleaning	Easily cleaned, when wet, from hands and tools with builder's wipes.
Shelf life	12 months in unopened packaging in a cool, dry place at between +5°C and +25°C.
Temperature Resistance	-40°C – +90°C (+120°C for a short period) when cured.
Specific Gravity	Approx. 1.6g/cm^3 Total Solids: 100% (solvent free)
Tensile strength [N/mm^2]	(ISO 37 DIN 53504) 1.4
Shear strength [N/mm^2]	(wood-wood; DIN EN 14293) 1.6
Tear strength [kN/m]	(ISO 34-1) 0.51
Application temperature [°C]	from +5°C to +40°C
Appearance	Thixotropic paste

*Trowel sizes according to TKB, use B1 for smooth floors and best coverage, B3 or B6 for less even floors and a higher bead height.

SUBSTRATE

Before installation of the wood, the substrate must be checked to ensure it is suitable and complies with all recommendations laid down by the wood manufacturer. Check the moisture content through the entire thickness of the sub-floor with a carbide or electric hygrometer. The moisture content must be as recommended by the flooring manufacturer (generally max 3% for sand cement substrates and max 0.5% for anhydrite, measured with a carbide hygrometer. For sub-floors with underfloor heating, the values are max 2.5% and 0.3% respectively)

ProFlex Ultra Adhesive RETURN TO CONTENTS

ProFlex Ultra should be applied to an even, dry, clean and smooth substrate which is free from irregularities and cracks. Residues of old adhesive may affect the adhesion and must be removed mechanically. Loose or damaged surfaces must be repaired before application of adhesive.

Powdery surfaces may be treated with FloorPrep Floor Binder. See relevant section of the manual for details. Smooth surfaces such as anhydrite should be roughened and if not already done, surface laitance should be mechanically removed.

When installing a parquet floor on top of marble, terrazzo or ceramic tiles, they must first be cleaned with caustic soda or another suitable cleaner. Once cleaned rinse the tiles thoroughly with plenty of clean water. Ensure the floor is completely dry before applying the ProFlex Ultra.

A preliminary compatibility test is recommended on every surface.

Wood: The parquet flooring must be acclimatized according to the wood supplier's instructions. Check before installation that the moisture content of the wood is as recommended by the supplier, (generally 9% +/- 2%), if the moisture content of the wood is more than 11%, installation is not recommended. Allow a gap of 2 cm (or as recommended by the wood manufacturer) around the perimeter of the laid parquet, including any columns or structures which penetrate the floor.

Applying the Adhesive: ProFlex should be allowed to reach room temperature before application. Apply the adhesive to the surface by means of our ProFlex notched trowel. Do not apply more than can be covered with parquet in 30 minutes. Slide the parquet onto the adhesive layer and tap into place or tamp down with a rubber hammer. A minimum of 80% coverage is required to ensure perfect adhesion. Loading the parquet with weights will improve final bond strength. Wait at least 24 hours before sanding and finishing. Uncured adhesive may be removed from tools and wood with builder's wipes. Cured adhesive must be removed mechanically.

Safety Recommendations: Apply the usual industrial hygiene precautions, wear protective gloves.

PRECAUTIONS

- Never install to substrates which are not protected against possible rising damp.
- Do not apply the adhesive at temperatures below 15°C or above 25°C.
- Minimum temperature of the substrate should be 15°C.
- Do not apply the adhesive where the relative humidity is above 75%.
- Never install onto a substrate which contains too much moisture or onto substrates with a moisture content higher than recommended by the wood supplier.
- Never install wood which is too dry, (<7% moisture). This can expand at higher humidity and cause damage.
- Do not install if the walls and ceiling of the area are not dry, e.g., after plaster, painting etc.
- Do not dilute the adhesive.
- Always mechanically remove any old adhesive residue before bonding.
- Do not bond onto bitumen or other sub floor types that may leech oils, waxes, plasticisers etc, without first sealing the floor and isolating the adhesive from contamination, using a two-part epoxy floor sealer. If Bitumen is over 30 years old it can be bonded to directly.
- Under floor heating must be turned off for min 48 hours before application and not re-started for 48 hours after the adhesive has been applied.
- Wood manufacturers recommendations to be followed regarding re-starting heating.

ProFlex Ultra Adhesive RETURN TO CONTENTS

TWO-PART SYSTEM

The above product, ProFlex Ultra Adhesive, can also be used within a two-part extremely fast-curing system. This two-part system is particularly useful for application to impervious substrates, in scenarios where a building needs to be brought back into use within a rapid time frame, such as within a retail environment. Additional technical data relating to the ProFlex Ultra Adhesive two-part system is detailed below.

TWO PART SYSTEM TECHNICAL DATA – COMPONENT PARTS

	ProFlex Ultra Adhesive	**Hardener**
Appearance	Low viscosity paste	Liquid
Colour	Straw	Grey
Density [g/cm³] (23°C and 50% RH)	Approx. 1.5	Approx. 1.38
Mixing ratio (volume)	3.64	1
Mixing ratio (weight)	4	1

TWO PART SYSTEM TECHNICAL DATA – MIXED PRODUCT

Appearance	Low viscosity paste
Colour	Grey
Density [g/cm³]	Approx. 1.48 (23°C and 50% RH)
Pot life	Approx. 50 [min] (23°C and 50% RH)
Handling time	Approx. 20 [min] (23°C and 50% RH)
Initial Hardening time [h]	Variable depending upon site conditions, approx. 3-4 hours until next layer can be applied.
Final Hardening time [h]	Approx. 24 (23°C and 50% RH)
Hardness Shore A	Approx. 30 (DIN 53505)
Tensile strength [N/mm²]	Approx. 1.7 (DIN 53504)
Elastic modulus [N/mm²]	Approx. 1.5 (DIN 53504)
Elongation at break [%]	Approx. 130 (DIN 53504)
Application temperature [°C]	From +5°C to +40°C
Temperature Resistance [°C]	From -40°C to +90°C

VinyLay Eco Acrylic Adhesive RETURN TO CONTENTS

OVERVIEW
VinyLay Eco Acrylic Adhesive is a SOLVENT FREE acrylic emulsion-based adhesive, for bonding many floor finishes direct to the sub-floor. This easy to spread adhesive, with a long open time, provides early tack and minimum slip, quickly building to a strong permanent bond. It is non-staining and has excellent resistance to plasticiser migration. VinyLay Eco Acrylic Adhesive is suitable for use with The FloorPrep Fastrack DPM and the FloorPrep Floor Binder where required.

USES
This adhesive with a very wide range of applications, can be used to install the following: Hard/resilient floorcoverings: vinyl: linoleum, sheet, tiles, cushion and other vinyl backed floorcoverings including mineral felt backed vinyl. Carpets & carpet tiles: PVC backed, polyurethane foam backed and many other carpets and needle-punch/fibre-bonded carpets where a solvent free system is specified.

The adhesive is suitable for use over underfloor heating at standard temperature ranges.
The underfloor heating should be turned off for 48 hours before and after the installation, and then brought back up to temperature gradually.
The adhesive is NOT suitable for use in areas of high solar gain (i.e., south facing large windows / patio doors and conservatories).
The installation temperature should be between 18°C and 25°C with a minimum floor temperature of 10°C.

SUBFLOORS
Suitable subfloors include concrete, sand/cement screed, smoothing underlayment, latex, plyboard, flooring grade chipboard, hardboard, wood, cementitious particle board, and existing well bonded resilient flooring. NOTE: There are certain grades of floor that have been treated with paraffin wax to provide a waterproof quality. There are also other types floor boards in use that have been treated, e.g., moisture proofing, preservatives and fire retardants. These types of boards are not suitable with this adhesive. Please always check the floor board in use at each installation. Please contact the office for technical information. With existing well bonded resilient flooring care must be taken to ensure the subfloor under the resilient flooring is sound and the surface of the resilient flooring is thoroughly cleaned of any polish etc. If this cannot be done, the existing resilient flooring must be removed and the subfloor made good before proceeding.

PREPARATION
All parts of the installation should comply with the latest edition of the following British Standard Code of Practice: BS 8203 The Installation of Resilient Floorcoverings or BS 5325 The Installation of Textile Floorcoverings. Another useful source of reference is The Contract Flooring Association (CFA) Guide to Contract Flooring. Subfloors must be sound, smooth, clean, dry and free from any contamination which will affect adhesion. Relative humidity of cementitious subfloors should be 75% or less (when tested by method described in BS 8203). Direct to earth bases must incorporate an effective damp proof membrane. Underfloor heating must be switched off for 48 hours before and after the installation. Very absorbent surfaces should be primed with FloorPrep Floor Binder.

VinyLay Eco Acrylic Adhesive RETURN TO CONTENTS

APPLICATION
For best results a minimum temperature of 18°C (65°F) should be maintained for the installation. An appropriate V notched trowel should be used to apply the adhesive evenly.
For vinyl and other smooth backed floorcoverings, a 1.5mm x 5.0mm or A2 trowel is recommended, whilst a 2.0mm x 6.0mm or B1 trowel should be selected for floorcoverings with a more profiled back. Trowels should be cleaned after use with water whilst the adhesive is still wet. Apply the adhesive evenly to an area of such a size that the floorcovering can be laid whilst the adhesive is receptive and gives good transfer. On absorbent surfaces lay the floorcovering immediately, or in the case of tiles, after 10-15 minutes (this reduces the slip). On non-absorbent surfaces allow the adhesive to develop a tack or, for sheet goods, employ a “double drop” technique to reduce the waiting time before laying.

To reduce the effect of shadowing on some vinyl’s, it is recommended that the adhesive is smoothed out whilst wet with a paint roller that has been pre-wetted with adhesive. Once installation area is laid, roll immediately in two directions (at right angles to each other) with a 68kg roller (on carpets use a weighted glider). This is to remove any trapped air and ensure good all-over adhesive contact. A second rolling (or gliding) is recommended approximately 1 hour later to ensure a strong bond is established.

HEALTH & SAFETY
Refer to Safety Data Sheet and follow the advice given.

ProFlex Ultra Gun Grade Adhesive RETURN TO CONTENTS

OVERVIEW
ProFlex Ultra Gun Grade Adhesive is a high specification, foil applied product, specifically designed for fixing all types of wooden floors directly onto all common substrates, eliminating the need for battens. ProFlex Gun Grade Adhesive is based on the latest developments in hybrid polymer technology.

- 100% active, solvent and water free – will not cause warpage or curl of wood blocks/planks.
- Permanently flexible – compensates for subfloor movement.
- Will bond wood directly to all common subfloors, e.g., concrete, wood, metal, ceramic tiled, vinyl, marble, granite and most natural stone floors.
- Suitable for use with underfloor heating (due to high flexibility)
- Odourless.
- Excellent gap filling properties for uneven surfaces

Always check with flooring manufacturer re: any specific instructions/requirements specifically relating to their flooring before fitting floors.
Do not bond onto bitumen or other sub floor types that may leech oils, waxes, plasticisers etc, without first sealing the floor and isolating the adhesive from contamination.
Do not use, store or allow to cure below +5°C.

Substrate: The surfaces to be glued must be sound, clean, dry and free from dust, grease and other contaminants. Existing floors must be free from all polish/wax. Prime/stabilise friable concrete/anhydrite floors before application.
On anhydrite floors, surface laitance must be mechanically removed.
Always check moisture level of subfloor. If moisture levels in subfloor are above those recommended by the flooring manufacturer, treat the floor with FloorPrep Fastrack DPM. Chipboard must be free of release agents/wax. Very porous or friable surfaces should first be primed with FloorPrep Floor Binder and allowed to dry.
Under floor heating must be turned off for min 48 hours before application and not re-started for 48 hours after the adhesive has been applied.
Wood manufacturers recommendations to be followed regarding re-starting heating

Wood: Wood supplier's instructions to be followed for acclimatisation.

All installations and sub floor preparations must be carried out in line with the relevant British or international standards. Cut off tip of sausage and place into suitable cartridge. Cut off top of nozzle flat to leave an 8mm opening. Cut a V shaped profile down into nozzle to a depth of approximately 10mm. Fix nozzle and place cartridge containing sausage in sealant gun. Hold gun at 90° to floor and extrude out a triangular shaped bead, approx. 8mm wide and 10mm high at 250mm centres at right angles to the length of the plank.

Position blocks/planks whilst adhesive is still tacky (within 30 mins) and tap into final position with mallet and block, removing uncured adhesive with builder's wipes.
Floor may be sanded/ trafficked 12-24 hours after application, depending on site conditions (longer at low temperatures).
If surface has no or little absorbency; allow 3 days before sanding or allowing foot traffic.

One 600ml sausage will bond approximately 2m^2 of flooring when applied as directed.

ProFlex Ultra Gun Grade Adhesive RETURN TO CONTENTS

TECHNICAL

Base	Hybrid Polymer
Sg	1.53g/cm^3
Solvent content	Nil
Colour	Buff
Workability	Good, and grooves remain after application
Viscosity (HBDVII+/S70/10rpm)	250,000 – 300,000cps
Tack free	30 mins at 23°C and 50% RH
Chemical resistance	Excellent
Humidity and water resistance	Excellent
Typical shear strength (wood/wood)	>1.2N/mm² (24 hrs)
Alkali resistance	Excellent
Application temps	+5°C to +30°C
Temperature resistance	-40 to +80°C
Trafficability/Sandability on new floors	24 hours after fixing
Complete cure	36-48 hours.
Minimum screed requirements	28 days maturing and max 3% moisture content before using this adhesive. For moisture contents at 3.1-7%, use in conjunction with FloorPrep Fastrack DPM. Do not use this Gun Grade above the max recommended moisture levels.

Store in cool, dry conditions between +5°C and +25°C.
Ensure good ventilation.
Storage outside these parameters will dramatically reduce shelf life.
Opened foils must be closed airtight and used up as soon as possible (within 1 month).

Shelf life: 12 months from date of manufacture when stored as directed.

FloorPrep Fastrack DPM, Moisture Vapour Suppressant RETURN TO CONTENTS

OVERVIEW
FloorPrep Fastrack DPM is a ready-for-use, one part, water-based moisture vapour suppressant and damp proof membrane that provides protection against both residual construction moisture and rising damp, whilst maintaining a gas permeable membrane that helps to disperse vapour pressure in the subfloor as well as allowing for long term stabilisation.

KEY BENEFITS SUMMARY
Designed to work as a DPM/moisture vapour suppressant prior to the application of a full coverage of ProFlex Ultra Adhesive or VinyLay Eco Acrylic Adhesive. Water-based; low VOC compliant, non-hazardous. Easy to apply – generally primerless* application and single component, no mixing required. Suitable for heated concrete and sand cement screeds (provided the surface temperature does not exceed 27°C in accordance with BS 8203 and BS 5325).
Extremely fast drying – as quick as 30 minutes, depending on environmental conditions.

Usage / Purpose: When used as directed, the product is a surface moisture vapour suppressant developed to suppress residual construction moisture and rising damp in cementitious subfloors including power floated concrete and sand/ cement screeds. Consideration should be given to the fact that if a self-levelling compound is required it will be below the DPM layer and should be suitable for this environment. Do not lay self-levelling compound over Fastrack DPM.
Not recommended for application onto bitumen or resin subfloors. In general, the Fastrack DPM is suitable for use with modern versions of anhydrite/calcium sulphate screeds provided that the screed is moisture tolerant, and the surface laitance has been removed as per the manufacturer's instructions. In case of any doubt, a test should be carried out on a small trial area, or technical advice should be sought. Floors which are dusty, or excessively dry must be treated with a suitable primer (FloorPrep Floor Binder) before using FloorPrep Fastrack DPM.

Colour: White emulsion when wet, becoming blue/grey on application, translucent when dry.
Packaging: 5 kg plastic jerricans.
Composition: FloorPrep Fastrack DPM is a modified synthetic polymer emulsion.
Performance: (Typical Values) CURE TIME (at 20°C) Approximate 1/2 hour

USAGE GUIDELINES
Standards: All aspects of the installation must be in accordance with the requirements of BS8204, BS8203 (Installation of Resilient floorcoverings) or BS5325 (Installation of Textile floorcoverings) and supplementary specifications and BS8201.

Moisture Testing: (in accordance with British Standards 8203)
Hygrometer readings must be taken and recorded.
The sealing effect of concrete curing compounds and over-trowelled concrete will extend the time taken for the hygrometer to reach equilibrium.
Subfloor measurement readings of up to 97% RH (measurable) can be accommodated with the system of FloorPrep Fastrack DPM and a full surface covering of ProFlex Ultra Adhesive. (97% RH equates to approx. 8.5%MC in sand/cement screed and 6%MC in concrete)

Conditioning: Condition the contents by storing for 24 hours at +15°C to +25°C as cooler temperatures will increase viscosity and make application more difficult. Higher temperatures will speed the chemical reaction and therefore reduce working pot life.

FloorPrep Fastrack DPM, Moisture Vapour Suppressant RETURN TO CONTENTS

Surface Preparation: Ensure the subfloor is clean, sound, surface dry and free from contaminants that may prevent adhesion. All dust and plaster deposits must be removed and vacuumed.
Remove all surface water. Highly polished surfaces or concrete containing a curing agent or surface hardener may require shot blasting.
Power floated concrete must be abraded or shot blasted to provide a good key for adhesion.

Priming: In most circumstances no priming is required.
For floors with excessively dry and absorbent surfaces, or floors that are dusty/burnt, a primer (FloorPrep Floor Binder) will be required. Always test a small area first to confirm suitability.

Method of Application: Note; drying times are based on ambient conditions, and will be slower in cold and/or wet conditions. Good ventilation is essential.
Shake the bottle to mix contents immediately prior to use.
Pour into a rectangular bucket or paint tray and apply with a medium pile roller.
It is essential that a pin-hole free coating is achieved and to maintain a coverage rate of 5m² per kg per coat. (i.e., 5 kg unit covers 25m²). The overall dry film coating thickness should be a minimum of 150 microns. Do not over-apply. Always apply the Fastrack DPM up the walls to a height of approx. two inches above floor level as a precaution.
Allow to dry to a translucent film. At 20°C the drying time will be approximately 30 minutes, depending on the subfloor and other environmental conditions. Once dry, it is advisable to begin application of the ProFlex Ultra Adhesive as soon as possible, to prevent surface contamination. Always apply the adhesive within 2 days after application.

Coverage
Approx. 25m² per 5kg unit.

Cleaning
Clean immediately after use with water or white spirit if the product has dried.

Health & Safety Precautions
Product Health and Safety Data Sheets must be read and understood before use.

Storage
Store between +5°C and +40°C in shaded dry conditions.
Protect from frost.

Shelf Life
12 months min., when stored in its original unopened containers.

FloorPrep Floor Binder, Surface Primer RETURN TO CONTENTS

OVERVIEW
Description and Usage / Purpose: FloorPrep Floor Binder is a universal primer for porous substrates.

Colour: White

Packaging: 5 litres.

KEY BENEFITS SUMMARY
Removes the adverse effects of certain undesirable sub-floor characteristics that can interfere with the smooth application of FloorPrep Fastrack DPM, ProFlex Ultra Adhesive, ProFlex Contract Adhesive and FloorPrep Self Levelling Compound. An excessively dry or absorbent subfloor, or a dusty, 'burnt' surface are the main reasons to use FloorPrep Floor Binder.

TECHNICAL

Composition:	Aqueous based co-polymer dispersion.
Characteristics (Typical Values)	
Density:	1.02 g/ml
pH:	7-9

USAGE GUIDELINES

Standards: All aspects of the installation must be in accordance with the requirements of BS8204, BS8203 (Installation of Resilient Floorcoverings) or BS5325 (Installation of Textile Floorcoverings) and supplementary specifications.

Surface Preparation:
- Ensure all surfaces to be coated are clean, dry, frost free and free from grease, oil, dirt, dust, loose friable material and any other contaminants.
- Mechanical preparation, using an enclosed shotblasting machine, may be recommended and should be followed by thorough vacuuming to remove all surface dust.

Method of Application:
Apply by brush or roller ensuring a continuous film, avoiding puddles and ensuring all the surface is coated. Provided surface preparation instructions are followed and surface laitance has been mechanically removed, FloorPrep Floor Binder is suitable for use on Anhydrite sub-floors.

Coverage Rate: 8m² per litre depending on substrate.

Storage: Store in dry, shaded conditions between +5°C and +35°C.

Shelf Life: 6 months when stored as recommended in original unopened packaging

FURTHER INFORMATION
Before using any products, the user should carry out any necessary tests in order to ensure the product is suitable for the intended application.
Moreover, all users should contact the seller or the manufacturer of the product for additional technical information concerning its use if they think that the information in their possession needs to be clarified in any way, whether for normal use or a specific application of our product.
The information detailed in the present technical data sheet is given by way of indication and is not exhaustive. The same applies to any information provided verbally by telephone to any prospective or existing customer

NOTE: The information in this manual is given in good faith and is based upon experience and experimentation. Because of the diversity of materials and substrates and the great number of possible applications which are outside of our control, we cannot accept any responsibility for the results obtained. In every case it is recommended that the user carries out preliminary trials to ensure the suitability of the product for their intended use

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